Final Program

HCI 2007 International

12th International Conference on Human-Computer Interaction

北京

jointly with:

Symposium on Human Interface (Japan) 2007

7th International Conference on Engineering Psychology and Cognitive Ergonomics

4th International Conference on Universal Access in Human-Computer Interaction

2nd International Conference on Virtual Reality

2nd International Conference on Usability and Internationalization

2nd International Conference on Online Communities and Social Computing

3rd International Conference on Augmented Cognition

1st International Conference on Digital Human Modeling

22-27 July 2007

Beijing International Convention Center

Beijing, P.R. China

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Conference at a Glance

Conference Registration – Secretariat

Conference Registration takes place at the Conference Secretariat, located at *BICC Level 1*, during the following hours:

Saturday, 21 July	14.00 - 20.00
Sunday, 22 July	08.00 - 19.00
Monday, 23 July	08.00 - 19.00
Tuesday, 24 July	07.30 - 17.00
Wednesday, 25 July	07.30 - 19:00
Thursday, 26 July	07.30 - 19:00
Friday, 27 July	07.30 - 18.30

The Conference registration fee includes:

- Participation in all open technical sessions (i.e. Parallel Paper Presentations)
- Entrance in the Exhibition
- Refreshment breaks
- Conference proceedings in DVD and
- One ticket for the Gala Dinner

Cancellation policy: Registration fee for any event is non-refundable.

Program

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Monday 23 July 2007	• Tutorials Day 2 - *page 17* • Brain Computer Interfaces (BCI) Workshop Day 1 - *page 29*
Tuesday 24 July 2007	• Tutorials Day 3 - *page 24* • Brain Computer Interfaces (BCI) Workshop Day 2 - *page 29* • Opening Plenary Session - *Room: Convention Hall No. 1 - BICC Level 2* Chair: Michael J. Smith, *USA* Welcome by the President of Tsinghua University P.R.China, Dr. Binglin Gu Keynote address *"Digital Human Modeling and Quality of Life Technology"* by: Takeo Kanade - *page 5* Short presentation "HCI activities of Microsoft Research Asia" by Jian Wang • Gala dinner - *page 122*
Wednesday 25 July 2007	• Parallel paper presentations Day 1 - *page 30* • Poster presentations - *page 108* • Exhibition - *page 8*
Thursday 26 July 2007	• Parallel paper presentations Day 2 - *page 32* • Poster presentations - *page 108* • Exhibition - *page 8*
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Welcome Note

HCI International 2007

Dear Colleague,

It is with great honour and pleasure that I welcome you to HCI International 2007, the 12th International Conference on Human-Computer Interaction, held in Beijing, P.R. China, 22-27 July 2007, in co-operation with the Symposium on Human Interface (Japan) 2007, the 7th International Conference on Engineering Psychology and Cognitive Ergonomics, the 4th International Conference on Universal Access in Human-Computer Interaction, the 2nd International Conference on Virtual Reality, the 2nd International Conference on Usability and Internationalization, the 2nd International Conference on Online Communities and Social Computing, the 3rd International Conference on Augmented Cognition, and the 1st International Conference on Digital Human Modeling.

HCI International is the worldwide renowned international forum for the dissemination and exchange of up-to-date scientific information on theoretical, generic and applied areas of Human-Computer Interaction. HCI International 2007 promises to be an unforgettable cluster of high quality international scientific events, and an ideal occasion to come to contact with the rapidly evolving ICT market in the world. This year, HCI International and the affiliated Conferences explore a wide variety of new hot topics which reflect and contribute to a paradigm shift towards ubiquitous interaction, intelligent environments and interactive technologies supporting virtually any aspect of human life and activities in a global and social perspective.

The 17-volume Conference Proceedings are published by Springer in the Lecture Notes in Computer Science (LNCS) and Lecture Notes in Artificial Intelligence (LNAI) series, and are available on-line through the LNCS Digital Library *(http://www.springer.com/lncs),* readily accessible by all subscribing libraries around the world. The Proceedings are also published by Springer in DVD, which is provided in your registration bag. This DVD also includes, in addition to the papers, the extended abstracts of the posters that will be presented during the conference.

An unprecedented number of over 2300 individuals from 76 countries have registered for this truly international in scope event, where the work of the world's foremost leaders in the field is presented. We are privileged that Professor Takeo Kanade has joined us as the keynote speaker at the opening plenary session.

I would like to thank each and every one of you for your valuable contribution towards the success of this Conference, and to wish you a professionally rewarding and socially enjoyable stay in Beijing.

Constantine Stephanidis
General Chair

HCI International 2009

The 13th International Conference on Human-Computer Interaction, HCI International 2009, will be held jointly with the affiliated Conferences in the Town and Country Resort & Convention Center, in San Diego, California, USA, 19-24 July 2009.

It will cover a broad spectrum of themes related to Human Computer Interaction, including theoretical issues, methods, tools, processes and case studies in HCI design, as well as novel interaction techniques, interfaces and applications.

The programme will feature, among others:

- pre-conference half-day and full-day tutorials
- parallel sessions
- poster presentations
- an opening session with a keynote address
- an exhibition including demonstrations by industrial companies

The Proceedings will be published by Springer.

For more information, please visit the Conference website: *http://www.hcii2009.org*

General Chair:
Constantine Stephanidis
University of Crete and ICS-FORTH, Greece
Email: *cs@ics.forth.gr*

Opening Plenary Session

Tuesday, **24 July 2007** @ **17:30** *Convention Hall No. 1 - BICC Level 2*

"Digital Human Modeling and Quality of Life Technology"

Takeo Kanade

Quality of Life Technology Engineering Research Center
Carnegie Mellon University
Pittsburgh, PA. USA
and
Digital Human Research Center
National Institute of Advanced Industrial Science and Technology
Tokyo, Japan

Abstract

People are the weakest link in a system. People are the most important component of a system – the system works for them and, often, is controlled by them. Yet, people are the least understood component – unlike other system components, many of which are man-made, there is no effective functional model of a person.

The purpose of Digital Human research is to observe and measure human functions (physio-anatomical, motion-mechanical, and psycho-cognitive), develop computer models of these functions, and reproduce them with computers. The use of models enables to design systems and products that fit better to human needs, that are more capable, and that are easier to use.

This keynote address will review the progress of human functional modeling at the Digital Human Research Center in Tokyo, and its use for design and operation of model–rich context-aware QoLT systems at the Quality of Life Technology Center in Pittsburgh.

While basic, our research has been application driven. In fact, several commercial products have been developed as outcomes of this project. Additionally, some sensing devices and software systems have been distributed in the research and user community, including eyeglass frames, computer mouse, baseball batting glove, drink package, body scanner, ultrasound-based position sensor, home robot, injury surveillance system, and the first version of the total human model, named "Dhaiba." Digital contents or databases of human factors were also made available, including anthropometric databases, motion databases, and CG contents of child injuries.

With the world-wide demographic shift to a greater percentage of older adults and the disabled, an area of emerging importance is "Quality of Life Technologies (QoLT)" – intelligent devices, systems, and sensor-and-actuator embedded environments that help older adults and people with disabilities to live independently and in their own houses. QoLT system must be aware of how people behave, act, and function in order to respond to individual needs. Digital human modeling will constitute the basis of all such human-centered systems.

Biographical Sketch

Takeo Kanade is currently the U. A. and Helen Whitaker University Professor of Computer Science and Robotics at Carnegie Mellon University. He received his Doctoral degree in Electrical Engineering from Kyoto University, Japan, in 1974. After holding a faculty position in the Department of Information Science, Kyoto University, he joined Carnegie Mellon University in 1980. He was the Director of the Robotics Institute from 1992 to 2001. Since 2000, Dr. Kanade has been the founding director of the Digital Human Research Center in Tokyo. In 2007, the United States National Science Foundation awarded an Engineering Research Center grant to establish the Quality of Life Technology Center at Carnegie Mellon, joint with University of Pittsburgh, of which Dr. Kanade is the Director.

Dr. Kanade works in multiple areas of robotics: computer vision, sensors, multi-media, autonomous ground and air mobile robots, and medical robotics. He has written more than 300 technical papers and reports in these areas, and holds more than 20 patents.

Dr. Kanade has been elected to the National Academy of Engineering and to the American Academy of Arts and Sciences. He is a Fellow of the IEEE, the ACM, the American Association of Artificial Intelligence (AAAI), and a fellow of a few other professional societies. He has received several awards, including the C&C Award, the Joseph Engelberger Award, IEEE Robotics and Automation Society's Pioneer Award, the FIT Funai Accomplishment Award, the Allen Newell Research Excellence Award, the JARA Award, the Marr Prize Award and the Longuet-Higgins Prize.

International Program Boards

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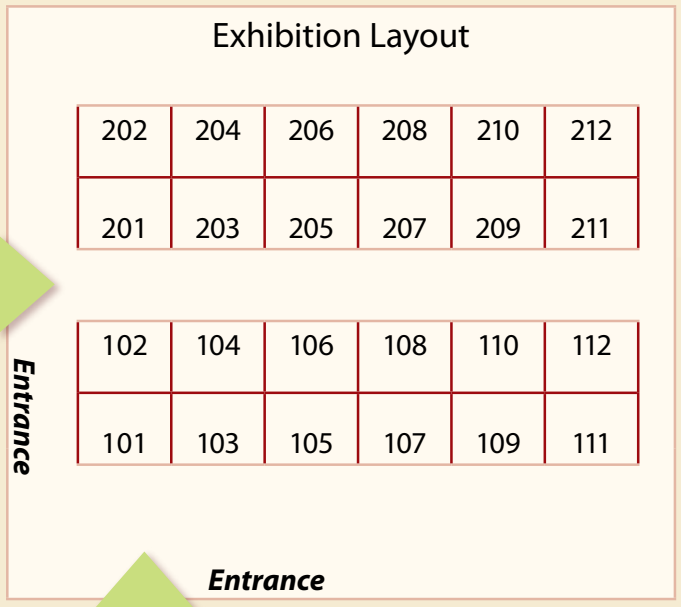
Conference Exhibition

The Exhibition of HCI International 2007 is hosted in the exhibition hall of the Beijing International Convention Center (BICC).

Entrance to the Exhibition is free of charge for all Conference participants.

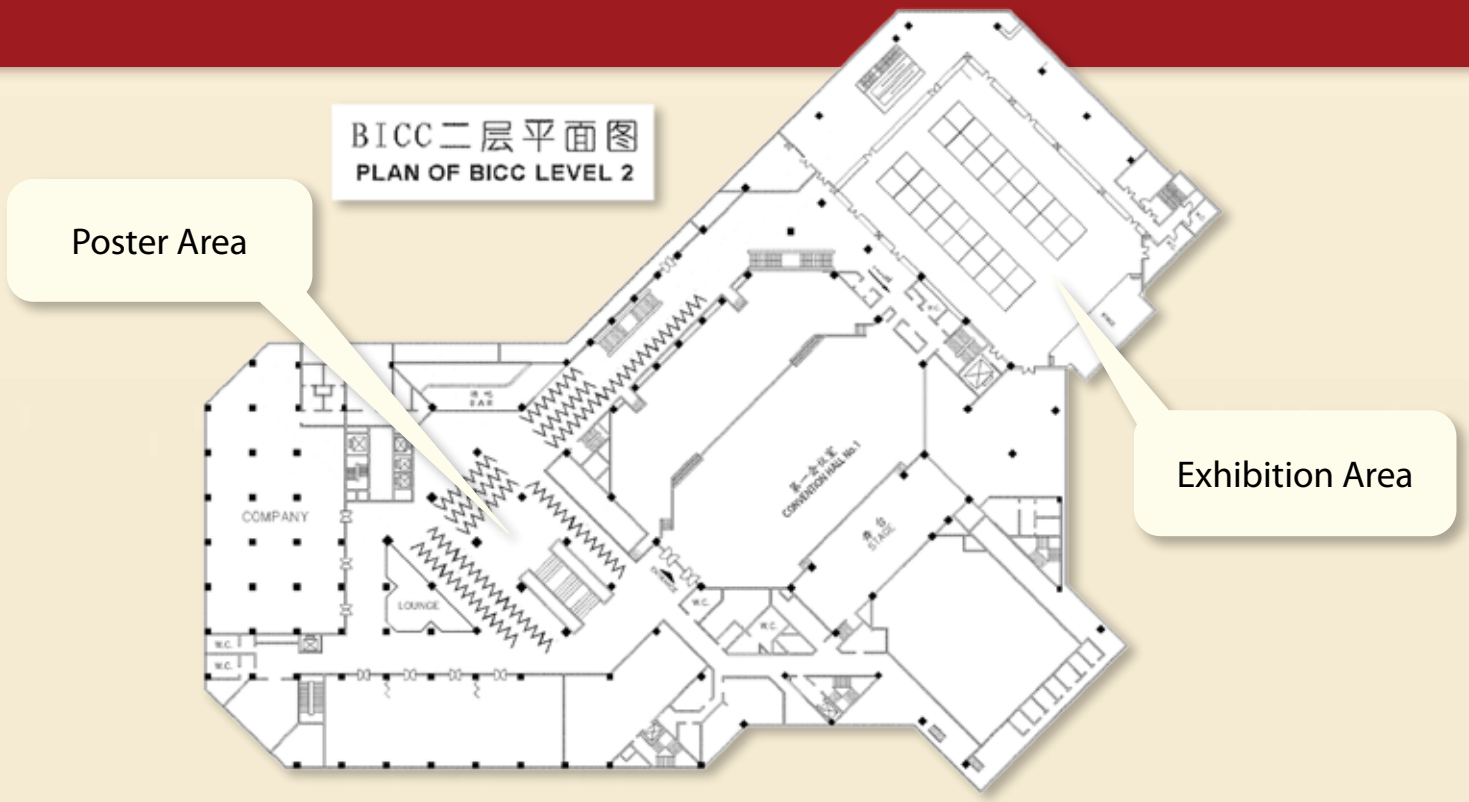
Timetable		
Display set–up	Tuesday, 24 July 2007	13:00 – 17:00
Opening Hours	Wednesday, 25 July 2007 Thursday, 26 July 2007 Friday, 27 July 2007	09:00 – 18:00
Display dismantle	Friday, 27 July 2007	16:00 – 20:00

Exhibition Layout



Booth Number per Exhibitor *(101 - 112)*

101, Tsinghua University	**102**, Springer	**103**, ICS-FORTH
www.tsinghua.edu.cn	www.springer.com	www.ics.forth.gr
104, ASPHI	**105**, HCI International 2009	**106**, eye square GmbH
www.asphi.it	www.hcii2009.org	www.eye-square.com
107 & 109, ISAR – user interface design	**108**, Noldus-Upwards	
www.isaruid.com	www.noldus.com/usability	www.upwardstek.com
110, SMI	**111**, TechSmith	**112**, Oxford University Press
www.smi.de	www.techsmith.com	www.oup.com



Booth Number per Exhibitor *(201 - 211)*

201, User Centric Inc. www.usercentric.com	**202**, Taylor & Francis Group www.taylorandfrancisgroup.com	**203**, ELSEVIER www.elsevier.com
204, tobii www.tobii.com	**205**, SAP www.sap.com	**206**, SIEMENS www.siemens.com
207, PITOTECH LTD www.pitotech.com.tw	**208**, seeingmachines www.seeingmachines.com	**209**, SIRVALUSE www.sirvaluse.de
210, g-tec – Guger Technologies www.gtec.at	**211**, Google www.google.com	**212**, Mitsubish Electric Research Labs www.merl.com

Tutorials Synopsis

Sunday, 22 July 2007

	Tutorial	Duration	Time
T 01	Introduction to Social Network Analysis *(302 Conference Room)* Dr. Panayiotis Zaphiris, Mr. Chee Siang Ang	Half Day	09:00 - 12.30
T 02	Design Patterns for User Interfaces on Mobile Equipment *(305-A Conference Room)* Mr. Erik G. Nilsson	Half Day	09:00 - 12.30
T 03	Designing for Accessibility: A Guide for Businesses and Researchers *(303 Conference Room)* Dr. Simeon Keates	Half Day	09:00 - 12.30
T 04	User Centered Design using Low-Cost Prototyping (UCD@LCP): *(303 Conference Room)* Paper Mock-Ups & Thinking Aloud Dr. Andreas Holzinger	Half Day	14:00 - 17.30
T 05	The User Experience with Pervasive Interactive Multimedia Systems *(305-A Conference Room)* Dr. Anxo Cereijo Roibas, Mr. Riccardo Sala	Half Day	14:00 - 17.30
T 06	An Introductory Guide to Doing Task Analysis *(302 Conference Room)* Prof. Neville A. Stanton	Half Day	14:00 - 17.30

Monday, 23 July 2007

	Tutorial	Duration	Time
T 07	An Introduction to Fieldwork for User Centered Designers *(302 Conference Room)* Dr. Susan M. Dray, Dr. David Siegel	Full Day	09:00 - 17:30
T 08	Cross-Cultural User-Interface Design for Work, Home, Play and on the Way *(305-A Conference Room)* Mr. Aaron Marcus	Full Day	09:00 - 17:30
T 09	Cost-effective User-Centred Design based on ISO 13407 *(303 Conference Room)* Dr. Nigel Bevan	Half Day	09:00 - 12:30
T 10	From Interaction to Teamwork in Joint Human-Automation Systems *(305-B Conference Room)* Dr. Guy Boy, Dr. Jeffrey M. Bradshaw	Half Day	09:00 - 12:30
T 11	Advanced Techniques and Tools for HCI Research and Usability Testing *(305-B Conference Room)* Dr. Lucas P.J.J. Noldus	Half Day	14:00 - 17:30
T 12	The Disappearing Computer: Designing Interaction for Smart Artefacts *(305-C Conference Room)* Dr. Dr. Norbert A. Streitz	Half Day	14:00 - 17:30
T 13	Virtual Reality in Mental Health and Rehabilitation: An Overview *(303 Conference Room)* Dr. Albert "Skip" Rizzo	Half Day	14:00 - 17:30

Tuesday, 24 July 2007

	Tutorial	Duration	Time
T 14	An Overview of Human Information Processing for *(305-A Conference Room)* Human-Computer Interaction Dr. Robert W. Proctor, Dr. Kim–Phuong L. Vu	Full Day	08:30 - 17:00
T 15	Matching Emerging ICT Interfaces to User Needs *(303 Conference Room)* Dr. Gregg C. Vanderheiden	Full Day	08:30 - 17:00
T 16	Mobile User-Interface Design for Work, Home, Play and on the Way *(305-B Conference Room)* Mr. Aaron Marcus	Full Day	08:30 - 17:00
T 17	Reducing Risk Through Human Centred Design *(305-C Conference Room)* Dr. Nigel Bevan	Half Day	08:30 - 12:00
T 19	Everywhere Interfaces *(305-C Conference Room)* Prof. Alois Ferscha	Half Day	13:30 - 17:00

Introduction to Social Network Analysis

Tutorial **1** Half Day

Sunday, **22 July 2007** @ **09:00 - 12:30** *302 Conference Room*

Panayiotis Zaphiris
Chee Siang Ang
City University, *UK*

Objectives:

Social Network analysis focuses on patterns of relations between and among people, organizations, states, etc. It aims to describe networks of relations as fully as possible, identify prominent patterns in such networks, trace the flow of information through them, and discover what effects these relations and networks have on people and organizations.

Social network analysis offers a very promising potential for analyzing human-human interactions in online communities (discussion boards, newsgroups, virtual organizations).

This Tutorial provides an overview of this analytic technique and demonstrates how it can be used in HCI research and practise, focussing especially on Computer Mediated Communication (CMC). This topic acquires particular importance these days, with the increasing popularity of social networking websites (e.g., youtube, myspace, MMORPGs etc.) and the research interest in studying them.

Upon completion of this Tutorial, participants should:

- Be able to understand the basics of social network analysis, its terminology and background (part 1)
- Be able to transform communication data to network data (part 1)
- Know practically how social network analysis (SNA) can be applied to HCI (especially CMC) analysis (part 2)
- Get familiar with the use of standard SNA tools and software (part 2)
- Be able to use SNA to derive practical and useful information for the design an innovative and successful online community. (part 2)

Content and Benefits:

The Tutorial is divided into two parts, each of which is structured in small groups to maximize interaction among participants.

- Part 1: Introduction to Social Network Analysis
  Benefits: Participants will be exposed to the introduction of SNA, and get familiar with the terminology and definitions of SNA.
- Part 2: Practical uses of social network analysis (SNA)
  Benefits: Through a series of interactive exercises, a number of case studies will be demonstrated and discussed. Case studies will draw from diverse areas (e.g., use of SNA to study age differences in CMC, use of SNA in universal design and research). Ways of using SNA to study new forms of CMC, such as MMORPGs, Wikis, blogs etc. will also be discussed.

Target audience:

We welcome researchers and practitioners interested in computer mediated communication, universal design, and other domains of application of that social network analysis.

Biographical Sketch

Dr. **Panayiotis Zaphiris** is a Senior Lecturer at the Centre for Human-Computer Interaction Design, School of Informatics of City University, London. Before joining City University, he was a researcher at the Institute of Gerontology at Wayne State University from where he also got his Ph.D. in HCI. His research interests lie in HCI with an emphasis on inclusive design and social aspects of computing. He has a strong interest in internet related research (web usability, mathematical modelling of browsing behaviour in hierarchical online information systems, online communities, e-learning, web based digital libraries and social network analysis of online human-to-human interactions). Panayiotis Zaphiris has published over 80 publications in prominent journals (e.g. Zaphiris, P., Sarwar, R. (2006) Trends, Similarities and Differences in the Usage of Teen and Senior Public Online Newsgroups. ACM Transactions on Computer-Human Interaction (TOCHI), 13(3), 2006, 403-422. ACM Press.) and has presented his work in numerous conferences. He is the editor of 4 books including the recent book: Lambropoulos, N., Zaphiris, P. (2006) User-Centered Design of Online Learning Communities. Hershey, Idea Group Publishing.

Mr. **Chee Siang Ang** is a PhD student at the Centre for Human-Computer Interaction Design, School of Informatics of City University, London. His research interests include the psychology and sociology of computer games and new forms of CMC communication such as MMORPG. His PhD research deals mainly with the social aspect of gaming.

Tutorial
2
Half Day

Design Patterns for User Interfaces on Mobile Equipment

Sunday, **22 July 2007** @ **09:00 - 12:30** *305-A Conference Room*

Erik G. Nilsson
SINTEF ICT, *Norway*

Objectives:

Enhance the participants' skills in designing user interfaces for mobile equipment.

Content and Benefits:

This Tutorial presents a collection of patterns addressing issues regarding the design of user interfaces on mobile devices. These patterns have been developed in a two-year research project. The patterns in the collection are structured in three main groups:

1. Utilizing screen space
2. Interaction mechanisms
3. Design at large

The patterns address typical challenges of designing user interfaces that are to run on PDAs and SmartPhones, in relation to both the characteristics of the equipment and to the tasks to be addressed. The suggested solutions are based on existing design practice, and the description includes examples of good solution and pros and cons of different approaches. An overview of the patterns collection will be presented, focusing on solution patterns for the most important challenges. The Tutorial consists of presentations and a hands-on exercise where the participants will use the patterns to design a paper prototype of a PDA/ SmartPhone user interface.

The participants will learn about design challenges and opportunities that are specific and important when designing user interfaces on mobile devices. They will obtain general knowledge about approaches for overcoming the challenges and exploiting the opportunities, in addition to specific knowledge about solving the most important problems.

Participation in the Tutorial will be beneficial for the HCI International 2007 audience because it both gives a structured overview of the challenges and opportunities connected to user interface design on mobile devices, and gives practical solutions to the most important challenges. The participants will also benefit from hands-on experience in user interface design for mobile clients in general, and from using the patterns collection in particular.

Tutorial documentation includes a comprehensive research report documenting the patterns collection, in addition to important choices regarding platforms, user interface style and deployment strategies, and an overview of the main differences between mobile and stationary user interfaces.

Target audience:

The Tutorial is intended for user interface designer, systems developers, and project leaders that work with or plan to work on the development of applications on mobile devices. The Tutorial requires basic knowledge of user interface design in general, and basic understanding of challenges connected to designing user interfaces on mobile devices.

Biographical Sketch

Mr. **Erik G. Nilsson** is a Senior Research Scientist at SINTEF ICT. He has been working with model-driven systems development at SINTEF since 1984, with a focus on user interface development the last ten years. The last five years he has performed research on user interface development for mobile equipment, with a focus on adaptation and exploiting context information. He has been and is the project leader for two Norwegian research projects (UMBRA and FLAMINKO) that develop design patterns and evaluation methods for user interfaces on mobile equipment. The patterns and methods are developed in co-operation with Norwegian development and consulting companies focusing on mobile technology. Erik Nilsson has authored/ co-authored publications at international refereed journals and conferences on re-engineering, systems integration, user interface design, mobile user interface design and model-based user interface development. He has also been instructor at a large number of courses on user interface design and development for Norwegian companies and organizations, and has given presentation on numerous industry oriented seminars.

Designing for Accessibility: A guide for Businesses and Researchers

Sunday, **22 July 2007** @ **09:00 - 12:30** *303 Conference Room*

Tutorial **3** Half Day

Simeon Keates
ITA Software, *USA*

Objectives:

The objective of this Tutorial is to provide an introductory guide to how companies can implement inclusive design and universal access practices into their corporate processes. The approach taken will be to show how existing corporate behaviour typically needs moderate adjustments to include the requirements of a wider range of users (disabled, older, etc.) to help make "mainstream" products more accessible to a larger customer base. This Tutorial is complemented by a new book on this topic, "Designing for Accessibility: A business guide to countering design exclusion" published by LEA.

Content and Benefits:

Implementing design for accessibility within a company requires planning and forethought. Its implementation is, in effect, a business transformation process, realigning a company's product ranges to meet the needs of the users. Therefore, this process offers a significant opportunity for realizing genuine innovation.

The days of products that people simply cannot use are over. Exclusion through design is no longer an option. Companies are beginning to realize that they have to move to offering products, services and environments that do not discriminate between potential users on the grounds of capability. This is partly due to the rise in anti-discrimination legislation that is stipulating that such discrimination is no longer acceptable and the fear of lawsuits arising from this. However, that is only part of the reason companies are moving away from designing products that exclude large sections of their customer-base.

Companies are looking to adopt inclusive design, universal design, etc. because they recognize economic reality. Designing for the widest possible population maximizes the number of people to whom a company can sell its products. Additionally, once one company develops a more accessible and inclusive product, all of the other products in the marketplace begin to look stale and uninviting. The ultimate reality is that companies that are selling user-unfriendly products will, in effect, be selling inferior products.

This Tutorial moves beyond an introduction and focuses more on how a company can set about realizing more inclusive products. Central to the notion of a more inclusive product is, of course, that the product must offer the right combination of functionality, usability, and, equally importantly, accessibility. This latter attribute is a new concept for many companies and this Tutorial is intended to serve as a means to demystify what is involved in designing for accessibility.

The aim is to provide a step-by-step guide to explaining design for accessibility and help companies understand its goals and objectives and see how it can fit into their everyday design processes.

Detailed content:

- An introduction to accessibility, inclusive design and UA - including design approaches, methods and framework
- Making the business case for accessibility
- Implementing inclusive design in industry, including
- Senior management role
- Project management role
- Filling the skills gap
- Case study - making expertise available within a company - the IBM Usable Access council
- Putting accessibility into the design process
- Case study - designing for accessibility in practice - the IRVIS robot
- Involving users in the design process
- Conducting sessions with users
- Case study - an example user session - investigating the accessibility of digital television for older adults
- Conclusion

Target audience:

Conference delegates from industry, practitioners, researchers and policy makers.

Biographical Sketch

Dr. **Simeon Keates** is currently working as a usability lead and designer at ITA Software in Cambridge, MA. Prior to joining ITA, he was a Research Staff Member at the IBM TJ Watson Research Center in New York and the Royal Mail Research Fellow at the Engineering Design Centre in the University of Cambridge (UK) Department of Engineering. He has published 5 books to date, 2 authored and 3 edited, and is an author of over 100 peer-reviewed papers. Dr Keates has complemented his research activities with consulting engagements. He has provided consultancy services to both the US and UK Governments (the Social Security Administration in the US and the Department of Trade and Industry in the UK), as well as to companies such as Royal Mail and Scientific Generics.

Tutorial
4
Half Day

User Centered Design using Low-Cost Prototyping(UCD@LCP): Paper Mock-Ups & Thinking Aloud

Sunday, **22 July 2007** @ **14:00 - 17:30** *303 Conference Room*

Andreas Holzinger
Medical University Graz, *Austria*

Objectives:

In this half-day hands-on Tutorial, after presenting the necessary theoretical background and showing examples, the participants will produce paper mock-ups of user-interfaces, in teams, with assistance where necessary. They will then design and develop an appropriate task to study end-users by application of the thinking aloud method. Videos taken during the experiments will be analyzed afterwards and the results integrated into the redesign of the mock-ups. After this Tutorial, the participants will be able to understand the theoretical and psychological background of the thinking-aloud method and to apply this method together with rapid prototyping, i.e., developing paper-mock ups. The main purpose of this Tutorial is for the participants to gain insight into the thinking and behavior of end-users by the application of simple and low-cost methods.

Content and Benefits:

Customer satisfaction with regard to user interfaces becomes increasingly more important and is, eventually, decisive for the selection of systems within a competitive market. End-users demand benefits and a clear increase in value. They expect efficient and optimum support in their work with their interfaces. One possible method to achieve this is User-Centered Design, which means to incorporate end-users in the interface development from scratch. Essential is the knowledge about the end-user, which in return, will lead to better insights into their thinking and behavior, consequently resulting in better user interfaces. This Tutorial focuses on two main issues: rapid prototyping and thinking aloud studies. Beginning with the necessary theoretical psychological and engineering backgrounds, the course will increasingly involve the participants in the hands-on development of paper mock-ups and concurrently engage them in thinking aloud studies. Recording these experiments on video allows the subsequent analysis of problems and the discussion of possible solutions. The combination of a psychological background with software engineering methods will make it possible to learn from the results and bring the results into a system's level.

Target audience:

Usability Engineers, Software Developers, Analysts, Designers, Project Managers. To date, this Tutorial has been presented successfully seven (7) times with an average of 30 participants and always the highest ratings of participants satisfaction.

Biographical Sketch

Dr. **Andreas Holzinger**, currently working at the Medical University Graz, was Visiting Professor at Vienna University of Technology, Institute for Software Technology and Interactive Systems (IFS) in 2005/06, Visiting Professor at Innsbruck University, Institute for Organization and Learning (IOL) in winter term 2004/05 and Visiting Lecturer at NHC in Berlin, Germany (2002 and 2003). He is Consultant for the Austrian and German Ministry of Science, National expert and IST evaluator in the EC, Industrial Consultant, member of the European Research Consortium in Informatics and Mathematics (ERCIM). He is elected chair of the WG HCI&UE of the Austrian Computer Society and founder and leader of the SIG "HCI4EDU" in order to bring together Psychologists, Educationalists and Engineers. Holzinger started his career as apprentice in IT in 1978, finishing as Radio- and Television Technician (1981); Foreman in Industrial Electronics (1983); College of Further Education Bournemouth (UK) with honors in Computer Science (1985/86); After extensive industrial experience, during which he attended evening classes, he was awarded Chartered Engineer for Communications (CEng, 1990); Diploma as Lecturer for Adult Education (DipEd, 1992); Studies of Communication Engineering (BEng, 1993), Physics and Psychology (MSc, 1995) as well as Media Pedagogy and Sociology (MPh, 1996) at Graz University of Technology and Graz University. Doctoral promotion with summa cum laude in Cognitive Science (PhD, 1997); Venia Docendi (Univ.-Doz., Associate Professor, 2003) in Applied Information Processing at Graz University of Technology. To date 152 publications and 110 lectures and talks internationally.

The User Experience with Pervasive Interactive Multimedia Systems

Tutorial **5** Half Day

Sunday, **22 July 2007** @ **14:00 - 17:30** *305-A Conference Room*

Anxo Cereijo Roibas
University of Brighton, *UK*
Riccardo Sala
Dare Digital, *UK*

Objectives:

This Tutorial intends to provide the attendees with:

- A reflection about the QuE and Perceived QoE for pervasive interactive multimedia systems.
- An understanding of how the mutual relationship between nomadic culture and technology.
- An exploration of the futures of interfaces design in advanced pervasive communication scenarios.
- An analysis of the future of digital content (smart, affective, context dependent, device independent, etc.).
- An overview of what multimedia applications for ubiquitous contexts are and why they imply a specific design approach (analysis of the situations of use).
- Awareness of how the physical and social context can influence the usage of a system.
- Evidence of how ethnographies can be part of user centred design approaches such as Participatory Design can be applied to these systems in order to find the right interaction models.
- An investigation about how the user experience will be in future scenarios of pervasive interactive multimedia systems.

Content and Benefits:

Users' generated content in convergent media is unavoidably becoming a significant HCI area. In fact, many choices are offered to mobile communities to create and, above all, to exchange digital content. Users and media companies will be able to provide content holistically across different channels and this will imply a strong integration between all the platforms involved. At the same time, users create and share users generated digital content using a wide range of eclectic devices (such as PC's, laptops, i-TV, mobile phones, PDA's, Public Digital Displays, etc.) and applications (such as, email, chat, instant messaging, SMS, MMS, etc).

In addition, rapid technological innovations in how we communicate have spurred a trend toward contexts where pervasive communication scenarios are common. In fact, handhelds can also enable interaction with the user's physical (e.g., exchanging information with a city landmark) and social context (e.g., providing social awareness). Taking into account the 'environmental' and 'social' interaction becomes an imperative concern in designing pervasive interactive multimedia systems. The high complexity that the design of these systems entails goes beyond usability issues and regards multifaceted emotional aspects strictly related to the usage context such as feelings towards privacy and trust. In fact, Interactive multimedia systems are used in different physical and social contexts, and these contexts influence in a positive or negative way the users' emotions and feelings towards the interaction process, persuading or discouraging the use of a certain interface.

This complexity calls for the application of new Participatory Design approaches and data gathering and evaluation techniques in order to be able to design interactive mobile artefacts that provide the user with a positive Quality of user Experience (QoE) in any context.

This Tutorial aims to elucidate how the use of diverse field ethnographic techniques - as part of a participatory design process - contributes to identify the 'soft' HCI issues related to nomadic users interacting in specific contexts, and to understand how these can influence the quality of the experience with systems that enable the creation and sharing of users' generated content on the move.

This Tutorial will provide a framework for the understanding of the Quality of the User Experience in future pervasive communication scenarios of pervasive interactive multimedia systems, helping designers to anticipate and solve real users' needs - that are generated by political, cultural and socio-economic changes - instead of deliberately creating new ones.

Target audience:

The Tutorial is intended for managers of HCI projects working in mobile and pervasive multimedia systems and, in particular, the i-TV, web and mobile industry (telecom companies, device manufacturers, service providers, etc.); industrial designer; event organizers; teachers and researchers in HCI; human factors practitioners; interface evaluators and testers; and HF academics and students with interests in human computer interaction and mobile interaction. Although no particular skills are required, basic knowledge of HCI design is recommendable.

Biographical Sketch

Dr. **Anxo Cereijo Roibas** is Senior Lecturer at the University of Brighton, Visiting Lecturer at Westminster University, at the Politecnico di Milano and the National Institute of Design (India). He has been User Experience Consultant for Vodafone and since 2000, he has been collaborating with the Nokia Research Center. He has coordinated an ethnographic research addressing the future use of mobile phones as multimedia tools in collaboration with the Vodafone Group Foundation and the British Royal Academic of Engineering. He is British Telecom Fellow at the BT IT Mobility Research Centre and Executive Committee member of the British HCI Group.

Mr. **Riccardo Sala** (BA and MSc Design Politecnico di Milano, MA Interactive Media Dublin Institute of Technology) is Information Architect at Dare Digital. He has been interaction designer at the Timesonline. He has also worked as consultant HCI designer specialized in new media and the assessment of the user experience with applications and services for mobile phones. He has collaborated with companies such as Orange, The Sun, Microsoft MSN, and Yahoo.

Tutorial
6
Half Day

An Introductory Guide to Doing Task Analysis

Sunday, **22 July 2007** @ **14:00 - 17:30** *302 Conference Room*

Neville A. Stanton
Brunel University, *UK*

Objectives:

The aim of this Tutorial is to introduce participants a wide variety of task analysis methods and to guide them though the practical considerations in the selection and application of the appropriate method(s) for the problem that they are addressing. It will be stressed that the use of task analysis methods is not an end in itself, but a means to an end. The key to successful application of methods to have a clear purpose for the analysis and use the method(s) to develop a deep understanding of context surrounding the task performance.

Content and Benefits:

Each of the methods will be introduced and case studies showing how they may be applied will be presented. Then each of the participants will be given the opportunity to try out the methods under the guidance and supervision of Professor Stanton. The spirit of the format will be to give each of the delegates' rapid exposure to the methods and help them understand how to apply them. The emphasis will be on developing practical task analysis skills.

The planned format of the presentation is as follows:

1. Introduction to task analysis and task analysis methods
2. Consideration in the selection and application of task analysis methods
3. Methods for collecting task analysis data
4. Case study on the application of tasks analysis methods
5. Practical guidance on Hierarchical Task Analysis
6. Practical guidance on Critical Decision Method
7. Practical guidance on Multi-Modal Critical Path Analysis
8. Practical guidance on Human Error Identification
9. Presentation and feedback
10. Conclusions for the application of task analysis

By the end of this Tutorial, the participants will have had practical experience with a broad range of tasks analysis methods using a variety of source of data collection methods. To help make the most of the Tutorial, it is advised that each participant brings a device to analyse (mobile phone, personal digital assistant, etc.) or have domain expertise in a safety critical environment.

Target audience:

This Tutorial will be suited to individuals interested in learning about and trying-out task analysis methods. Ideally, participants will be able to come along with a simple analysis problem to try out. This may be based on a device they own or a problem for which they are a subject matter expert.

Biographical Sketch

Prof. **Neville A. Stanton** received his Ph.D. in Human Factors at Aston University, UK. He is a Professor of Human Factors and the author of over 100 journal papers and 10 books, including the co-author of Human Factors Methods (Ashgate, 2005) and A Guide to Methodology in Ergonomics (Taylor & Francis, 1999) and co-editor of Task Analysis (Taylor & Francis, 2000) and the Handbook of Task Analysis for HCI (LEA, 2004).

An Introduction to Fieldwork for User Centered Designers

Tutorial **7** Full Day

Monday, **23 July 2007** @ **09:00 - 17:30** *302 Conference Room*

Susan M. Dray, David Siegel
Dray & Associates Inc., *USA*

Objectives:

Attendees will learn:

- How observational field research fits into design, and how fieldwork complements other User-Centered Design (UCD) methods.
- What it takes to make fieldwork more than just "anecdote collecting."
- Why and how to use four types of field research techniques, including, Naturalistic Observation, Contextual Inquiry, Artifact Walkthrough, Naturalistic Usability Evaluation.
- How to make sure field research provides meaningful input to design.
- Tips for addressing practical and organizational obstacles to field work.

Content and Benefits:

There is increased awareness of the need for design to be driven by deep understanding of users, their activity patterns, processes, needs and external influences. Such an understanding can only be gained by studying user behavior in the user's context. This Tutorial takes a fresh and deeper look at fundamental principles of fieldwork, teaches a range of techniques, and examines important issues on which methods differ. Some of the issues that we examine include:

- How fieldwork relates to and complements other user-centered design practices.
- How fieldwork influences the various stages of the design process.
- Whether a focus that is developed before going into the field should be broad or detailed.
- How to balance "people focused" versus "product focused" tendencies in the research.
- The need to increase the credibility and validity of field research by incorporating techniques such as hypothesis testing and strategic sampling.

While we teach concepts, we also give participants practical, how-to guidance about the following techniques to ground information in behavior: Naturalistic Observation, Contextual Inquiry, Artifact Walkthroughs, Naturalistic Usability evaluation.

In presenting each technique, we give a summary of its key challenges and recommendations for how to address them.

Understanding these issues and techniques will help practitioners to adapt field research techniques to a range of circumstances, and to make informed choices as they plan their approach for carrying out studies in a range of situations for different products.

This Tutorial is a mixture of lecture, hands-on exercises, video demonstrations, and discussion. Several of the exercises use videos serve both as demonstrations and also as stimuli for several of the exercises. Because the instructors have done many observational studies, using a variety of techniques, this course will include many real-life case examples and practical "tips" for attendees. There is a heavy emphasis on active audience involvement.

Target audience:

This hands-on Tutorial is aimed at practitioners, including developers, designers, and managers who are interested in user experience, needs or user requirements identification. This introductory to intermediate level Tutorial will be useful for beginners, as well as those with some experience in field studies of users who want to broaden and deepen their knowledge of approaches, or those responsible for planning and leading user studies.

Biographical Sketch

Dr. **Susan Dray** has worked in the field of human factors since 1979. She initially worked as a human factors psychologist at Honeywell and subsequently worked at IDS (now American Express Financial Advisors). Since 1993, as president of Dray & Associates, she has provided ethnographic user research, usability evaluation, and interface design consultation for a wide range of products, systems, and applications. She is widely known for her expertise in observational field research, especially for international user studies and cross-cultural usability. Susan has given over 100 talks at conferences and symposia and has published numerous papers and book chapters. She was the North American editor of the journal Behaviour and Information Technology, and now serves on its editorial board. In addition, together with Dr. David Siegel, she edited the Business Column of the ACM magazine interactions. Susan holds a doctorate in Psychology from UCLA (1980) and is a Board Certified Human Factors Professional. She was elected a Fellow of HFES in 1994 and received the CHI Lifetime Service Award in 2006. She is the incoming Director of Publications on the Board of Directors of the Usability Professionals Association.

Dr. **David Siegel** has worked with Dray & Associates since 1993. He carries out field user studies and contextual research, formal usability evaluation, and expert evaluation of interface designs. He has particular interest in implications of user research for product concept, design, and user acceptance. He has consulted on many software applications, Web designs, and designs for new technologies, and helped product teams make key improvements at levels ranging from fundamental product concept to interface design. He has carried out many fieldwork projects including user research and field usability studies in the US and internationally. David has published many articles on UCD, as well as book chapters, and has taught on a variety of user-centered design topics, including workshops and tutorials at conferences. Together with Dr. Susan Dray, he was the co-editor of the Business Column in ACM's magazine interactions. He is on the editorial board of the UPA Magazine. David received his Ph.D. in Psychology from UCLA (1982). He brings to the fields of Usability and User Centered Design his background in psychology, including assessment and measurement of cognitive processes, systems approaches to interpersonal dynamics, and research methodology.

Tutorial
8
Full Day

Cross-Cultural User-Interface Design for Work, Home, Play and on the Way

Monday, **23 July 2007** @ **09:00 - 17:30** *305-A Conference Room*

Aaron Marcus
Aaron Marcus and Associates, Inc. , *USA*

Objectives:

Participants will learn new terms and concepts to understand culture, Geert Hofstede's dimensions of culture (power, distance, individualism/collectivism, masculinity/feminity, uncertainty avoidance, and long-term orientation), and how these dimensions relate to the design of user-interface components (metaphors, mental models, navigation, interaction and appearance). In addition, the Tutorial will introduce additional dimensions that must be considered in relation to culture (persuasion, trust, intelligence, cognition), and will examine the practice and trade-offs of several multi-national companies' Web sites, as well as a best-of-breed set of culture dimensions derived from experts' opinions. Basics issues of ethnography will also be introduced.

Content and Benefits:

Illustrated lectures introduce the issues of globalization, localization, and culture. The Tutorial defines each of the dimensions of culture and shows examples from the Web. Group exercises with paper and pen provide direct experience in understanding the hidden content of cultural messages, in analyzing the impact of culture dimensions on the components of user interfaces, and in synthesizing an initial Web page design targeted for a particular culture. Participants work in teams of 5-8 people during most of the exercises.

Target audience:

Researchers and developers of Web-based documents and applications, telecommunications-oriented consumer products, and office/mobile productivity tools.

Biographical Sketch

Mr. **Aaron Marcus** received a BA in Physics from Princeton University (1965) and a BFA/MFA in Graphic Design from Yale University Art School (1968). He is an internationally recognized authority on the design of user interfaces for desktop, Web, mobile, and vehicle platforms. Mr. Marcus has given tutorials at HCII, SIGCHI, and SIGGRAPH conferences and at seminars for businesses and academic institutions around the world. He coauthored Human Factors and Typography for More Readable Programs (1990), The Cross-GUI Handbook (1994), and authored Graphic Design for Electronic Documents and User Interfaces (1992), all published by Addison-Wesley. Mr. Marcus was the world's first professional graphic designer to be involved full-time in computer graphics (1967), to program a desktop publishing system (for the AT&T Picturephone in 1969-71), to design virtual realities (1971-73), and to establish an independent computer-based graphic design firm (1982). In 1992, he received the National Computer Graphics Association Industry Achievement Award for contributions to computer graphics. His firm helped design the user interfaces of the first versions of AOL and Travelocity.

Cost-effective User-Centred Design based on ISO 13407

Tutorial **9** Half Day

Monday, **23 July 2007** @ **09:00 - 12:30** *303 Conference Room*

Nigel Bevan
Professional Usability Services, *UK*

Objectives:

Participants will learn a structured approach to user-centred design based on the principles of the International Standard "Human centred design processes for interactive systems" (ISO 13407) and other associated standards. They will gain practical experience of the key methods needed to support user centred design. By the end of the day, they will have sufficient knowledge to know how to choose a limited number of appropriate methods when resources are limited. This introductory Tutorial uses simple heuristics for selecting methods, rather than the risk-based approach in the complementary Tutorial "Reducing Risk Through Human Centred Design" for a more experienced audience.

Content and Benefits:

The Tutorial will explain the basis for choosing appropriate usability methods and techniques, and give an overview of each method. The principles will be illustrated with experience from a case study and short group exercises to familiarize participants with the key methods. By the end of the Tutorial, participants will have sufficient knowledge to know how to choose a limited number of appropriate methods when resources are restricted.

The methods have been validated by practical application in industry as part of trials supported by the European Union.

The Tutorial will focus on a core set of techniques to support the human-centered design process advocated by ISO 13407. These techniques have been selected based on their applicability, maturity, availability, and cost-effectiveness, and have been used in a wide range of organizations. The techniques are broadly divided into three categories: planning, early lifecycle, and late lifecycle, and include: a stakeholder meeting, identifying the context of use, producing scenarios of use, evaluating an existing system, specifying usability requirements, prototyping, using style guides, usability testing and collecting feedback.

For each method, the Tutorial provides information that includes when the method should be used, the type of results provided, the number of usability experts and users required, and the typical range of person days involved. Selection of methods should take account of these factors in meeting the business priorities for usability.

The Tutorial notes will be supplemented by reference material and cross-references to a web site of resources: *http://www.usabilitynet.org/trump*

Target audience:

This Tutorial addresses designers and developers with beginners' experience in Human centered design.

Biographical Sketch

Dr. **Nigel Bevan** is an independent consultant with wide industrial experience, who is also a research fellow at the University of York and a visiting professor at Dalian Maritime University, China. He has managed a series of European projects that have incorporated user centred design into the development processes of several large organisations, and the UsabilityNet project that established a web site of usability resources. He has contributed to many international standards, and is editor of the new version of the ISO standard for usability methods supporting human-centered design. He was a member of the US National Academy of Science Committee that produced the report on Human-System Design Support for Changing Technology. He has published a chapter on a framework for cost benefits in the book "Cost-Justifying Usability: An Update for the Internet Age" (Bias and Mayhew, 2005).

Tutorial
10
Half Day

From Interaction to Teamwork in Joint Human-Automation Systems

Monday, **23 July 2007** @ **09:00 - 12:30** *305-B Conference Room*

Guy Boy
EURISCO International, *France*
Jeffrey M. Bradshaw
Florida IHMC, *USA*

Objectives:

Teamwork has become the most widely accepted metaphor for describing the nature of cooperation in joint human-automation systems. New approaches are emerging that allow team members to coordinate joint activities in a coherent fashion that enhances performance and facilitates recovery when unanticipated problems arise. The objective of this Tutorial is to introduce participants to the most promising approaches to understanding and developing systems that exploit available knowledge on joint activity in human-automation teams.

Content and Benefits:

Participants will be introduced to (1) the background and motivation for the shift from interaction to teamwork; (2) a theory of joint activity in joint human-automation systems and accompanying design principles; and (3) research perspectives and case studies on aircraft cockpits, human-agent and human-robotic collaboration, personal assistants, and cognitive and robotic prostheses. The Tutorial will be supported by a large quantity of practical examples from various domains of expertise. It will be based on short lectures describing the main issues and possible solutions, demonstrations and videos. Participants will be invited to group discussions on federating topics, and case studies will be proposed.

Target audience:

Participants should have a basic understanding of principles of HCI, and some experience in the development of complex user interfaces, advanced interaction media, or software agents.

Biographical Sketch

Dr. **Guy Boy** is President of EURISCO International since its creation in 1992. Engineer and psychologist, he received his Doctorate from the "Ecole Nationale Supérieure de l'Aronautique et de l'Espace" (SUPAERO), his Professorship Habilitation (HDR) from the "Université Pierre et Marie Curie" (Paris VI), and his Full Professorship Qualifications in Computer Science and Psychology. He teaches cognitive engineering at SUPAERO. Researcher at l' ONERA from 1977 to 1988, he was seconded at NASA-Ames Research Center from 1984 to 1986 in the Aerospace Human Factors Research Division. He then joined NASA as the Leader of the Advanced Interaction Media Group from 1989 to 1991. His research is focused on usability, human-centered automation, safety-critical systems, electronic documentation and knowledge management. He developed various methods and techniques that include the Group Elicitation Method, Cognitive Function Analysis, and the Active Design Documents. He is the author of three major books and more than 200 scientific and technical papers. He is an expert in Information Society and Technology for the European Commission. He was an expert for the European Space Agency for the definition of the overall human-machine interaction and artificial intelligence research program in 1991. He was a legal expert for aircraft accident investigations. From 1995 to 1999, he was the Executive Vice-Chair ACM-SIGCHI. From 2002 to 2005, he was a member of the Board of Directors of the French National Center for Technological Research in Aerospace (CNRT-AE). He is a Permanent Member of the French National Academy of Air and Space. He is the Vice-President and co-founder of the Cognitique Institute.

Dr. **Jeffrey M. Bradshaw** is a Senior Research Scientist at IHMC, where he leads the research group developing the KAoS policy and domain services framework. Formerly, he has led research groups at The Boeing Company and the Fred Hutchinson Cancer Research Center. He has been a Fulbright Senior Scholar at the EURISCO; an Honorary Visiting Researcher at the Center for Intelligent Systems and their Applications and AIAI at the University of Edinburgh, Scotland; a visiting professor at the Institut Cognitique at the University of Bordeaux; the former chair of ACM SIGART; the former chair of the RIACS Science Council for NASA Ames Research Center; and a member of the External Advisory Board for the Next Generation Intelligent Systems Grand Challenge at Sandia National Labs. His work on the KAoS policy and domain services framework is now in use in several military, space, and scientific research programs. He has been General chair, co-chair, program co-chair, or organiser of various international conferences. He is the vice-chair for the first IEEE conference on Human-Robotic Interaction 2008. He serves on the Autonomous Agents Steering committee and on the editorial board of the Journal of Autonomous Agents and Multi-Agent Systems, the International Journal of Human-Computer Studies (on leave), the Web Semantics Journal, and the Web Intelligence Journal. He led the DARPA and NASA funded ITAC study team Software Agents for the Warfighter. Among numerous other publications, he edited the books Knowledge Acquisition as a Modeling Activity (with Ken Ford, Wiley, 1993) and Software Agents (AAAI Press/The MIT Press, 1997).

Advanced Techniques and Tools for HCI Research and Usability Testing

Monday, **23 July 2007** @ **14:00 - 17:30** *305-B Conference Room*

Tutorial **11** Half Day

Lucas P.J.J. Noldus
Noldus Information Technology,
The Netherlands

Objectives:

In this Tutorial, participants will:

- gain knowledge and understanding of video and computer technology relevant to usability testing data collection, storage, and presentation.
- learn the tools requirements for user research in various stages of the product development cycle, from field observations to summative usability tests.
- learn the tools requirements for user research in various settings: in the field, lab, office, home, vehicle, etc.
- learn how to design observational studies.
- learn how software tools support the key data collection steps.
- learn how to select the optimal tool or combination of tools for a given study.
- see live demonstrations of various tools.

Content and Benefits:

Setting up a new usability lab, upgrading an existing lab or selecting tools for field studies involves many decisions about computer hardware, video recording and storage systems, data collection and data analysis software. Users of this type of equipment and software tools often have a background in psychology or industrial design, rather than in computer science or electronic engineering. This Tutorial will enable HCI professionals to gain up-to-date gain knowledge and understanding of digital video and computer technology relevant to usability testing data collection, storage, and presentation.

Furthermore, participants will get an overview of software tools and integrated solutions for field and lab studies, and become up to date with the latest proven techniques, tools and best practices for data collection. If your next project is a field study, a focus group or a usability lab test, attend this course to learn how to select the right tool for the job and how to put it to optimal use.

Content:

- Digital video recording and screen capture, storage and retrieval.
- Designing a usability lab: stationary, mobile, home labs.
- Observational data collection: design a coding scheme, event logging, remote usability testing.
- Multimodal measurements: eye tracking, physiology, capturing facial expressions and emotions.

Target audience:

This Tutorial is intended for human-computer interaction researchers and usability practitioners (usability engineers, UI designers, usability testers) who wish to take advantage of new technologies and tools to enhance the quality of their measurements and the efficiency of their projects. Those who are planning to set up new research or test facilities or upgrade existing facilities (usability lab, focus group room, tools for ethnography) will also benefit from the course. The Tutorial is useful for people working in academic research, corporate human factors groups, as well as independent consulting firms.

Both novices and experts can benefit from this Tutorial. For instance, the novice will learn the basic of digital video technology while the expert will learn how to integrate video with observational and psychophysiological measures.

Biographical Sketch

Dr. **Lucas Noldus** is founder and CEO of Noldus Information Technology, an international company developing software tools and integrated solutions for HCI research and usability testing. Lucas Noldus studied at Leiden University and Wageningen University and received a Ph.D. in behavioral biology. Prior to founding Noldus Information Technology, he held research positions at Beijing Normal University (China) and the University of Georgia (USA). He has more than 16 years of experience in tools development and training users. He has authored numerous peer-reviewed papers and conference presentations about methods and techniques in behavioral research. Lucas Noldus has taught tutorials at CHI 2004, CHI 2005 and CHI 2006.

Tutorial
12
Half Day

The Disappearing Computer: Designing Interaction for Smart Artefacts

Monday, **23 July 2007** @ **14:00 - 17:30** *305-C Conference Room*

Norbert A. Streitz
Fraunhofer IPSI, *Germany*

Objectives:

The objective of this Tutorial is to make researchers and practitioners aware of the implications for interaction design that are caused by the increasing trend of embedding computation in everyday objects, creating so called "smart artefacts". Attendees will learn about the state-of-the-art and obtain information that allows them to realize the full potential of this new field in their current and future work.

Content and Benefits:

The development of the "disappearing computer" created new challenges for the design of human-computer interaction. Computers used to be "primary" artefacts. Now they are turning into "secondary" artefacts moving into the background in several ways (physical and mental disappearance), and becoming "invisible" in the users' perception. Beyond disappearance, smart artefacts are also characterized by sensors collecting data about the environment, devices and humans acting in this context. The issues to be addressed are:

- How can people interact with "invisible" devices?
- What kind of everyday objects affordances can be provided and exploited?
- How do people migrate from explicit to implicit interfaces and sensor-based interaction?
- How can we design for transparency and make people "understand" the interface?
- How can we design for a coherent experience?
- What should happen in case of errors or malfunctioning not explicitly perceived?
- How can we design for user's control and privacy in sensor-based environments?

Other topics result from the distinction between "system-oriented, importunate smartness" vs. "people-oriented, empowering smartness" which can be summarized as "smart spaces make people smarter". This is achieved by keeping "the human in the loop".

The Tutorial consists of two parts:

- Part 1: Introduction, Approaches and Conceptual Frameworks.
- Part 2: Application Domains and Design Examples.

Attendees will gain an overall understanding of the basic principles of designing for ubiquitous/pervasive computing and ambient intelligence and learn about design examples from different applications domains (office, home, public spaces, leisure/games).

Target audience:

People interested in designing innovative systems and products, researchers in cognitive and computer science, system designers and developers, information architects, interface designers, human factors practitioners and educators. Background in user interface design is helpful but not essential due to the example-based approach. Tutorial level: Beginners to Intermediate.

Biographical Sketch

Dr. rer. nat. Dr. phil. **Norbert Streitz** (Ph. D. in physics and Ph.D. in psychology) is a Senior Scientist and Strategic Advisor with more than 20 years of experience in information and communication technology. In 1997, he initiated and managed the research division 'AMBIENTE - Smart Environments of the Future' at the Fraunhofer institute IPSI in Darmstadt, Germany, where he also teaches at the Technical University. He was a post-doc fellow at the University of California, Berkeley, a visiting scholar at Xerox PARC and the Intelligent Systems Lab of ETL-MITI, Tsukuba Science City, Japan.

During 2001-2004, he was the Chair of the Steering Group of the EU-funded research initiative "The Disappearing Computer" and was/is involved in many EU-funded projects and efforts. He is now the co-chair of the recently established ERCIM Working Group "Smart Environments and Systems for Ambient Intelligence" (SESAMI). His interests include Ambient/Pervasive/Ubiquitous Computing, Interaction and Experience Design, Human-Computer Interaction, CSCW, Hypertext/ Hypermedia, and Cognitive Science. He and his team are also known for the development of Roomware®, the integration of walls and furniture with information technology which won several design prices.

He has published/edited 16 books and (co)authored more than 100 technical papers. He serves on the program committees of national and international conferences and editorial boards and is often invited to present tutorials and keynote speeches to scientific and commercial events in Europe, USA, South America, Malaysia, Singapore, and Japan.

Virtual Reality in Mental Health and Rehabilitation: An Overview

Tutorial **13** Half Day

Monday, **23 July 2007** @ **14:00 - 17:30** *303 Conference Room*

Albert "Skip" Rizzo
University of Southern California, *USA*

Objectives:

Participants will learn about:

1. The rationales for use of Virtual Reality (VR) in the assessment and rehabilitation of a wide range of clinical disorders (i.e., ADHD, PTSD, Alzheimer's, Phobias, Stroke, addictions, etc.).
2. The relevant issues involved in the design, development, implementation, and evaluation of virtual environments for use in assessment and rehabilitation via a SWOT Analysis of the entire field.
3. Applications where VR has been used in the study, assessment, treatment and rehabilitation of cognitive, psychological, motor processes.
4. Case studies on developing VR applications for assessment, therapy and rehabilitation.
5. The issues to be considered for decision making regarding the use of these information technology tools with vulnerable clinical populations in a professional and ethical manner.

Content and Benefits:

VR technology has emerged as a viable tool for mental health and rehabilitation applications. The capacity of VR technology to create controllable, dynamic, interactive and immersive stimulus environments, within which behavioral responding can be recorded and measured, offers clinical assessment and intervention options that are not available using traditional methods. Much like an aircraft simulator serves to test and train piloting ability under a variety of controlled conditions, virtual environments have been developed to present simulations that target human cognitive, emotional, motor and functional processes that are relevant for assessment, therapy and rehabilitative purposes. As well, VR technology provides assets that will continue to advance the scientific study of normal functioning.

VR applications have been developed and tested which focus on component cognitive processes including attention, memory, visuospatial and executive functions. Many VR systems have also been developed to address psychological conditions (i.e., anxiety disorders, addiction, acute pain) and motor impairments (i.e., reaching, grasping and gait impairments following brain injury or stroke). Functional VR training scenarios have also been designed to test and teach instrumental activities of daily living such as street-crossing, automobile driving, meal preparation, supermarket shopping, use of public transportation, and wheelchair navigation. These initiatives have formed a foundation of work that provides support for the feasibility and potential value of further development of VR applications for clinical and research questions.

This Tutorial will present an overview and SWOT Analysis of VR and the rationale for its use in assessment, therapy and rehabilitation. Both positive and negative exemples of VR applications will be presented. Participants will be given the latest information on what the technology involves, how it has been applied with clinical and non-clinical populations, professional issues involved in its use, and current and future research issues.

Target audience:

This is one of the hot application areas for "new" computer and information technologies, and should be of interest to application designers and developers within the general HCI community. Additionally, the Tutorial will have appeal to a wide range of professionals in fields such as psychology, physical therapy, occupational science, neurology, neuropsychology, psychiatry, social work and general medical areas.

Biographical Sketch

Dr. **Albert "Skip" Rizzo** received his Ph.D. in Clinical Psychology from the State University of New York at Binghamton. He is a Research Scientist at the University of Southern California Institute for Creative Technologies and has a faculty appointment with the USC School of Gerontology. Dr. Rizzo conducts research on the design, development and evaluation of Virtual Reality systems targeting the assessment and training/rehabilitation of spatial abilities, attention, memory, executive function and motor abilities. Additionally, he is conducting research on VR applications that use 360 Degree Panoramic video for exposure therapy (social phobia), role-playing applications (anger management, etc.), and recently has used this technology to capture news scenes for future multimedia journalism applications. He is also investigating the use of VR for pain distraction at LA Children's Hospital and is currently designing game-based physical rehabilitation VR scenarios for the elderly and persons with impairments due to Central Nervous System dysfunction (post-stroke and Alzheimer's Disease). His latest project has focused on the translation of the graphic assets from the Xbox game, Full Spectrum Warrior, into an exposure therapy application for combat-related PTSD with Iraq War veterans. His research also involves designing and evaluating 3D User Interface devices and interaction methods and he has created a graduate level course at USC entitled, "Human Factors and Integrated Media Systems". He is the associate editor of the journals, CyberPsychology and Behavior; and The International Journal of Virtual Reality, is Senior Editor of the MIT Press journal, Presence: Teleoperators and Virtual Environments, is on a number of editorial boards for journals in the areas of cognition and computer technology (Cognitive Technology; Journal of Computer Animation and Virtual Worlds; Media Psychology) and is the creator of the Virtual Reality Mental Health Email Listserver (VRPSYCH). He has recently guest-edited theme issues for Applied Psychophysiology and Biofeedback on "VR and Psychophysiology" and for the MIT journal Presence:Teleoperators and Virtual Environments on "Virtual Reality and Neuropsychology". Previously, he guest edited a theme issue in CyberPsychology and Behavior on "Aging and Information Technology" and has recently guest edited two new journal issues on "Virtual Rehabilitation" (in CyberPsychology and Behavior and in the International Journal on Disability and Human Development). In 2003, he served as General Chair for the IEEE VR2003 conference in Los Angeles and co-chaired this conference in 2004. He was also the Conference Chair of the 4th Annual Workshop on Virtual Rehabilitation on Catalina Island, Los Angeles in Sept. of 2005.

Tutorial
14
Full Day

An Overview of Human Information Processing for Human-Computer Interaction

Tuesday, **24 July 2007** @ **08:30 - 17:00** *305-A Conference Room*

Robert W. Proctor
Purdue University, *USA*
Kim-Phuong L. Vu
California State University, Long Beach, *USA*

Objectives:

One objective of this Tutorial is to provide an overview of fundamental concepts and findings concerning human information processing. Another is to relate contemporary knowledge of human information processing to issues of relevance to HCI.

Content and Benefits:

HCI is fundamentally an information-processing task. The human information processing approach is based on the idea that human performance, from displayed information to a response, is a function of several processing stages. The nature of these stages, how they are arranged, and the factors that influence how quickly and accurately a particular stage operates, can be discovered through appropriate research methods.

Human information processing analyses are used in HCI in several ways. First, basic facts and theories about information-processing capabilities are taken into consideration when designing user interfaces and tasks. The first part of this Tutorial will review classic and recent findings on such topics as attention, memory, decision-making, and action selection, and discuss their relevance for HCI.

Second, information-processing methods are used in HCI to conduct empirical studies evaluating the cognitive requirements of various tasks in which a human uses a computer. The second part of the Tutorial will describe recent developments in empirical methods for studying human information processing, and provide examples of how they can be applied to HCI.

Third, computational models developed in HCI are intended to characterize the information processing of a user interacting with a computer, and to predict human performance with alternative interfaces. The final part of the Tutorial will provide an introduction to modeling techniques that can be used to characterize and predict human information processing in HCI.

Target audience:

This Tutorial is geared toward human factors and HCI professionals interested in deepening their background in human information processing, or in a refreshing overview of research in human information processing, of recent developments in the area, and of human information processing contribution to HCI. It also should be of interest to computer scientists, industrial designers, and engineers interested in improving their designs by incorporating information-processing analyses.

Biographical Sketch

Dr. **Robert Proctor** is Professor of Psychology at Purdue University. Dr. Proctor is the coordinator of the program in Cognitive Psychology and co-coordinator of the interdisciplinary Human Factors program. He teaches courses in Human Factors in Engineering, Human Information Processing, Attention, and Perception and Action. Dr. Proctor's research focuses on basic and applied aspects of human performance. He has published over 150 articles on human performance and is author of numerous books and book chapters. His books include Human Factors in Simple and Complex Systems, Skill Acquisition and Human Performance, Stimulus-Response Compatibility: An Integrated Perspective, Attention: Theory and Practice, and Human Factors in Web Design. He is Fellow of the American Psychological Association and Association for Psychological Science, and Honorary Fellow of the Human Factors and Ergonomics Society.

Dr. **Kim Vu** is Assistant Professor of Psychology at California State University, Long Beach. She is Associate Director of the Center for Usability in Design and Assessment and of the Center for the Study of Advanced Aeronautic Technologies. Dr. Vu has over 50 publications in areas relating to human performance, human factors, and human-computer interaction. She is co-author of the chapter, "Human Information Processing: An Overview for Human-Computer Interaction," in The Human-Computer Interaction Handbook (1st and 2nd editions), co-editor of the Handbook of Human Factors in Web Design, and co-author of the book Stimulus-Response Compatibility Principles: Data, Theory, and Application.

Matching Emerging ICT Interfaces to User Needs

Tuesday, **24 July 2007** @ **08:30 - 17:00** *303 Conference Room*

Tutorial **15** Full Day

Gregg C. Vanderheiden
University of Wisconsin–Madison,
Trace R&D Center, *USA*

Objectives:

- Orientation to key emerging information and communication technologies (commercially available, demonstrated and probably available within the next few years, and still in the R&D stage).
- Recognition of opportunities presented by emerging technologies, related to cross-disability access.
- Identification of potential challenges presented by emerging technologies, related to cross-disability access.
- Suggestion of possible research and development topics that will provide the knowledge needed to address the accessibility needs of consumers related to emerging technologies

Content and Benefits:

Advances in mainstream information and communication technologies (ICT) present new opportunities, but also potential new challenges for cross-disability access. This Tutorial will overview key technologies that have recently become commercially available, those that have been demonstrated and will become available within the next few years, and those that are emerging in R&D. Needs of users with sensory, physical, and cognitive disabilities will be identified as they relate to these technologies. Finally, possible research and development topics will be identified that can provide the knowledge needed to address the accessibility needs of consumers related to emerging technologies.

The Tutorial will be interactive. Participants will both be briefed on results of a State of the Science Workshop held in Spring 2007 by the Trace Center and also asked for their input relative to an R&D agenda to develop accessibility solutions that can be implemented in mainstream technology products. All will benefit from the review of emerging technologies, and a greater understanding and awareness of implications for accessibility. Funding agency representatives and others interested in research funding will benefit from the discussion of and R&D agenda.

Target audience:

This Tutorial will provide information important to human factors professionals, mainstream technology product developers, researchers, and government or other funding agencies.

Biographical Sketch

Dr. **Gregg C. Vanderheiden** is the Director of the Trace R&D Center, and is a Professor in the Industrial and Systems Engineering Department (Human Factors Program) and the Biomedical Engineering Department at the University of Wisconsin-Madison (USA). Dr. Vanderheiden has been working in the area of technology and disability for over 35 years, pioneering in the field of augmentative and alternative communication, computer access, and universal design of information technology and telecommunication. Interface features developed by Dr. Vanderheiden and his team have been built into the Macintosh OS since 1987, OS/2 and the UNIX X Window system since 1993, and Microsoft Windows since 1995. He is co-chair of the Web Accessibility Content Guidelines Working Group and co-editor of WCAG 1.0 and WCAG 2.0 (currently in the last stages of development). Dr. Vanderheiden is also co-editor of the ANSI/HFES 200 standards on Human Factors Engineering of Software User Interfaces, and participates on numerous other international standards and guidelines working groups related to interface and accessibility. He is currently serving on the Telecommunications and Electronic and Information Technology Advisory Committee, formed by the U.S. Access Board to review and update Section 508 standards and Section 255 guidelines. Dr. Vanderheiden is a past President of RESNA, and a Founding Fellow of the American Institute of Medical and Biological Engineering (AIMBE). He holds degrees in electrical engineering, biomedical engineering, and his Ph.D. is in Technology in Communication, Rehabilitation, and Child Development (an interdisciplinary degree between the departments of Electrical and Computer Engineering, Communicative Disorders, and Educational Psychology, University of Wisconsin-Madison).

Tutorial
16
Full Day

Mobile User-Interface Design for Work, Home, Play and on the Way

Tuesday, **24 July 2007** @ **08:30 - 17:00** *305-B Conference Room*

Aaron Marcus
Aaron Marcus and Associates, Inc., *USA*

Objectives:

Participants will learn practical principles and techniques of Mobile User-Interface Design that are immediately useful. They will also have an opportunity to put them into practice through a series of pen and paper exercises.

Content and Benefits:

User interfaces (UIs) combining computation with communication functions, e.g., phone, organizer, camera, game machine, video, the Web, and music enable mobile products/services to permeate environments for work, play, and on the way. Consequently, developers must learn techniques to make mobile products/services easier to learn and use, more usable, useful, and appealing to an ever wider, more diverse set of users. This Tutorial summarizes key principles, techniques, hot issues, and current products/services. Special attention is given to information design/visualization and the impact of different cultures. Analyzing and designing mobile UIs from information, visually-oriented design perspective can make product/services easier to produce, sell, learn, use, and maintain. Users will find it easier to find, sort, play, and pay.

Target audience:

Researchers and developers of phone/PDA, vehicle, music/consumer electronics, and other mobile devices/appliances.

Biographical Sketch

Mr. **Aaron Marcus** received a BA in Physics from Princeton University (1965) and a BFA/MFA in Graphic Design from Yale University Art School (1968). He is an internationally recognized authority on the design of user interfaces for desktop, Web, mobile, and vehicle platforms. Mr. Marcus has given tutorials at HCII, SIGCHI, and SIGGRAPH conferences and at seminars for businesses and academic institutions around the world. He coauthored Human Factors and Typography for More Readable Programs (1990), The Cross-GUI Handbook (1994), and authored Graphic Design for Electronic Documents and User Interfaces (1992), all published by Addison-Wesley. Mr. Marcus was the world's first professional graphic designer to be involved full-time in computer graphics (1967), to program a desktop publishing system (for the AT&T Picturephone in 1969-71), to design virtual realities (1971-73), and to establish an independent computer-based graphic design firm (1982). In 1992, he received the National Computer Graphics Association Industry Achievement Award for contributions to computer graphics. His firm helped design the user interfaces of the first versions of AOL and Travelocity.

Reducing Risk Through Human Centred Design

Tutorial **17** Half Day

Tuesday, **24 July 2007** @ **08:30 - 12:00** *305-C Conference Room*

Nigel Bevan
Professional Usability Services, *UK*

Objectives:

Participants will learn how to select human-centered methods that are most effective in reducing risk in a particular project, as an integral part of systems development.

They will be introduced to:

- The ISO 13407 standard for human centered design, and the list of essential human centered activities in ISO PAS 18152.
- How these activities can be restructured into groups that map onto human centered methods.
- How to assess the potential risk to a project inherent in not carrying out activities in each group.
- How to use this information to decide which groups of methods should be prioritized.
- How to select the most appropriate method in each prioritized group.
- Understanding the benefits of this approach compared with existing recommended practice.
- The principles will be illustrated with examples to enable participants to apply the principles in other contexts.

Some familiarity with user-centered design is expected, but no prior knowledge of the standards is needed.

Content and Benefits:

ISO 13407 "Human-centred design processes for interactive systems" contains a widely-accepted framework for user-centered design. ISO PAS 18152 "Process assessment of human-system issues" contains a detailed set of human centered activities that are potentially needed to implement human centered design in systems engineering. Human centered design is the term used by ISO to emphasize the importance of designing for all stakeholders, not just users.

As part of project planning, each human centered design activity is reviewed to assess the potential risk to the project objectives if the activity is not conducted. Groups of activities can be associated with deliverables that can be produced by a related set of methods. Using risk-assessment to prioritize which activities are important to project success thus leads to the identification of methods that can be used to provide information to mitigate the most important risks. Potential alternative methods can be assessed against criteria such as:

- To what extent will each possible method address the activities that have been identified as important?
- How cost effective is each method likely to be, given the time and effort required and constraints such as available skills, access to stakeholders and other users, etc.?

The Tutorial will include practical exercises to apply the principles.

Members of the audience will also be invited to provide examples of situations where they had a choice of methods. The practicality of calculating the cost benefits and having these decisions accepted will be discussed.

Sufficient reference material will be provided on the web to enable participants to apply the principles to their own situation. This will be summarized in a handout. A discussion group with resources to follow up the course will be established for course participants at: *http://groups.yahoo.com/group/hcdrisk/* so that they can share experience of applying the principles.

Target audience:

This Tutorial addresses designers and developers with intermediate to advanced experience in Human centered design.

Biographical Sketch

Dr. **Nigel Bevan** is an independent consultant with wide industrial experience, who is also a research fellow at the University of York and a visiting professor at Dalian Maritime University, China. He has contributed to many international standards, and is editor of the new version of the ISO standard for usability methods supporting human-centered design. He was a member of the US National Academy of Science Committee on Human-System Design Support for Changing Technology for which he developed the risk-based approach usability conjunction with Jonathan Earthy of Lloyds Register and Barry Boehm of University of Southern California. The report is due to be published in May 2007. He has published a chapter on a framework for cost benefits in the book "Cost-Justifying Usability: An Update for the Internet Age" (Bias and Mayhew, 2005).

Tutorial
19
Half Day

Everywhere Interfaces

Tuesday, **24 July 2007** @ **13:30 - 17:00** *305-C Conference Room*

Alois Ferscha
Johannes Kepler Universität Linz, *Austria*

Objectives:

Pervasive and ubiquitous computing has developed a vision where the "computer" is no longer associated with the concept of a single device or a network of devices, but rather with the entirety of situative services originating in a digital world, which are perceived through the physical world. It is expected that services with explicit user input and output will be replaced by a computing landscape sensing the physical world via a huge variety of sensors, and controlling it via a plethora of actuators. The nature and appearance of computing devices will change to be hidden in the fabric of everyday life, invisibly networked, and omnipresent. Applications and services in such a context will have to be based on the notions of context and knowledge, and will have to cope with highly dynamic environments and changing resources. Interaction with such computing landscapes will presumably be more implicit, at the periphery of human attention, rather than explicit, i.e., at the focus of attention.

This Tutorial will give an overview of the emerging field of "everywhere interfaces". This term refers to an environment where computing devices pervade into objects of everyday life. Computers become "invisible", but physical interfaces will be "omnipresent". The Tutorial will contrast implicit and explicit interaction approaches at the frontiers of pervasive, integrated and thus "hidden" technology. Perceived invisibility and the invisibility of technology will spawn the interaction design space challenge, and help identifying strategies for embedding interaction into everyday objects and environments, into literally every "thing".

Content and Benefits:

1. Interaction Paradigms
   - Historical (HCI) foundations
     Interaction modes and modalities, Implicit / explicit interaction, Input / output modalities, Context awareness, Physical / tangible interaction, Spatial / ambient interfaces, Interaction design space, Social implications
2. Design and Implementation Principles
   - Design
     Interaction design process, Choosing interaction modalities, Defining desired abilities, features and properties of artefacts, Hardware/software architecture, Self-description, -management, and -organisation of artefacts, Ergonomics and design guidelines
   - Implementation
     Sensing technologies and recognition techniques, Actuators and output technologies, Interconnection of everyday objects, Software Frameworks
   - Challenges and visions
3. Case Study
   - Delivering hands-on experience

Target audience:

This Tutorial addresses Computer Science and Engineering professionals and researchers interested in the fields of interaction design, embodied interaction, tangible user interfaces, peripheral displays, pervasive display landscapes and the like. A case study delivering hands-on experience will accompany the Tutorial content.

Biographical Sketch

Prof. **Alois Ferscha** received his PhD degree from the University of Vienna, Austria, and joined the University of Linz in 2000 as a professor for computer science, where he is now head of the Department for Pervasive Computing and the speaker of the JKU Pervasive Computing Initiative. He has published on topics related to parallel and distributed computing, like e.g. Computer Aided Parallel Software Engineering, Performance Oriented Distributed/Parallel Program Development, Parallel and Distributed Discrete Event Simulation, Performance Modeling/ Analysis of Parallel Systems and Parallel Visual Programming. Currently he is focused on Pervasive Computing, Embedded Software Systems, Wireless Communication, Multi-user Cooperation, Distributed Interaction and Distributed Interactive Simulation. He has been the project leader of several national and international projects like e.g.: Network Computing, Performance Analysis of Parallel Systems and their Workload, Parallel Simulation of Very Large Office Workflow Models, Distributed Simulation on High Performance Parallel Computer Architectures, Modelling and Analysis of Time Constrained and Hierarchical Systems, Broadband Integrated Satellite Network Traffic Evaluation and Distributed Cooperative Environments, etc. Currently he is pursuing project work related to networked embedded systems, software frameworks for context computing, co-ordination architectures and models, wireless and mobile ad-hoc networks and sensor/actuator networks. In his application related work he has built context based application frameworks for the JKU "Wireless Campus" network, public community displays with wireless remote controls ("WebWall", "Digital Graffiti"), geo-enhanced, augmented reality mobile navigation systems ("SmartRoad", "DigitalPheromones"), RFID based realtime notification systems, wearable computing and embedded internet application frameworks ("DigitalAura", "SmartCase", "DigiScope").

He has been a visiting researcher at the Dipartimento di Informatica, Universita di Torino, Italy, at the Dipartimento di Informatica, Universita di Genoa, Italy, at the Computer Science Department, University of Maryland at College Park, College Park, Maryland, and at the Department of Computer and Information Sciences, University of Oregon, Eugene, Oregon, U.S.A. He has served on the committees of several conferences like PERVASIVE, UMBICOMP, ISWC, WWW, PADS, DIS-RT, SIGMETRICS, MASCOTS, MSWiM, MobiWac, TOOLS, Euro-Par, PNPM, ICS, etc. Ferscha is member of the OCG, GI, ACM, IEEE and holds the Heinz-Zemanek Award for distinguished contributions in computer science.

BCI Workshops

International Workshop on Brain-Computer Interface Technology & 2nd BCI2000 Workshop

Synopsis: Brain-Computer Interfaces (BCIs) use brain signals to communicate a user's intent. These systems do not depend on peripheral nerves and muscles. Thus, they can be used by people with severe motor disabilities to express their wishes to the outside world just by thinking.

Brain-Computer Interfaces integrate several aspects from Human-Computer Interaction (HCI) and Augmented Cognition (AugCog). For example, like with other conventional communication channels studied by HCI efforts, BCI communication needs to be optimized to best match the user's individual communication and control capacities. Also, just like with efforts in Augmented Cognition, brain-based communication depends on accurate measurement and interpretation of brain function.

Registration: Please register for the BCI Workshops at the Conference Secretariat. This will allow participation on both days of the BCI Workshops, as well as participation in the HCI International 2007 Conference.

Organization

Gerwin Schalk
Contact for USA, Europe and Australia
schalk@wadsworth.org
Brain–Computer Interface R&D Program
Wadsworth Center, USA

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Sponsors

National Institutes of Health, USA (EB006356 (GS))

The BCI2000 Project (*http://www.bci2000.org*)

g.tec Guger Technologies (Graz, Austria)

Program

- **International Workshop on Brain-Computer Interface Technology** *(Monday, 23 July 2007)*
  Brain-Computer Interfaces (BCIs) convert brain signals into outputs that communicate a user's intent. BCI systems can provide a new ability to communicate to people with severe motor disabilities. In this Workshop, we provide representative research reports from the rapidly growing field of BCI research. The format is a series of talks that will be delivered by BCI experts from the USA, Europe, and China.
- **2nd BCI2000 Workshop** *(Tuesday, 24 July 2007)*
  Brain-Computer Interfaces (BCIs) convert brain signals into outputs that communicate a user's intent. BCI systems can provide a new ability to communicate to people with severe motor disabilities. In this Workshop, we will provide hands-on practical tutorials of this technology using two different BCI approaches implemented using BCI2000 software and hardware from g.tec. BCI2000 is a general-purpose software system for Brain-Computer Interface research that is currently in use by more than 120 laboratories around the world. Devices from g.tec are ideally suited for BCI experiments. Their operation is fully supported by BCI2000. In these tutorials, we provide six EEG-based BCI systems for use by workshop participants.

International Workshop on Brain-Computer Interface Technology

Monday, 23 July 2007, 08:30 - 17:30

308 Conference Room

08:30-08:55	**Gerwin Schalk and Shangkai Gao** Opening remarks and brief overview of BCI research
09:00-09:50	**Gerwin Schalk, Ph.D.** *New York State Dept. of Health, USA* Brain-computer interfacing using electrocorticography (ECoG)
09:55-10:45	**Bo Hong, Ph.D.** *Tsinghua University, PR China* BCIs using EEG oscillations: towards practical applications
10:45-11:00	Coffee Break
11:00-11:50	**Leigh Hochberg, M.D., Ph.D.** *Department of Veterans Affairs / Massachusetts General Hospital / Harvard Medical School, USA* Intracortically-based human brain-computer interfaces
11:55-12:45	**Len Trejo, Ph.D.** *Quantum Applied Science and Research, USA* Development of a hybrid EEG sensor array for brain-computer interfaces
12:45-13:45	Lunch
13:45-14:35	**Febo Cincotti, Ph.D.** *University of Rome, Italy* Neuroelectrical imaging and different feedback modalities for BCI control
14:40-15:30	**Klaus–Robert Mueller, Ph.D.** *Technical University of Berlin / Fraunhofer, Germany* BBCI: A machine learning approach to Brain Computer Interfacing
15:30-15:45	Coffee Break
15:45-16:35	**Eric Sellers, Ph.D.** *New York State Dept. of Health, USA* Brain-computer interface via the P300 event-related potential
16:40-17:30	**Christoph Guger, Ph.D.** *g.tec Medical Engineering, Austria* Brain-Computer Interfacing in virtual environments

2nd BCI2000 Workshop

Tuesday, 24 July 2007, 08:30 - 17:00

308 Conference Room

08:30-08:55	**BCI2000: A General-Purpose Brain-Computer Interface System** *Gerwin Schalk, Ph.D.* This talk will provide an overview of the BCI2000 system and give examples of its use for brain-computer interfacing, data acquisition, stimulus presentation, and brain monitoring applications.
09:00-12:00	**Configuration, Conduction, and Analysis of Sensorimotor Rhythm Experiments** *Febo Cincotti, Ph.D., and Eric Sellers, Ph.D.* In this tutorial, the user learns how to analyze and configure BCI2000 to support brain-based control of a cursor on a computer screen.
	Note: Coffee available from 10:00 to 10:30.
12:00-13:00	Lunch Break
13:00-14:00	**Advanced Signal Processing** *Christoph Guger, Ph.D.* In this tutorial, the user learns advanced signal processing concepts for offline analysis of BCI experiments.
14:00-17:00	**Configuration, Conduction, and Analysis of P300 Experiments** *Eric Sellers, Ph.D. and Febo Cincotti, Ph.D.* In this tutorial, the user learns how to analyze and configure BCI2000 to support spelling using P300 evoked potentials.
	Note: Coffee available from 15:00 to 15:30.

Parallel Sessions Overview

Wednesday, 25 July 2007 @ 08:00 - 12:30

Conference Thematic Area	08:00 – 10:00 *(page 36)* Session Title	10:30 – 12:30 *(page 42)* Session Title
EHAWC	• Visual Discomfort and Muscle Pain - Is There a Correlation?	• Office Health: Health Effects of Choices in the Office Work Environment
HIMI	• Signposts to Tomorrow's Human-Computer Interaction • Advanced Interfaces for Communication and Collaboration Support (I) • Information in the Human Environment	• Human Computer Interaction in ICT (Information Communication Technology) • Human Aspects of Privacy Assurance • Human Interface in Management Information Technology
HCI	• Interactive Augmented & Virtual Reality Applications & Systems • Patterns and Models for the Development of Interactive Systems • Scenario-based Design in Asia • HCI in Aviation • Innovative Technology Benefiting Medical Environments • Conversation, Dialogue and Communication • User Interfaces for Advanced Applications	• Usability Methods & Approaches to Support International Users Populations • Design for Effective Online User Experience • Information Life Cycle in Business Activity • Smart Living Spaces • Safety of Medication Usage • Human Factors in Digital Production
EPCE	• Psychophysiology in Ergonomics (I) • Cognitive Issues in User Interface Design (I)	• Psychophysiology in Ergonomics (II)
UAHCI	• Research and Development Methods in Universal Access (I) • Designing for Diversity • Universal Access to HCI for Infomobility Services • Multimedia Accessibility • Advanced Human-Robot Interaction • Human, Computer & Environment	• Automatic and Manual Evaluation of Web Sites • Meta-design • Smart Environments and Ambient Intelligence (I): Interaction Design and Evaluation • Eye Gaze and Gesture Tracking
VR	• Application of Augmented Reality to the Human Centered Design and Prototyping for Information Appliances	• Novel Approaches in VR
UI	• User Interface Design and Global Acceptance (I): Development processes	• Cross-Cultural HCI Design: Best Practices and Next Practices • Designing for Emerging Countries – Is It New Wine in a New Bottle? • User Interface Design for Mobile Devices
OCSC		• Social Computing
AC	• Physiological and Neurophysiological Measures and Augmenting Cognition	• Neurotechnology and AugCog Applications: Present and Future
DHM	• Computer Aided Ergonomics Analysis (I) • Motion Prediction and Motion Capture (I)	• Virtual Reality and Movement Modeling • Digital Patient • Technology for Education & Training

EHAWC Ergonomics and Health Aspects of Work with Computers • **HIMI** Human Interface and the Management of Information • **HCI** Human-Computer Interaction • **EPCE** Engineering Psychology and Cognitive Ergonomics

Wednesday, **25 July 2007** @ **13:30 - 18:00**

Conference Thematic Area	**13:30 – 15:30** *(page 48)* Session Title	**16:00 – 18:00** *(page 54)* Session Title
EHAWC	• Psychological and Kinematic Issues	• Ergonomic Design
HIMI	• Intelligent HCI Convergence (I) • Embodied Interaction and Communication • Adaptive Interaction and Human Information Processing • Designing Ubiquitous Society: HCI Perspectives	• Virtual Reality 2.0 • Text Analysis and Mining: Theory and Applications • Brain Functions in Mobile Interactions • e-Learning and m-Learning • Networks and Communication
HCI	• Quality Methodologies for the Diffusion of the Cultural Heritage through Hypermedia Systems: e-Learning, e-Commerce and Tourism • Emotions in HCI: Theory, Synthesis and Evaluation • Pattern Recognition Technologies for Interactive Interface (I) • Smart Textiles • Location Awareness and Environment Navigation	• The Computer Games and Interactive 3D Graphics System • Usability Practice in China • Technologies and Intelligent Systems (I) • Empower Elders to Enjoy New Technologies • HCI in MIS (I) • Presence and Copresence: Toward Understanding the User's Perception in Human-Computer Interaction • Intelligent Interaction Environments • Adaptive Interfaces and Environments
EPCE	• User's Working Memory, Mental Workload, and Task Performance	• Human Factors Integration(s) in Aviation Systems
UAHCI	• Facing Virtual Environments with Innovative Interaction Techniques • Evaluation of Educational Software for Universal Access • Intelligent Interfaces in e-Learning: a Myth or Pragma • HCI Tools and Procedures as m-Learning Enablers • Older Adults and Technology: Understanding and Improving the User Experience • Smart Environments and Ambient Intelligence (II): Tools, Architectures and Infrastructures	• Multimodal Efficient Interaction within Learning e-Environments • FUITEL: Future Interfaces in Technology Enhanced Learning (I) • Enhancing User Input • PANEL: Accessible e-Learning
VR	• Novel Applications of VR (I)	• VR and Health
UI	• Designing for Security and Privacy across Cultures and Social Contexts	• PANEL: Physical Computing, Open Source and Data Visualization: Collaboration between Parsons The New School for Design, New York, U.S. and Tsinghua University, Beijing, China • Global Software Design Solutions
OCSC	• HCI Research in Culture-Driven Mediated Communication, Cognition & Recreation	• Security, Trust and Participation
AC	• Sensors and Algorithms for Mental State Estimation	
DHM	• Functional Modeling and Rehabilitation (I) • Advanced Shape and Size Analysis • Digital Human Modeling in Medical and Rehabilitation Applications	• User Experience Modeling

UAHCI Universal Access in Human-Computer Interaction • **VR** Virtual Reality, Usability and Internationalization • **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling

Parallel Sessions Overview

Thursday, 26 July 2007 @ 08:00 - 12:30

Conference Thematic Area	08:00 – 10:00 *(page 60)* Session Title	10:30 – 12:30 *(page 66)* Session Title
EHAWC		• Ergonomics in Interactive Systems
HIMI	• New Human Interface and System Developments for Energy and Environmental Problems • Display and Operations in Mobile Interactions • Mobile Application for the Future	• Advanced Interfaces for Communication and Collaboration Support (II) • Intelligent HCI Convergence (II) • Enhancing Information Search
HCI	• Textile E-business • Reliability and Security for Information Engineering • Current Trends in Usability Engineering in Japan • Information Complexity of Systems and Displays • Gesture Recognition • Emotion and Interaction • Product Design	• Technologies and Intelligent Systems (II) • HCI in MIS (II) • Mobile Devices (I) • Pattern Recognition Technologies for Interactive Interface (II) • Usability and Software Engineering • HCI Design (I) • Learning Environments (I)
EPCE	• Command and Control	• Cognitive Issues in User Interface Design (II) • Mental Workload
UAHCI	• Design for All and Ambient Intelligence • Cognition, Learning and Education • Cognition, Learning and the Design of Accessible and Assistive Systems • Cross-Country/Cross-Culture Usability Studies	• HCI Concepts for the Future Driver • Computer Games Meet Universal Access • Designing for Mobile Interaction • Facilitating Computer Interaction in Older Adults • Health Applications and Services
VR	• 3D Interaction in Virtual Reality	• VR for Digital Museum and Digital Heritage
UI	• Advanced and Adaptive Interactions between Humans and Systems in Crisis Control (ICIS-CHIM) • Cross Culture Design -- Taiwan Experience • PANEL: Global Innovative Design for Social Change	• Cross-Cultural HCI * from an Ibero-American Perspective
OCSC	• Learning Communities	
AC	• Adaptive Task Allocation and Support (I)	• Augmented Cognition: From Laboratory to Application
DHM	• Computer Aided Ergonomics Analysis (II)	• Functional Modeling and Rehabilitation (II)

EHAWC Ergonomics and Health Aspects of Work with Computers • **HIMI** Human Interface and the Management of Information • **HCI** Human-Computer Interaction • **EPCE** Engineering Psychology and Cognitive Ergonomics

Thursday, **26 July 2007** @ **13:30 - 18:00**

Conference Thematic Area	**13:30 – 15:30** *(page 72)* Session Title	**16:00 – 18:00** *(page 78)* Session Title
EHAWC		• Health and Well-being in the Human Environment
HIMI	• Interacting with the World Wide Web • Business Management • Public and Personal Information Spaces • Education and Entertainment Environments	• Information Visualisation Techniques • Designing Information Systems • Digital Libraries
HCI	• Mobile Storytelling, Sharing, and Video • Multimodal Interaction • Speech and Voice • Usability Evaluation Methods • Interactive Digital TV • Usability Case Studies • Mobile Services	• Learning Environments (II) • Language Processing in HCI • Intelligence at the Interface • Evaluation: Methods and Tools (I) • Usability and User-Oriented Design Practice
EPCE	• Manned-unmanned Teaming Collaborative Work in Vehicle Guidance	• Cognitive Ergonomics in Aviation and Automotive
UAHCI	• Universal Accessibility of Documents (I) • Various Interfaces Designed for User • Inclusive Design • Merging Medicine and VR: The INTUITION Working Group Medicine and Neuroscience • User Driven Innovation of Novel Applications (UDINA)	• Non Visual Interaction and Brain Interfaces • Multi-modal Interactions for Ubiquitous Environment • Authentication and Access Control for Human Computer Interaction • Universal Access in Intelligent Environments • Deaf Users & Sign Language • Ageing and HCI • Applications for Future Virtual Reality Workspaces
VR	• Novel Applications of VR (II)	• Scene Rendering
UI	• User Interface Design and Global Acceptance (II) : Industrial Applications • Culture-friendly Interface Design	• Usability and Culture (I) • Customizing the User Experience for the China Market: Cross Culture Usability Methods & Practices
OCSC	• PANEL: Local / Global Linkages: A Multi-Country Perspective on Civic Intelligence	
AC	• fNIR and Related Technology and Emerging AugCog Applications	
DHM		• Future DHM

UAHCI Universal Access in Human-Computer Interaction • **VR** Virtual Reality, Usability and Internationalization • **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling

Parallel Sessions Overview

Friday, 27 July 2007 @ 08:00 - 12:30

Conference Thematic Area	08:00 – 10:00 *(page 84)* Session Title	10:30 – 12:30 *(page 90)* Session Title
EHAWC	• Ecological Ergonomics in Product Design – with a Particular Emphasis on Comfort in Office Seating	
HIMI	• Novel Devices and Techniques for Interacting with Information • Knowledge Sharing and Collaboration	• Mobile in Everyday Interactions • Industrial and Other Advanced Applications
HCI	• Usability Issues in Business Application • HCI in MIS (III) • Tangible User Interfaces • Pen-based Interaction and Sketching • Eye Tracking • User Interface Development Issues • Understanding Users	• Visualisation Techniques and Metaphors • HCI Design (II) • Ambient and Table-top Displays • Theoretical Issues in HCI • Interacting with Mobile Phones
EPCE	• Cognitive Issues in User Interface Design (III)	• Human Modeling in Design
UAHCI	• FUITEL: Future Interfaces in Technology Enhanced Learning (II) • Applications of HCI for Service Science • Non Visual User Interfaces • Adaptation and Personalisation • Capture, Memory and Accessibility	• Interaction Design for Intelligent Transportation Systems • Mobile Interaction and Universal Access
VR		• Mixed Reality, Interaction, and Simulation • Virtual Reality Studies in China
UI	• Cultural Usability: Cross Cultural Issues in Usability Evaluation Methods (UEM) (I)	• Cross-cultural and Global Communication • Cultural Usability: Cross Cultural Issues in Usability Evaluation Methods (UEM) (II)
OCSC		• Developing On-line Communities • Knowledge Communities
AC	• Adaptive Task Allocation and Support (II)	• AugCog-Enabled Simulation and Training
DHM	• Motion Prediction and Motion Capture (II)	• Functional Modeling and Rehabilitation (III) • Advances in Digital Human Modeling

EHAWC Ergonomics and Health Aspects of Work with Computers • **HIMI** Human Interface and the Management of Information • **HCI** Human-Computer Interaction • **EPCE** Engineering Psychology and Cognitive Ergonomics

Friday, **27 July 2007** @ **13:30 - 18:00**

Conference Thematic Area	**13:30 – 15:30** *(page 96)* Session Title	**16:00 – 18:00** *(page 102)* Session Title
EHAWC		
HIMI	• Cognitive and Psychological Issues of Interacting with Information • Supporting Development	• Visual Information • Supporting Design and Usability
HCI	• Electronic and Mobile Games • Mobile Devices (II) • HCI Patterns • Interacting with Images • Evaluation: Methods and Tools (II) • Web Applications for Everyday Life	• Advanced Displays • Enhancing Visual Interaction • Interacting in Virtual and Augmented Environments • Information Search • Teamwork Support and Collaboration • Mobile Interaction • HMI Theory and Practice in Industries
EPCE	• Human Performance and Error	• Cognitive Design
UAHCI	• Research and Development Methods in Universal Access (II) • Design for All and e-Inclusion • Universal Accessibility of Documents (II)	• Advanced Environments and Technologies • Usability and Accessibility of e-Government • Web Accessibility
VR	• Designing and Developing Virtual Environments	• Interacting in Virtual Environments
UI	• User Experience Research and Design in Multinational Corporate Environment • European Localization Research and Activities with Focus on the Asian Market	• Global Development for Global Users • Designing for Culture • Usability and Culture (II)
OCSC	• Social Behaviour in On-line Communities	• Interaction Design for On-line Communities
AC	• AugCog Lessons Learned and Future Directions for Enabling "Anyone, Anytime, Anywhere" Applications	
DHM	• Ergonomic Applications of Digital Human Modeling • Anthropometry and Visible Human-based Virtual Medicine	• Modeling, Animation and Simulation

UAHCI Universal Access in Human-Computer Interaction • **VR** Virtual Reality, Usability and Internationalization • **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling

Parallel Sessions

Wednesday 08:00 - 10:00

EHAWC

Ergonomics and Health Aspects of Work with Computers

Visual Discomfort and Muscle Pain - Is There a Correlation?

305-A Conference Room

Chair(s): Arne Aarås, *Buskerud University College, Norway*.

Can Visual Discomfort Influence on Muscle Pain and Muscle Load for Visual Display Unit (VDU) Workers?
Arne Aarås, Gunnar Horgen, Magne Helland, *Buskerud University College, Norway*.

Do the Luminance Levels of the Surroundings of Visual Display Units (VDU) and the Size of the Characters on the Screen Effect the Accommodation, the Muscle Load and Productivity During VDU Work?
Gunnar Horgen, Magne Helland, Tor Martin Kvikstad, Arne Aarås, *Buskerud University College, Norway*.

Do Background Luminance Levels or Character Size Effect the Eye Blink Rate during Visual Display Unit (VDU) work – Comparing Young Adults with Presbyopes?
Magne Helland, Gunnar Horgen, Tor Martin Kvikstad, Arne Aarås, *Buskerud University College, Norway*.

Mechanisms for Work Related Disorders among Computer Workers
Mikael Forsman, Stefan Thorn, *National Institute for Working Life, Sweden*.

Neuromuscular Principles in the Visual System and their Potential Role in Visual Discomfort
J. Richard Bruenech, Inga Britt Haugen, *Buskerud University College, Norway*.

Video Display Terminals and Neck Pain: When Ophthalmology Explains the Failure of Biomechanical Intervention
Elvio Ferreira Jr, *Centro Universitario Sao Camilo, Brazil*; Karina Ferreira, *Instituto Geraldo Ferreira de Medicina, Brazil*; Graziela Ferreira, *Universidade de Sao Paulo, Brazil*.

Musculoskeletal and Performance Effects of Monocular Display Augmented, Articulated Arm Based Laser Digitizing
William Littell, Kari Babski-Reeves, Gary McFadyen, John McGinley, *Mississippi State University, USA*.

HIMI

Human Interface and the Management of Information

Signposts to Tomorrow's Human-Computer Interaction

305-B Conference Room

Chair(s): Hans-Jörg Bullinger, *Fraunhofer-Gesellschaft, Germany*.

Signposts to Tomorrow's Human-Computer Interaction
Hans-Jörg Bullinger, *Fraunhofer-Gesellschaft, Germany*; Dieter Spath, Matthias Peissner, *Fraunhofer, Germany*.

Machine Learning and Applications for Brain-Computer Interfacing
Klaus-Robert Müller, *Fraunhofer, Germany*; Matthias Krauledat, *Technical University Berlin, Germany*; Guido Dornhege, *Fraunhofer, Germany*; Gabriel Curio, *Charité University of Medicine, Germany*; Benjamin Blankertz, *Fraunhofer, Germany*.

Fovea-Tablett®: A New Paradigm for The Interaction with Large Screens
Jürgen Geisler, Ralf Eck, Nils Rehfeld, Elisabeth Peinsipp-Byma, Christian Schütz, Sven Geggus, *Fraunhofer, Germany*.

Intuitive Human-Machine-Interaction and Implementation on a Household Robot Companion
Christopher Parlitz, Winfried Baum, Ulrich Reiser, Martin Haegele, *Fraunhofer, Germany*.

Human-centered Development of Advanced Driver Assistance Systems
Günther Nirschl, *Fraunhofer, Germany*.

New Approaches to Intuitive Auditory User Interfaces
Dieter Spath, Matthias Peissner, Lorenz Hagenmeyer, *Fraunhofer, Germany*; Brigitte Ringbauer, *University of Stuttgart, Germany*.

HEI! – The Human Environment Interaction
José Encarnação, *Fraunhofer, Germany*.

Advanced Interfaces for Communication and Collaboration Support (I)

305-C Conference Room

Chair(s): Yoshio Nakatani, *Ritsumeikan University, Japan*; Shogo Nishida, *Osaka University, Japan*.

Friendly Process of Human-Computer Interaction - A Prototype System in Nostalgic World -
Seiko Myojin, Mie Nakatani, Hirokazu Kato, Shogo Nishida, *Osaka University, Japan*.

Fond Memory Management System: Using Information about Communities
Katsuya Hashimoto, Yoshio Nakatani, *Ritsumeikan University, Japan*.

Communication Environment for Sharing Fond Memories
Mie Nakatani, Seiko Myojin, Masumi Simizu, Hirokazu Kato, Shogo Nishida, *Osaka University, Japan*.

Evaluation of the Participant-Support Method for Information Acquisition in the "Multiplex Risk Communicator"
Hiroshi Yajima, Tomohiro Watanabe, Ryoichi Sasaki, *Tokyo Denki University, Japan*.

Extraction of Anchor-Related Text and its Evaluation by User Studies
Bui Quang Hung, Masanori Otsubo, Yoshinori Hijikata, Shogo Nishida, *Osaka University, Japan*.

Tasting Robot with an Optical Tongue: Real Time Examining and Advice Giving on Food and Drink
Hideo Shimazu, Kaori Kobayashi, *NEC System Technologies, Ltd., Japan*; Atsushi Hashimoto, Takaharu Kameoka, *Mie University, Japan*.

Usability of Electronic Medical Record Systems: An Application in its Infancy with a Crying Need
Hal Miller-Jacobs, John Smelcer, *Human Factors International, USA*.

Information in the Human Environment

Exhibition Hall 2-H

Chair(s): Gunilla Bradley, *Royal Institute of Technology, Sweden*.

Resolving Assumptions in Art-Technology Collaboration as a Means of Extending Shared Understanding
Yun Zhang, Alastair Weakley, Ernest Edmonds, *University of Technology, Sydney, Australia*.

Human-friendly HCI Method for the Control of Home Appliance
Seung-Eun Yang, *Korea Aerospace Research Institute (KARI), Korea*; Jun-Hyeong Do, Hyoyoung Jang, Zeungnam Bien, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

The Vision of Ubiquitous Media Services: How Close Are We?
Maria Åkesson, Carina Ihlström Eriksson, *Halmstad University, Sweden*.

Context-Based Loose Information Structure for Medical Free Text Document
Tadamasa Takemura, *Kyoto University Hospital, Japan*; Kazuya Okamoto, Hyogyong Kim, Masahiro Hirose, *Kyoto University, Japan*; Tomohiro Kuroda, Hiroyuki Yoshihara, *Kyoto University Hospital, Japan*.

The Relationship between Working Conditions and Musculoskeletal/Ergonomic Disorders in a Manufacturing Facility
Dennis Jones, *Northern Illinois University, USA*.

Mobile Social Networking Based on Mobile Internet and Ubiquitous Web Services
Yung Bok Kim, *Sejong University, Korea*.

HCI

Interactive Augmented & Virtual Reality Applications & Systems

201-A Conference Room

Chair(s): Sepideh Chakaveh, *Fraunhofer, Germany*.

Travelling Stories: Mobile Applications for Storytellers
Anxo Cereijo Roibas, *University of Brighton, UK*; Nina Sabnani, *National Institute of Design, India*; Riccardo Sala, *Dare Digital, UK*.

Cyberwalk: Implementation of a Ball Bearing Platform for Humans
Martin Schwaiger, Thomas Thümmel, Heinz Ulbrich, *Technische Universität München, Germany*.

Static and Dynamic Hand-Gesture Recognition for Augmented Reality Applications
Stefan Reifinger, Frank Wallhoff, Markus Ablaßmeier, Tony Poitschke, Gerhard Rigoll, *Technische Universität München, Germany*.

IMPROVE: Designing Effective Interaction for Virtual and Mixed Reality Environments
Pedro Santos, André Stork, *Fraunhofer, Germany*; Thomas Gierlinger, Alain Pagani, *TU-Darmstadt, Germany*; Bruno Araújo, Ricardo Jota, Luis Bruno, Joaquim Jorge, Joao Madeiras Pereira, *INESC-ID, Portugal*; Martin Witzel, Giuseppe Conti, Raffaele De Amicis, *GraphiTech, Italy*; Iñigo Barandarian, Céline Paloc, *VicomTech, Spain*; Maylu Hafner, *UNIMEP, Brazil*; Don McIntyre, *The Lighthouse, UK*.

Context-Aware Mobile AR System for Personalization, Selective Sharing, and Interaction of Contents in Ubiquitous Computing Environments
Youngjung Suh, Youngmin Park, Hyoseok Yoon, Yoonje Chang, Woontack Woo, *Gwangju Institute of Science and Technology (GIST), Korea*.

Multifinger Haptic Interface for Collaborative Tasks in Virtual Environments
María Oyarzábal, Manuel Ferre, Salvador Cobos, Mary Monroy, Jordi Barrio, Javier Ortego, *Universidad Politécnica de Madrid, Spain*.

A New Model of Collaborative 3D Interaction in Shared Virtual Environment
Nassima Ouramdane-Djerrah, Samir Otmane, Malik Mallem, *University of Evry, France*.

Patterns and Models for the Development of Interactive Systems

201-B Conference Room

Chair(s): Peter Forbrig, *University of Rostock, Germany*.

ORCHESTRA: Formalism to Express Static and Dynamic Model of Mobile Collaborative Activities and Associated Patterns
Bertrand David, René Chalon, Olivier Delotte, Guillaume Masserey, *Ecole Centrale de Lyon, France*.

Patterns for Task- and Dialog-Modeling
Maik Wurdel, Peter Forbrig, *University of Rostock, Germany*; Thiruvengadam Radhakrishnan, Daniel Sinnig, *Concordia University, Canada*.

Effective Integration of Task-Based Modeling and Object-Oriented Specifications
Anke Dittmar, *University of Rostock, Germany*; Ashraf Gaffar, *Concordia University, Canada*.

Task-Based Prediction of Interaction Patterns for Ambient Intelligent Environments
Kristof Verpoorten, Kris Luyten, Karin Coninx, *Hasselt University, Belgium*.

Towards an Integrated Approach for Task Modeling and Human Behavior Recognition
Martin Giersich, Peter Forbrig, Georg Fuchs, Thomas Kirste, Daniel Reichart, Heidrun Schumann, *University of Rostock, Germany*.

Integrating Authoring Tools into Model Driven Development of Interactive Multimedia Applications
Andreas Pleuß, Heinrich Hußmann, *University of Munich, Germany*.

Model-Based Usability Testing - Evaluation of Tool Support
Gregor Buchholz, *University of Rostock, Germany*; Juergen Engel, Christian Märtin, *University of Applied Sciences Augsburg, Germany*; Stefan Propp, *University of Rostock, Germany*.

Scenario-based Design in Asia

201-C Conference Room

Chair(s): Kentaro Go, *University of Yamanashi, Japan*.

A New User-Centered Design Process for Creating New Value and Future
Yasuhisa Itoh, *U'eyes Design Inc., Japan*; Yoko Hirose, Hideaki Takahashi, Masaaki Kurosu, *National Institute of Multimedia Education, Japan*.

A Scenario-based Design Method with Photo Diaries and Photo Essays
Kentaro Go, *University of Yamanashi, Japan*.

Participatory Design Using Scenarios in Different Cultures
Makoto Okamoto, Hidehiro Komatsu, *Future University - Hakodate, Japan*; Ikuko Gyobu, *Ochanomizu University, Japan*; Kei Ito, *Future University - Hakodate, Japan*.

Scenario-Based Product Design, a Real Case
Der-Jang Yu, *ScenarioLab, Taiwan China*; Huey-Jiuan Yeh, *Industrial Technology Research Institute (ITRI), Taiwan China*.

Micro-Scenario Database for Substantializing the Collaboration Between Human Science and Engineering
Masaaki Kurosu, *National Institute of Multimedia Education, Japan*; Kentaro Go, *University of Yamanashi, Japan*; Naoki Hirasawa, *Otaru University of Commerce, Japan*; KASAI Hideaki, *NEC Software Hokkaido, Ltd., Japan*.

Application of Micro-Scenario Method (MSM) to User Research for the Motorcycle's Informatization - A Case Study for the Information Support System of Motorcycle
Hiroshi Daimoto, *Yamaha Motors Co., Ltd / The Graduate University for Advanced Studies, Japan*; Sachiyo Araki, *YAMAHA MOTOR Co., Ltd., Japan*; Masamitsu Mizuno, *Yamaha Motors Co., Ltd, Japan*; Masaaki Kurosu, *National Institute of Multimedia Education, Japan*.

Verification of Development of Scenarios Method and Visual Formats for Design Process
Haifu Lin, *The Graduate University for Advanced Studies, Japan*; Masaaki Kurosu, Hideaki Takahashi, Hiroshi Kato, *National Institute of Multimedia Education, Japan*; Takeshi Toya, *Tokai University, Japan*.

HCI in Aviation

302 Conference Room

Chair(s): Steven Landry, *Purdue University, USA*.

Flight Crew Perspective on the Display of 4D Information for En Route and Arrival Merging and Spacing
Vernol Battiste, Walter W. Johnson, Nancy H. Johnson, Stacie Granada, Quang Dao, *NASA Ames Research Center, USA*.

Conceptual and Technical Issues in Extending Computational Cognitive Modeling to Aviation
Alex Kirlik, *University of Illinois at Urbana-Champaign, USA*.

Predicting Perceived Situation Awareness of Low Altitude Aircraft in Terminal Airspace Using Probe Questions
Thomas Strybel, Kim-Phuong Vu, *California State University, Long Beach, USA*; John P. Dwyer, *The Boeing Company, USA*; Jerome Kraft, Thuan Ngo, Vanessa Chambers, Fredrick P. Garcia, *California State University, Long Beach, USA*.

The Impact of Automation and FMS in Flight Safety: Result of a Survey and an Experimental Study
Diyar Akay, *Gazi University, Turkey*; Ergun Eraslan, *Baskent University, Turkey*; Cengiz Yoldas, *Commercial Pilot, Turkey*.

Evaluation of Process Tracing Technique to Assess Pilot Situation Awareness in Air Combat Missions
Ketut Sulistyawati, Yoon Ping Cui, Yeow Min Tham, Yeow Koon Wee, *Nanyang Technological University, Singapore*.

Culture and Communication in the Philippine Aviation Industry
Rosemary Seva, Alma Maria Jennifer Gutierrez, *De La Salle University - Manila, Philippines*; Henry Been-Lirn Duh, *Nanyang Technological University, Singapore*.

Parallel Sessions

HCI

Innovative Technology Benefiting Medical Environments

303 Conference Room

Chair(s): Holly Vitense, *Medtronic Inc., USA*; Edmond Israelski, *Abbott Laboratories, USA*.

Industrial Design and Human Factors: Design Synergy for Medical Devices
Merrick Kossack, Andrew Gellatly, Alice Jandrisits, *Baxter Healthcare Corporation, USA*.

How New Technologies Can Help Create Better UI's for Medical Devices
William Muto, Edmond Israelski, *Abbott Laboratories, USA*.

Augmented Virtual Reality for Laparoscopic Surgical Tool Training
Kanav Kahol, *SimET Center/Arizona State University, USA*; Jamieson French, Troy McDaniel, Sethuraman Panchanathan, *Arizona State University, USA*; Mark Smith, *Banner Good Samaritan Hospital, USA*.

Managing Group Therapy through Multiple Devices
Luís Carriço, Marco De Sá, Luis Duarte, João Carvalho, *University of Lisbon, Portugal*.

Usability Issues in the Development of a User Interface for an Alerts and Reminders System for a Nursing Documentation Application
Jose Borges, Nestor Rodriguez, Carlos Perez, Gilberto Crespo, *University of Puerto Rico at Mayagüez, Puerto Rico*.

Human Factors: User Experience Design Guidelines for Telecare Services
Alejandro Rodriguez-Ascaso, *UNED, Spain*; Bruno Von Niman, *Vonniman Consulting, Sweden*; Steve Brown, *BT Group, UK*; Torbjørn Sund, *Telenor ASA, Norway*.

Wearable computers IN the Operating Room Environment
Qi Ma, Peter Weter, *City University London, UK*; Gerlinde Mandersloot, *Royal London Hospital, UK*; Arjuna Weerasinghe, *St. Bartholomew's Hospital, UK*; Darren Morrow, *Norfolk and Norwich University Hospital, UK*.

Conversation, Dialogue and Communication

Exhibition Hall 2-E

Chair(s): Andrea Corradini, *University of Potsdam, Germany*.

Developing a Conversational Agent using Ontologies
Manish Mehta, *Georgia Institute of Technology, USA*; Andrea Corradini, *University of Potsdam, Germany*.

Persuasive Effects of Embodied Conversational Agent Teams
Hien Nguyen, Judith Masthoff, Pete Edwards, *University of Aberdeen, UK*.

Conspeakuous: Contextualising Conversational Systems
S. Arun Nair, *IIT Delhi, India*; Amit Anil Nanavati, Nitendra Rajput, *IBM Research, India*.

Playwright Agent as Adaptive Scripts for Organization-Communication
Yu-Pei Yeh, Teng-Wen Chang, *Yunlin University of Science and Technology, Taiwan China*.

"Show and Tell": Using Semantically Processable Prosodic Markers for Spatial Expressions in an HCI System for Consumer Complaints
Christina Alexandris, *Institute for Language and Speech Processing (ILSP), Greece*.

Chat-Robot based Web Content Presentation Interface and Its Evaluation
Yumi Kikuchi (Tomioka), Kota Hidaka, Shinya Nakajima, Minoru Kobayashi, *Nippon Telegraph and Telephone Corp., Japan*.

A Feasibility Study of Sixth Sense Computing Scenarios in a Wearable Community
Seunghwan Lee, Hojin Kim, Sumi Yun, Geehyuk Lee, *Information and Communications University, Korea*.

User Interfaces for Advanced Applications

Exhibition Hall 2-F

Chair(s): Ichiro Kageyama, *Nihon University, Japan*.

A Human-Centered Systems Approach to Ship Facility Design
Chiuhsiang Lin, Yung-Tsan Jou, Chih-Wei Yang, Shi-Bin Lin, Yao-Hung Hsieh, Hung-Jen Chen, *Chung Yuan Christian University, Taiwan China*.

Designing an Ergonomic Computer Console on the Ship
Chiuhsiang Lin, Yung-Tsan Jou, Chih-Wei Yang, Chun-Lang Huang, Tse-Jung Chen, Ming-Zhe Tsai, *Chung Yuan Christian University, Taiwan China*.

AGV Simulator and Implementer Design
Qiang Huang, *ShenZhen University, China*; TianHao Pan, *Imperial College, UK*; WenHuan Xu, *Shenzhen University, China*.

INT-MANUS: Interactive Production Control in a Distributed Environment
Thomas Schlegel, Aravind Srinivasan, Maxim Foursa, Manfred Bogen, Rejin Narayanan, David D-Angelo, *Fraunhofer, Germany*; Géza Haidegger, Istvan Mezgar, *CIM-EXP, Hungary*; Joseph Canou, Damien Sallé, *Robosoft S.A., France*; Fabrizio Meo, *Fidia, Germany*; Jon Agirre Ibarbia, *Fatronik, Spain*; Anja Herrmann Praturlon, *Centro Ricerche Fiat, Italy*.

Affordance Table – A Collaborative Smart Interface for Process Control
Jari Laarni, Leena Norros, Hanna Koskinen, *Technical Research Centre of Finland (VTT), Finland*.

Stripe-Cache: An Efficient Cache Scheme for Building Multimedia Oriented RAID System
Wei Qinqi, Xie Changsheng, Li Xu, *Huazhong University of Science and Technology, China*.

EPCE

Engineering Psychology and Cognitive Ergonomics

Psychophysiology in Ergonomics (I)

311-C Conference Room

Chair(s): Richard Backs, *Central Michigan University, USA*; Wolfram Boucsein, *University of Wuppertal, Germany*.

Combining Skin Conductance and Heart Rate Variability for Adaptive Automation During Simulated IFR Flight
Wolfram Boucsein, Andrea Haarmann, Florian Schaefer, *University of Wuppertal, Germany*.

Impact of Long Haul Flights on Performance, Well-Being, and Health in Flight Crew
Michael Trimmel, *Medical University Vienna, Austria*.

Are Computers Capable of Understanding Our Emotional States?
Min Cheol Whang, Joa Sang Lim, Kang Ryoung Park, Yongjoo Cho, *Sangmyung University, Korea*; Wolfram Boucsein, *University of Wuppertal, Germany*.

Event-Related Brain Potentials Corroborate Subjectively Optimal Delay in Computer Response to a User's Action
Hiroshi Nittono, *Hiroshima University, Japan*.

Stress and Managers Performance: Age-related Changes in Psychophysiological Reactions to Cognitive Load
Sergei Schapkin, Gabriele Freude, Udo Erdmann, *Federal Institute for Occupational Safety and Health, Germany*; Heinz Ruediger, *Technical University of Dresden, Germany*.

Symbiosis: Creativity with Affective Response
Ming-Luen Chang, Ji-Hyun Lee, *Yunlin University of Science & Technology, Taiwan China*.

EEG Activities of Dynamic Stimulation in VR Driving Motion Simulator
Chin-Teng Lin, Li-Wei Ko, Yin-Hung Lin, *Chiao Tung University, Taiwan China*; Tzyy-Ping Jung, *University of California San Diego, USA*; Sheng-Fu Liang, *Cheng-Kung University, Taiwan China*; Li-Sor Hsiao, *Chiao Tung University, Taiwan China*.

Cognitive Issues in User Interface Design (I)

Exhibition Hall 2-G

Chair(s): Karl Sandberg, *Mid Sweden University, Sweden*.

Design Perspectives: Sampling User Research for Concept Development
Petri Mannonen, Mika Nieminen, *Helsinki University of Technology, Finland*.

How Developers Anticipate User Behavior in the Design of Assistance Systems
Cordula Krinner, *Technische Universitaet Berlin, Germany*.

The Role of Human Factors in Design and Implementation of Electronic Public Information Systems
Karl Sandberg, *Mid Sweden University, Sweden*; Yan Pan, *MTO-kompetens / Mid Sweden University, Sweden*.

Creation of an Ergonomic Guideline for Supervisory Control Interface Design
Pere Ponsa, Marta Díaz, *Technical University of Catalonia, Spain*.

A Review of Current Human Reliability Assessment Methods Utilized in High Hazard Human-System Interface Design
Chih-Wei Yang, Chiuhsiang Lin, Yung-Tsan Jou, *Chung Yuan Christian University, Taiwan China*; Tzu-Chung Yenn, *Institute of Nuclear Energy Research, Taiwan China*.

Intuitive Use of User Interfaces: Defining a Vague Concept
Anja Naumann, Jörn Hurtienne, Johann Habakuk Israel, Carsten Mohs, *TU Berlin, Germany*; Martin Christof Kindsmüller, *University of Lübeck, Germany*; Herbert Meyer, *HU Berlin, Germany*; Steffi Hußlein, *University of Applied Sciences Potsdam, Germany*.

Computer-Supported Creativity: Evaluation of a Tabletop Mind-Map Application
Stéphanie Buisine, *ENSAM, France*; Guillaume Besacier, *LIMSI-CNRS, France*; Marianne Najm, *ENSAM, France*; Améziane Aoussat, *ENSAM-LCPI, France*; Frédéric Vernier, *LIMSI, France*.

UAHCI

Universal Access in Human-Computer Interaction

Designing for Diversity

301 Conference Room

Chair(s): Sheue-Ling Hwang, *Tsing Hua University, Taiwan China*.

Measurement and Prediction of Cyber-sickness on Older Users Caused by a Virtual Environment
Cheng-Li Liu, *Vanung University, Taiwan China*.

Specialized Design of Web Search Engine for the Blind People
Yi-Fan Yang, *HTC, Taiwan China*; Sheue-Ling Hwang, *Tsing Hua University, Taiwan China*.

A Study of Control Performance in Low Frequency Motion Workstation
Yi-Jan Yau, *Tsing Hua University, Taiwan China*; Chin-Jung Chao, *Chung-Tung University, Taiwan China*; Sheue-Ling Hwang, Jhih-Tsong Lin, *Tsing Hua University, Taiwan China*.

Design Implications of Simultaneous Contrast Effects under Different Viewing Conditions
Shiaw-Tsyr Uang, *Minghsin University of Science and Technology, Taiwan China*; Cheng-Li Liu, *Vanung University, Taiwan China*.

Evaluation of RSVP and Display Types on Decoding Performance of Information Extraction Tasks
Ya-Li Lin, Chun-Min Ho, *Tunghai University, Taiwan China*.

An Empirical Study of Developing an Adaptive Location-Based Services Interface on Smartphone
Kuo-Wei Su, Ching-Chang Lee, Li-Kai Chen, *Kaohsiung First University of Science and Technology, Taiwan China*.

Design of Computer Integrated Safety and Health Management System
Hunszu Liu, *Ming Hsin University of Science & Technology, China*.

Advanced Human-Robot Interaction

306 Conference Room

Chair(s): Jianwei Zhang, *University of Hamburg, Germany*.

Enhancing Human-Computer Interaction with Embodied Conversational Agents
Mary Ellen Foster, *Technische Universität München, Germany*.

Integrating Language, Vision and Action for Human Robot Dialog Systems
Markus Rickert, Mary Ellen Foster, Manuel Giuliani, Tomas By, Giorgio Panin, Alois Knoll, *Technische Universität München, Germany*.

The BIC Model: A Blueprint for the Communicator
Jan De Ruiter, Nick Enfield, *Max Planck Institute, Netherlands*.

Integrating Multimodal Cues Using Grammar Based Models
Manuel Giuliani, Alois Knoll, *Technische Universität München, Germany*.

Natural Demonstration of Manipulation Skills for Multimodal Interactive Robots
Markus Hüser, Tim Baier-Löwenstein, Marina Svagusa, Jianwei Zhang, *University of Hamburg, Germany*.

Experimental Study on Enlarged Force Bandwidth Control of a Knee Rehabilitation Robot
Chao Li, Dangxiao Wang, Yuru Zhang, *Beihang University, China*.

Research and Development Methods in Universal Access (I)

307 Conference Room

Chair(s): Ray Adams, *Middlesex University, UK*; Simeon Keates, *ITA Software, USA*.

Accessibility Research in a Vocational Context
Ray Adams, *Middlesex University, UK*; Simeon Keates, *ITA Software, USA*.

Universal Design within the Context of e-Learning
Andrina Granić, Maja Cukusic, *University of Split, Croatia*.

Agile Methods and Visual Specification in Software Development: a chance to ensure Universal Access
Thomas Memmel, Harald Reiterer, *University of Konstanz, Germany*; Andreas Holzinger, *Medical University Graz, Austria*.

Shifting Paradigms in Universal Design
Hua Dong, *Brunel University, UK*.

Focussing on Extra-ordinary users
Graham Pullin, Alan Newell, *University of Dundee, UK*.

Designers' Perceptions of Methods of Involving and Understanding Users
Joy Goodman, Susannah Clarke, Patrick Langdon, P. John Clarkson, *University of Cambridge, UK*.

Remote Usability Tests – an Extension of the Usability Toolbox for Online-Shops
Steffen Kehr, *Otto GmbH & Co. KG, Germany*; Tim Bosenick, Martina Kühn, *SirValUse Consulting GmbH, Germany*; Stephan Nufer, *Studiengang Digitale Medien Fachhochschule Kaiserslautern, Germany*.

Parallel Sessions

UAHCI

Multimedia Accessibility

308 Conference Room

Chair(s): Chieko Asakawa, *IBM Research, Japan.*

Accessibility Evaluation for Multimedia Content
Chieko Asakawa, Takashi Itoh, Hironobu Takagi, Hisashi Miyashita, *IBM Research, Japan.*

Restoring Semantics to BML Content for Data Broadcasting Accessibility
Kinji Matsumura, Yasuaki Kanatsugu, Takuya Handa, Tadahiro Sakai, *Japan Broadcasting Corporation, Japan.*

An Evaluation of Accessibility of Hierarchical Data Structures in Data Broadcasting -Using Tactile Interface for Visually-Impaired People-
Takuya Handa, Tadahiro Sakai, Kinji Matsumura, Yasuaki Kanatsugu, Nobuyuki Hiruma, Takayuki Ito, *Japan Broadcasting Corporation, Japan.*

Making Multimedia Internet Content Accessible and Usable
Hisashi Miyashita, Hironobu Takagi, Daisuke Sato, Chieko Asakawa, *IBM Research, Japan.*

An Evaluation of Mobile 3D-based Interaction with Complex Multimedia Environments
Ali Asghar Nazari Shirehjini, Jafar Movahedi, *Fraunhofer, Germany.*

A Study on the Straight-Line Drawing Tasks for the Non-sighted People
Chih-Fu Wu, Cherng-Yee Leung, Yung-Hsiang Tu, Kuang Chieh Hsu, Huei-Tang Lin, *Tatung University, Taiwan China.*

Real-Time Image Correction for Interactive Environment
Hyunchul Choi, Dongwuk Kyoung, Keechul Jung, *Soongsil University, Korea.*

Universal Access to HCI for Infomobility Services

309 Conference Room

Chair(s): Evangelos Bekiaris, *CERTH, Greece.*

Specification of Information Needs for the Development of a Mobile Communication Platform to Support Mobility of People with Functional Limitations
Marion Wiethoff, *Delft University of Technology, Netherlands*; Sascha Sommer, *Johanniter-Hospital Radevormwald, Germany*; Sari Valjakka, *National Research and Development Centre for Welfare and Health (STAKES), Finland*; Karel Van Isacker, *Information Society Open To ImpairmentS (e-ISOTIS), Greece*; Dionisis Kehagias, *Centre for Research and Technology Hellas / Informatics and Telematics Institute, Greece*; Evangelos Bekiaris, *CERTH, Greece.*

Elderly and Disabled Travelers Needs in Infomobility Services
Evangelos Bekiaris, Maria Panou, Adriani Mousadakou, *CERTH, Greece.*

From "Design for All" Towards "Design for One" – A Modular User Interface Approach
Brigitte Ringbauer, *University of Stuttgart, Germany*; Matthias Peissner, *Fraunhofer, Germany*; Maria Gemou, *CERTH, Greece.*

Nomad Devices Adaptation for Offering Computer Accesible Infomobility Services
Laura Pastor, *Technical University of Madrid (UPM), Spain*; Maria Garcia Robledo, *SIEMENS S.A., Spain*; Luis Reigosa, *Siemens, Spain*; Maria Fernanda Cabrera-Umpierrez, *Universidad Politécnica de Madrid, Spain*; Alexandros Mourouzis, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Brigitte Ringbauer, *University of Stuttgart, Germany.*

Towards an Accessible Europe
Maria Panou, Evangelos Bekiaris, *CERTH, Greece*; Maria Garcia Robledo, *SIEMENS S.A., Spain.*

Enhancing the Safety Feeling of Mobility Impaired Travellers Through Infomobility Services
Maria Fernanda Cabrera-Umpierrez, Juan Luis Villalar, Maria Teresa Arredondo, Eugenio Gaeta, *Universidad Politécnica de Madrid, Spain*; Juan Pablo Lazaro, *ITACA - UPV, Spain.*

An Accessible and Usable Soft Keyboard
Alexandros Mourouzis, Evaggelos Boutsakis, Stavroula Ntoa, Margherita Antona, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

Human, Computer & Environment

311-A Conference Room

Chair(s): Jerzy Charytonowicz, *Wroclaw University of Technology, Poland.*

Reconsumption and Recycling in the Ergonomic Design of Architecture
Jerzy Charytonowicz, *Wroclaw University of Technology, Poland.*

Necropolis as a Material Remembrance Space
Jerzy Charytonowicz, *Wroclaw University of Technology, Poland*; Tomasz Lewandowski, *Technical University of Lodz, Poland.*

Ergonomics of Contemporary Urban Necropolies
Tomasz Lewandowski, *Technical University of Lodz, Poland*; Jerzy Charytonowicz, *Wroclaw University of Technology, Poland.*

Ergonomic Design of Children's Play Spaces in the Urban Environment
Przemyslaw Nowakowski, Jerzy Charytonowicz, *Wroclaw University of Technology, Poland.*

Economic and Social Condition of the Software Quality Assessment
Katarzyna Lis, Jerzy Olszewski, *University of Economics, Poland.*

The Use of Kaizen Continuous Improvement Approach for Betterment of Ergonomic Standards of Workstations
Ewa Gorska, Anna Kosieradzka, *Warsaw University of Technology, Poland.*

Identification of Threat of Isolation as a Result of Work with a Computer in Free Time
Teresa Musiol, Katarzyna Ujma-Wasowicz, *Silesian University of Technology, Poland.*

VR

Virtual Reality

Application of Augmented Reality to the Human Centered Design and Prototyping for Information Appliances

Exhibition Hall 2-A

Chair(s): Tek-Jin Nam, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Collaborative Design Prototyping Tool for Hardware Software Integrated Information Appliances
Tek-Jin Nam, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Sketch Based Modeling System
Hideki Aoyama, Hiroki Yamaguchi, *Keio University, Japan.*

Which Prototype to Augment? A Retrospective Case Study on Industrial and User Interface Design
Jouke Verlinden, *Delft University of Technology, Netherlands*; Christian Suurmeijer, *Benchmark Electronics, Netherlands*; Imre Horvath, *Delft University of Technology, Netherlands.*

IMPROVE: Advanced Displays and Interaction Techniques for Collaborative Design Review
Pedro Santos, André Stork, *Fraunhofer, Germany*; Thomas Gierlinger, Alain Pagani, *TU-Darmstadt, Germany*; Bruno Araújo, Ricardo Jota, Luis Bruno, Joaquim Jorge, Joao Madeiras Pereira, *INESC-ID, Portugal*; Martin Witzel, Giuseppe Conti, Raffaele De Amicis, *GraphiTech, Italy*; Iñigo Barandarian, Céline Paloc, *VicomTech, Spain*; Maylu Hafner, *UNIMEP, Brazil*; Don McIntyre, *The Lighthouse, UK.*

Augmented Reality System for Development of Handy Information Device with Tangible Interface
Hidetomo Takahashi, *Tokyo Institute of Technology, Japan*; Shun Shimazaki, Toshikazu Kawashima, *Graduate School of Tokyo Institute of technology, Japan.*

An Integrated Environment for Testing and Assessing the Usability of Information Appliances using Digital and Physical Mock-ups
Satoshi Kanai, Soh Horiuchi, *Hokkaido University, Japan*; Yukiaki Kikuta, Akihiko Yokoyama, *CS Labs Co., Ltd., Japan*; Yoshiyuki Shiroma, *Sapporo City University, Japan.*

Designer-centered Haptic Interfaces for Shape Modeling
Monica Bordegoni, Umberto Cugini, *Politecnico di Milano, Italy.*

UI

Usability and Internationalization

User Interface Design and Global Acceptance (I): Development processes

311-B Conference Room

Chair(s): Myung Hwan Yun, *Seoul National University, Korea.*

User-specific Service Generation: A Morphological Approach to Customized Blog Creation
Namjoong Kim, Hyojeong Lim, Sookyeong Seo, Yoo-Suk Hong, Yongtae Park, *Seoul National University, Korea.*

Computer Task-based Evaluation Technique for Measuring Everyday Risk-taking Behavior
Kentaro Kotani, Chiho Tateda, Ken Horii, *Kansai University, Japan.*

Incorporation of User Preferences Into Mobile Web Service Conversations
Jonghun Park, Wan Lee, Jae-Yoon Jung, *Seoul National University, Korea*; Kangchan Lee, *Electronics and Telecommunication Research Institute (ETRI), Korea.*

Designing Globally Accepted Human Interfaces for Instant Messaging
Chiuhsiang Lin, Dylan Sung, Ching-Chow Yang, Yung-Tsan Jou, Chih-Wei Yang, Lai-Yu Cheng, *Chung Yuan Christian University, Taiwan China.*

A Development of Graphical Interface for Decision Making Process Including Real-time Consistency Evaluation
Joong-Ho Lee, Ki-Won Yeom, Ji-Hyung Park, *Korea Institute of Science and Technology (KIST), Korea.*

User-Centered Design Approach Applying CPV in Mobile Service Design
Chang Cho, *Circleone Co. Ltd., Korea*; Cheol Lee, Myung Hwan Yun, *Seoul National University, Korea.*

Sound Detection as an Aid to Increase Detectability of CCTV in Surveillance System
Yongjun Kim, Sang Won Lee, Daniel Hyundo Lee, Jaeyong Kim, Myun Lee, *Seoul National University, Korea.*

AC

Augmented Cognition

Physiological and Neurophysiological Measures and Augmenting Cognition

Exhibition Hall 2-C

Chair(s): Michael Russo, *US Army, USA*; David Chin, *University of Hawaii, USA.*

Quantitative EEG Changes under Continuous Wakefulness and with Fatigue Countermeasures: Implications for Sustaining Aviator Performance
Carlos Cardillo, *US Army Aeromedical Research Laboratory, USA*; Michael Russo, *US Army, USA*; Patricia LeDuc, *US Army Aeromedical Research Laboratory, USA*; William Torch, *EyeCom Corporation, USA.*

Measuring Spatial Factors in Comparative Judgments about Large Numerosities
Catherine Sophian, *University of Hawaii, USA.*

Information Filtering, Expertise and Cognitive Load
David Chin, *University of Hawaii, USA.*

Assessing Information Presentation Preferences with Eye Movements
Laurel King, *University of Hawaii, USA*; Martha Crosby, *University of Hawaii at Manoa, USA.*

Event-related Brain Dynamics in Continuous Sustained-attention Tasks
Ruey-Song Huang, Tzyy-Ping Jung, Scott Makeig, *University of California San Diego, USA.*

Augmented Cognition and Cognitive State Assessment Technology -- Near-term, Mid-term, and Long-term Research Objectives
Leah Reeves, *Potomac Institute for Policy Studies, USA*; Dylan Schmorrow, *Office of Naval Research, USA*; Kay Stanney, *University of Central Florida, USA.*

DHM

Digital Human Modeling

Motion Prediction and Motion Capture (I)

Exhibition Hall 2-B

Chair(s): Zhang Xiong, *Beihang University, China*; Zhenyong Chen, *Beihang University, China.*

Automatic Joints Extraction of Scanned Human Body
Yong Yu, Zhaoqi Wang, Shihong Xia, Tianlu Mao, *Chinese Academy of Sciences, China.*

Capturing 3D Human Motion from Monocular Images using Orthogonal Locality Preserving Projection
Xu Zhao, Yuncai Liu, *Shanghai Jiao Tong University, China.*

A Motion Compensated De-interlacing Algorithm for Motive Object Capture
Lei Gao, Chao Li, Chengjun Zhu, Zhang Xiong, *Beihang University, China.*

A Fast Motion Estimation Algorithm for H.264
Jianbin Song, Bo Li, Qinglei Meng, *Beihang University, China.*

Digital Human Model Based Participatory Design Method to Improve Work Tasks and Workplaces
Kaj Helin, Juhani Viitaniemi, Jari Montonen, Susanna Aromaa, Timo Määttä, *VTT Technical Research Centre of Finland, Finland.*

Modeling Human Bipedal Navigation in a Dynamic Three Dimensional Virtual Environment
Mark Thomas, Daniel Carruth, Bryan Robbins, John McGinley, Alex Morais, *Mississippi State University, USA.*

Human Age and Vehicle Speeds Affect on Vehicle Ingress Motion Pattern
Lars Hanson, *Lund University, Sweden*; Li Yong, *Zhongyan Institute of Technology, Sweden*; Torbjörn Falkmer, *Linköping University / Jönköping University, Sweden.*

Computer Aided Ergonomics Analysis (I)

Exhibition Hall 2-D

Chair(s): Heiner Bubb, *Technische Universität München, Germany.*

Future Applications of DHM in Ergonomic Design
Heiner Bubb, *Technische Universität München, Germany.*

RAMSIS – The Leading CAD Tool for Ergonomic Analysis of Vehicles
Peter Van der Meulen, Andreas Seidl, *Human Solutions GmbH, Germany.*

Prediction of Discomfort during Arm Movements
Florian Fritzsche, Heiner Bubb, *Technische Universität München, Germany.*

Two Vibration Modes of a Human Body Sitting on a Car Seat - The Relationship between Riding Discomfort Affected by the Material Properties of the Seat Cushion and the Two Vibration Modes
Mitsunori Kubo, Fumio Terauchi, Hiroyuki Aoki, *Chiba University, Japan.*

Computer Aided Lumbar Support Design and Application
Susanne Frohriep, Jan Petzel, *Leggett & Platt Automotive Europe, Germany.*

Digital Humans for Virtual Assembly Evaluation
Dimitris Mavrikios, Menelaos Pappas, Marios Kotsonis, Vassiliki Karabatsou, George Chryssolouris, *University of Patras, Greece.*

Effecting Validity of Ergonomics Analysis During Virtual Interactive Design
Renran Tian, *Mississippi State University, USA*; Vincent Duffy, *Purdue University, USA*; John McGinley, *Mississippi State University, USA.*

Parallel Sessions

Wednesday 10:30 – 12:30

EHAWC

Ergonomics and Health Aspects of Work with Computers

Office Health: Health Effects of Choices in the Office Work Environment

301 Conference Room

Chair(s): Peter Vink, *TNO, Netherlands*; Elsbeth De Korte, *TNO, Netherlands*; Michelle Robertson, *Liberty Mutual Research, USA*.

Effects of the Office Environment on Health and Productivity 1: Auditory and Visual Distraction
Elsbeth De Korte, Lottie Kuijt-Evers, Peter Vink, *TNO, Netherlands*.

Effects of the Environment on Productivity and Health 2: Coffee Corner Position
Peter Vink, Elsbeth De Korte, Merle Blok, Liesbeth Groenesteijn, *TNO, Netherlands*.

Ergonomic Requirements for Input Devices
Ulrike Hoehne-Hueckstaedt, Sandra Keller Chandra, Rolf Ellegast, *BG-Institute for Occupational Safety and Health (BGIA), Germany*.

How Users with RSI Review the Usability of Notebook Input Devices
Christine Sutter, *RWTH Aachen University, Germany*.

Effects of Using Dynamic Office Chairs on Posture and EMG in Standardized Office Tasks
Rolf Ellegast, Rene Hamburger, Kathrin Keller, *BG-Institute for Occupational Safety and Health (BGIA), Germany*; Frank Krause, Liesbeth Groenesteijn, Peter Vink, *TNO, Netherlands*; Helmut Berger, *BG for Administration, Germany*.

The Health and Performance Consequences of Ergonomic Interventions in Offices
Michelle Robertson, *Liberty Mutual Research, USA*.

Complexity and Workload Factors in Virtual Work Environments of Mobile Work
Ursula Hyrkkänen, Ari Putkonen, *Turku University of Applied Sciences, Finland*; Matti Vartiainen, *Helsinki University of Technology, Finland*.

HIMI

Human Interface and the Management of Information

Human Computer Interaction in ICT (Information Communication Technology)

302 Conference Room

Chair(s): Yasufumi Kume, *Kinki University, Japan*.

Measurement and Analysis of Performance of Human Perception for Information Communication Technology
Hidetoshi Nakayasu, *Konan University, Japan*; Masao Nakagawa, *Shiga University, Japan*; Hidehiko Hayashi, *Naruto University of Education, Japan*.

Information on the Causal Relationship between Store Kaizen and Store Features that Attract Customers by Covariance Structural Analysis
Yumiko Taguchi, *Shohoku College, Japan*; Yasushi Akiyama, *Hewlett-Packard Japan, Ltd, Japan*; Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

A Methodology for Construction Information System for Small Size Organization with Excel/VBA
Hyun Seok Jung, Tae Hoon Kim, *Dongseo University, Korea*.

Construction of Web Application for Cusp Surface Analysis
Yasufumi Kume, Zaw Aung Htwe Maung, *Kinki University, Japan*.

Web Application for Data Analysis by Means of Evidential Dominance
Zaw Aung Htwe Maung, Yasufumi Kume, *Kinki University, Japan*.

Impact of E-Commerce Environment on Selection of Sales Methods Considering Delivery Lead Time of Goods
Etsuko Kusukawa, Shinji Masui, Ikuo Arizono, *Osaka Prefecture University, Japan*.

Skill Transfer from Expert to Novice – Instruction Manuals Made by Means of Groupware
Chung-Yong Liu, *Industrial Technology Research Institute, Taiwan China*; Yasufumi Kume, *Kinki University, Japan*.

Health Risk Estimation of Dichlorobenzene Exposure Workers by Using Computer Models
Pei-Shan Liu, Ren-Ming Yang, *Soochow University, Taiwan China*; Yin-Mei Chung, *Institute of Occupational Safety and Health, Taiwan China*; Chung-Yong Liu, *Industrial Technology Research Institute, Taiwan China*.

Human Aspects of Privacy Assurance

303 Conference Room

Chair(s): Robert Proctor, *Purdue University, USA*; Kim-Phuong Vu, *California State University, Long Beach, USA*.

Human Aspects of Privacy Assurance: An Overview
Robert Proctor, *Purdue University, USA*; Kim-Phuong Vu, *California State University, Long Beach, USA*.

Privacy Requirements in Identity Management Solutions
Abhilasha Bhargav-Spantzel, Anna Squicciarini, Matthew Young, Elisa Bertino, *Purdue University, USA*.

Examining User Privacy Practices While Shopping Online: What are Users Looking for?
Kim-Phuong Vu, Fredrick P. Garcia, Deborah Nelson, John Sulaitis, Beth Creekmur, Vanessa Chambers, *California State University, Long Beach, USA*; Robert Proctor, *Purdue University, USA*.

How Users Read and Comprehend Privacy Policies
Kim-Phuong Vu, Vanessa Chambers, Fredrick P. Garcia, Beth Creekmur, John Sulaitis, Deborah Nelson, Russell Pierce, *California State University, Long Beach, USA*; Robert Proctor, *Purdue University, USA*.

Reconciling Privacy Policies and Regulations: Ontological Semantics Perspective
Olga Krachina, Victor Raskin, Katrina Triezenberg, *Purdue University, USA*.

Usability of User Agents for Privacy-Preference Specification
Robert Proctor, *Purdue University, USA*; Kim-Phuong Vu, *California State University, Long Beach, USA*; M. Athar Ali, *Purdue University, USA*.

Privacy and the Public Educator
Melissa Dark, Clewin McPherson, *Purdue University, USA*.

Human Interface in Management Information Technology

305-A Conference Room

Chair(s): Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

Rough Ontology: Extension of Ontologies by Rough Sets
Syohei Ishizu, *Aoyama Gakuin University, Japan*; Andreas Gehrmann, *TUV Rheinland Japan Ltd., Japan*; Yoshimitsu Nagai, Yusei Inukai, *Aoyama Gakuin University, Japan*.

A Method for Constructing a Movie-Selection Support System Based on Kansei Engineering
Noriaki Sato, Michiko Anse, Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

A Method for Generating Plans for Retail Store Improvements Using Text Mining and Conjoint Analysis
Takumi Kaneko, Yuichiro Nakamura, Michiko Anse, Tsutomu Tabe, *Aoyama Gakuin University, Japan*; Yumiko Taguchi, *Shohoku College, Japan*.

Methodology for Constructing a Prototype Site For Finding Employment SPI Measures Using Mobile Phones
Shinsuke Wakita, Michiko Anse, Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

A Study of an Effective Rehearsal Method in E-Learning
Toshiaki Horinouchi, Shinsuke Wakita, Michiko Anse, Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

Evaluation Method of e-Learning Materials by Alpha Wave and Beta Wave of EEG
Michiko Anse, Tsutomu Tabe, *Aoyama Gakuin University, Japan*.

A Study of Production / Transaction-related Model Using Control Theory
Daisuke Doyo, Katsuhiro Sakamoto, *Aoyama Gakuin University, Japan*; Katsuya Aoki, *Mitsubishi Motors Corporation, Japan*.

HCI

Usability Methods & Approaches to Support International Users Populations

201-A Conference Room

Chair(s): V. Kathlene Leonard, *Alucid Solution, USA*; Patrick Hall, *Madan Puraskar Pustakalaya, Nepal*.

Designing Input Method of Hand-held Device with International User Studies
Scott Song, Joonhwan Kim, Wanje Park, Boeun Park, Hyunkook Jang, *Samsung Electronics, Korea*.

User Customization Methods Based on Mental Models: Modular UI Optimized for Customizing in Handheld Device
Boeun Park, Scott Song, Joonhwan Kim, Wanje Park, Hyunkook Jang, *Samsung Electronics, Korea*.

Recognizing Cultural Diversity in Digital Television User Interface Design
Joonhwan Kim, Sanghee Lee, *Samsung Electronics, Korea*.

Collaborative Design for Strategic UXD Impact and Global Product Value
James Nieters, *Cisco, USA*; David Williams, *Asentio Design, China*.

Using Patterns to Support the Design of Flexible User Interaction
M. Cecilia Baranauskas, Vania Paula de Almeida Neris, *University of Campinas, Brazil*.

Sambad – Computer Interfaces for Non-literates
Sagun Dhakwha, Patrick Hall, Ganesh Bahadur Ghimire, Prakash Manandhar, Ishwor Thapa, *Madan Puraskar Pustakalaya, Nepal*.

Design for Effective Online User Experience

201-B Conference Room

Chair(s): Pei-Luen Patrick Rau, *Tsinghua University, China*.

Provide Context-aware Advertisements with Interactivity
Qin Gao, Pei-Luen Patrick Rau, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

Creating Kansei Engineering-based Ontology for Annotating and Archiving Photos Database
Yu-Liang Chi, Shu-Yun Peng, Ching-Chow Yang, *Chung Yuan Christian University, Taiwan China*.

Understanding, Measuring, and Designing User Experience: The Causal Relationship between the Aesthetic Quality of Products and User Affect
Haotian Zhou, Xiaolan Fu, *Chinese Academy of Sciences, China*.

Effects of Time Orientation on Design of Notification Systems
Ding-Long Huang, Pei-Luen Patrick Rau, *Tsinghua University, China*; Hui Su, *IBM, China*; Mark Nan Tu, *Tsinghua University, China*; Chen Zhao, *IBM, China*.

Streamlining Checkout Experience – A Case Study of Iterative Design of a China e-Commerce Site
Alice Han, Jianming Dong, Winnie Tseng, Bernd Ewert, *PayPal Inc., USA*.

Impact of Mental Rotation Strategy on Absolute Direction Judgments: Supplementing Conventional Measures with Eye Movement Data
Ronggang Zhou, *Tsinghua University, China*; Kan Zhang, *Chinese Academy of Sciences, China*.

Factor Structure of Content Preparation for E-business Web Sites:A Survey Result of Industrial Employees in P. R. China
Yinni Guo, Gavriel Salvendy, *Purdue University, USA*.

Information Life Cycle in Business Activity

201-C Conference Room

Chair(s): Hiroshi Tsuji, *Osaka Prefecture University, Japan*; Hidehiko Okada, *Kyoto Sangyo University, Japan*.

Evaluation of P2P Information Recommendation Based on Collaborative Filtering
Hidehiko Okada, Makoto Inoue, *Kyoto Sangyo University, Japan*.

Document Management and Information Organizing Method using RFID tags
Hiroyuki Kojima, *Hiroshima Institute of Technology, Japan*; Ken Iwata, *Hitachi Information Systems, Ltd., Japan*; Naoki Nishimura, *Hiroshima Institute of Technology, Japan*.

Project Evaluation by e-Mail Based Communication Pattern
Jugo Noda, *Hitachi, Ltd., Japan*; Ryosuke Saga, Hiroshi Tsuji, *Osaka Prefecture University, Japan*.

An Adaptive Web Browsing Method for Various Terminals: A Semantic Over-Viewing Method
Hisashi Noda, Teruya Ikegami, Yushin Tatsumi, Shin'ichi Fukuzumi, *NEC Corporation, Japan*.

Tool for Detecting Webpage Usability Problems from Mouse Click Coordinate Logs
Ryosuke Fujioka, *Kobesogosokki Co., Ltd, Japan*; Ryo Tanimoto, Yuki Kawai, Hidehiko Okada, *Kyoto Sangyo University, Japan*.

Perspectives on Reuse Process Support Systems for Document-Type Knowledge
Yukiko Morimoto, Hisao Mase, *Hitachi, Ltd., Japan*; Hiroshi Tsuji, *Osaka Prefecture University, Japan*.

HOPE: Extensible System for Automatic & Periodic Diagnosis of Offshore Software Project
Zhang Xuan, Zhang Lei, Chai Meiping, Shigeru Miyake, *Hitachi Research & Development Corporation, China*; Ryota Mibe, *Hitachi, Ltd., Japan*.

Safety of Medication Usage

306 Conference Room

Chair(s): Fumito Tsuchiya, *Tokyo Medical & Dental University, Japan*; Michiko Ohkura, *Shibaura Institute of Technology, Japan*.

Medication Errors Caused by Order Entry System and Prevention Measures
Fumito Tsuchiya, *Tokyo Medical & Dental University, Japan*.

Ergonomic Study of Medicament Packages for the Improvement of Safety in Use
Akinori Komatsubara, *Waseda University, Japan*.

The Analysis of Near-Miss Cases Using Data-Mining Approach
Masaomi Kimura, Kouji Tatsuno, Toshiharu Hayasaka, Yuta Takahashi, Tetsuro Aoto, Michiko Ohkura, *Shibaura Institute of Technology, Japan*; Fumito Tsuchiya, *Tokyo Medical & Dental University, Japan*.

The Usability Assessment of Pharmaceutical Package
Michiko Ohkura, Tosiaki Harikae, *Shibaura Institute of Technology, Japan*; Fumito Tsuchiya, *Tokyo Medical & Dental University, Japan*.

A Study on Display to Improve the Visibility of PTP Sheets
Akira Izumiya, Michiko Ohkura, *Shibaura Institute of Technology, Japan*; Fumito Tsuchiya, *Tokyo Medical & Dental University, Japan*.

Challenge For Preventing Medication Errors -Learn from Errors- : What is the Most Effective Label Display to Prevent Medication Error for Injectable Drug ?
Hiroyuki Furukawa, *Kanazawa University Hospital, Japan*.

Interfacing Safety and Communication Breakdowns: Situated Medical Technology Design
Svetlena Taneva, Effie Law, *Swiss Federal Institute of Technology (ETH), Switzerland*.

Parallel Sessions

HCI

Smart Living Spaces

307 Conference Room

Chair(s): Itiro Siio, *Ochanomizu University, Japan*.

Kitchen of the Future and Applications
Itiro Siio, *Ochanomizu University, Japan*; Reiko Hamada, *The University of Tokyo, Japan*; Noyuri Mima, *Future University - Hakodate, Japan*.

Human-Robot Interaction in the Home Ubiquitous Network environment
Hirotada Ueda, Michihiko Minoh, *Kyoto University, Japan*; Masaki Chikama, Junji Satake, Akihiro Kobayashi, *National Institute of Information and Communications Technology, Japan*; Kenzabro Miyawaki, *Osaka Institute of Technology, Japan*; Masatsugu Kidode, *Nara Institute of Science and Technology, Japan*.

Designing Smart Living Objects – Enhancing vs. Distracting Traditional Human-Object Interaction
Pei-Yu (Peggy) Chi, Jen-hao Chen, Shih-yen Liu, Hao-hua Chu, *Taiwan University, Taiwan China*.

Using Memory Aid to Build Memory Independence
Quan Tran, Elizabeth Mynatt, Gina Calcaterra, *Georgia Institute of Technology, USA*.

Attentive Information Support with Massive Embedded Sensors in Room
Hiroshi Noguchi, Taketoshi Mori, Tomomasa Sato, *The University of Tokyo, Japan*.

Inhabitant Guidance of Smart Environments
Parisa Rashidi, *Washington State University, USA*; G. Michael Youngblood, *University of North Carolina at Charlotte, USA*; Diane Cook, *Washington State University, USA*; Sajal Das, *The University of Texas at Arlington, USA*.

Interactive Design of Memory Sharing Applications for Families
Minako Kubo, Akihiko Kodama, Etsushi Takaishi, Rikio Chiba, Keita Watanabe, Michiaki Yasumura, *Keio University, Japan*.

Human Factors in Digital Production

Exhibition Hall 2-H

Chair(s): Dieter Spath, *Fraunhofer, Germany*.

Application of Tangible Acoustic Interfaces in the Area of Production Control and Manufacturing
Wolfgang Rolshofen, Peter Dietz, Günter Schäfer, *Technical University of Clausthal, Germany*.

Experimenting Wearable Solutions for Workers' Training in Manufacturing
Iñaki Maurtua, Miren Unceta, Miguel Angel Pérez, *Fundación Tekniker Eibar, Spain*.

A Novel Human-computer Interface Based on Passive Acoustic Localisation
D.T. Pham, Ze Ji, Ming Yang, Zuobin Wang, Mostafa Al-Kutubi, *Cardiff University, UK*.

Decentralized Information Aggregation and Central Control in Networked Production Environments
Simon Thiel, Thomas Schlegel, Dieter Spath, *Fraunhofer, Germany*.

Users Interact Differently: Towards a Usability Oriented User Taxonomy
Fabian Hermann, Iris Niedermann, Matthias Peissner, *Fraunhofer, Germany*; Katja Henke, Anja Naumann, *TU Berlin, Germany*.

Movement-based Interaction and Event Management in Virtual Environments with Optical Tracking Systems
Maxim Foursa, Gerold Wesche, *Fraunhofer, Germany*.

Applications of Virtual Reality in Product Design Evaluation
Jilin Ye, Saurin Badiyani, *University of Warwick, UK*; Vinesh Raja, *Warwick Manufacturing Group, UK*; Thomas Schlegel, *Fraunhofer, Germany*.

EPCE

Engineering Psychology and Cognitive Ergonomics

Psychophysiology in Ergonomics (II)

311-C Conference Room

Chair(s): Wolfram Boucsein, *University of Wuppertal, Germany*; Richard Backs, *Central Michigan University, USA*.

Diagnosticity of Cardiac Modes of Autonomic Control Elicited by Simulated Driving and Verbal Working Memory Dual-Tasks
John Lenneman, Richard Backs, *Central Michigan University, USA*.

HR changes in driving scenes with danger and difficulties using driving simulator
Yukiyo Kuriyagawa, *Nihon University, Japan*; Mieko Ohsuga, *Osaka Institute of Technology, Japan*; Ichiro Kageyama, *Nihon University, Japan*.

Multidimensional Evaluation of Human Responses to the Workload
Shinji Miyake, Simpei Yamada, Takuro Shoji, *University of Occupational and Environmental Health, Japan*; Yasuhiro Takae, Nobuyuki Kuge, Tomohiro Yamamura, *Nissan Motor Co., Ltd., Japan*.

Classification of Blink Waveforms Towards the Assessment of Driver's Arousal Level: An Approach for HMM Based Classification form Blinking Video Sequence
Yoshihiro Noguchi, Roongroj Nopsuwanchai, *Asahi Kasei Corporation, Japan*; Mieko Ohsuga, Yoshiyuki Kamakura, *Osaka Institute of Technology, Japan*.

Classification of Blink Waveforms Towards the Assessment of Driver's Arousal Level: An EOG Approach anf the Correlation with Physiological Measures
Mieko Ohsuga, Yoshiyuki Kamakura, Yumiko Inoue, *Osaka Institute of Technology, Japan*; Yoshihiro Noguchi, Roongroj Nopsuwanchai, *Asahi Kasei Corporation, Japan*.

Development of a Wireless Embedded Brain-Computer Interface and Its Application on Drowsiness Detection and Warning
Chin-Teng Lin, *Chiao Tung University, Taiwan China*; Hung-Yi Hsieh, *University System of Taiwan, Taiwan China*; Sheng-Fu Liang, *Cheng-Kung University, Taiwan China*; Yu-Chieh Chen, Li-Wei Ko, *Chiao Tung University, Taiwan China*.

UAHCI

Universal Access in Human-Computer Interaction

Smart Environments and Ambient Intelligence (I): Interaction Design and Evaluation

305-B Conference Room

Chair(s): Norbert Streitz, *Fraunhofer, Germany*.

Informative Art Display Metaphors
Alois Ferscha, *University of Linz, Austria*.

Engineering Social Awareness in Work Environments
Dhaval Vyas, *Twente University, Netherlands*; Marek Van de Watering, Anton Eliëns, *Vrije Universiteit Amsterdam, Netherlands*; Gerrit Van der Veer, *Open Universiteit Nederland, Netherlands*.

Learning Situation Models for Providing Context-Aware Services
Oliver Brdiczka, James Crowley, Patrick Reignier, *INRIA Rhones Alpes, France*.

Learning Topologies of Situated Public Displays by Observing Implicit User Interactions
Hans Jörg Müller, Antonio Krüger, *University of Münster, Germany*.

Nonverbally Smart User Interfaces: Postural and Facial Expression Data in Human-Computer Interaction
Gisela Susanne Bahr, *Florida Institute of Technology, USA*; Carey Balaban, *University of Pittsburgh, USA*; Mariofanna Milanova, *University of Arkansas at Little Rock, USA*; Howard Choe, *Raytheon - Network Centric Systems, USA*.

Ambient Intelligence and Multimodality
Laura Burzagli, Pier Luigi Emiliani, Francesco Gabbanini, *National Research Council (CNR), Italy*.

Creating Smart and Accessible Ubiquitous Knowledge Environments
Ray Adams, *Middlesex University, UK*; Andrina Granić, *University of Split, Croatia*.

Virtual Reality

Automatic and Manual Evaluation of Web Sites

309 Conference Room

Chair(s): Helen Petrie, *University of York, UK*; Gerhard Weber, *Technical University of Dresden, Germany*.

The Usability of Accessibility Evaluation Tools
Helen Petrie, *University of York, UK*; Neil King, *DesignedforAll, UK*; Carlos Velasco, Henrike Gappa, Gabriele Nordbrock, *Fraunhofer, Germany*.

Editing a Test Suite for Accessibility of Interactive Web Sites
Gerhard Weber, *Technical University of Dresden, Germany*; Kurt Weimann, *Universität Kiel, Germany*.

The BenToWeb XHTML 1.0 Test Suite for the Web Content Accessibility Guidelines 2.0 - Last Call Working Draft
Christophe Strobbe, Jan Engelen, *Katholieke Universiteit Leuven, Belgium*; Johannes Koch, Carlos Velasco, *Fraunhofer, Germany*; Evangelos Vlachogiannis, *University of the Aegean, Greece*; Daniela Ortner, *University of Linz, Austria*.

Development of Automatic Web Accessibility Checking Modules for Advanced Quality Assurance Tools
Johannes Koch, Dirk Stegemann, Yehya Mohamad, Carlos Velasco, *Fraunhofer, Germany*.

A Unified Web Evaluation Methodology using WCAG
Eric Vellemann, *Accessibility Foundation, Netherlands*; Christophe Strobbe, *Katholieke Universiteit Leuven, Belgium*; Johannes Koch, Carlos Velasco, *Fraunhofer, Germany*; Mikael Snaprud, *Agder University College, Norway*.

Large Scale Web Accessibility Evaluation - a European Perspective
Mikael Snaprud, Agata Sawicka, *Agder University College, Norway*.

Comparative Analysis of the Accessibility of Desktop Operating Systems
Ángel Lucas González, Gonzalo Mariscal, *Technical University of Madrid, Spain*; Loic Martinez, *Universidad Politecnica de Madrid, Spain*; Carlos Ruiz, *Technical University of Madrid, Spain*.

Meta-design

311-A Conference Room

Chair(s): Maria Francesca Costabile, *Università degli Studi di Bari, Italy*.

Designing for Participation in Socio-Technical Software Systems
Yunwen Ye, Gerhard Fischer, *University of Colorado at Boulder, USA*.

Meta-Design to Face Co-Evolution and Communication Gaps Between Users and Designers
Maria Francesca Costabile, *Università degli Studi di Bari, Italy*; Daniela Fogli, *Università degli Studi di Brescia, Italy*; Rosa Lanzilotti, *Università degli Studi di Bari, Italy*; Andrea Marcante, Piero Mussio, Loredana Parasiliti Provenza, *Università degli Studi di Milano, Italy*; Antonio Piccinno, *Università degli Studi di Bari, Italy*.

An Architecture for Adaptive and Adaptable Mobile Applications for Physically Handicapped People
Matthias Betz, Mahmudul Huq, Volkmar Pipek, *University of Siegen, Germany*; Markus Rohde, *International Institute for Socio-Informatics (IISI), Germany*; Gunnar Stevens, *University of Siegen, Germany*; Roman Englert, *Ben-Gurion University, Israel*; Volker Wulf, *University of Siegen, Germany*.

CBEADS: A Framework to Support Meta-Design Paradigm
Athula Ginige, Buddhima De Silva, *University of Western Sydney, Australia*.

Easy Model-driven Development of Multimedia User Interfaces with GuiBuilder
Stefan Sauer, Gregor Engels, *University of Paderborn, Germany*.

A Conceptual Model of Inclusive Technology for Information Access by the Rural Sector
Kristina Pitula, Thiruvengadam Radhakrishnan, *Concordia University, Canada*.

Eye Gaze and Gesture Tracking

Exhibition Hall 2-G

Chair(s): Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

Geometry Issues of a Gaze Tracking System
Arantxa Villanueva, Juanjo Cerrolaza, Rafael Cabeza, *Public University of Navarre, Spain*.

An Eye-gaze Input System Using Information on Eye Movement History
Kiyohiko Abe, *Kanto Gakuin University, Japan*; Shoichi Ohi, Minoru Ohyama, *Tokyo Denki University, Japan*.

A New Gaze-Based Interface for Environmental Control
Fangmin Shi, Alastair Gale, Kevin Purdy, *Loughborough University, UK*.

Strategy of Visual Search of Targets on Screen through Eye Movement of Elderly Person
Kazunari Morimoto, Yasumasa Okuyama, Xu Xiaonian, *Kyoto Institute of Technology, Japan*; Ryu Hyun-Seok, Koo Kang, Son-Tae Won, *Yeungnum University, Korea*.

A Real-Time Gesture Tracking and Recognition System Based on Particle Filtering and Ada-Boosting Techniques
Chin-Shyurng Fahn, Chih-Wei Huang, *Taiwan University of Science and Technology, Taiwan China*; Hung-Kuang Chen, *Chin-Yi University of Technology, Taiwan China*.

Facial Expression Recognition Based on Color Lines Model and Region Based Processing
GeonAe Eom, Hyun-Seung Yang, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Gesture-Based Interactions on Multiple Large Displays with a Tabletop Interface
Jangho Lee, Jun Lee, HyungSeok Kim, Jee-In Kim, *Konkuk University, Korea*.

VR

Novel Approaches in VR

Exhibition Hall 2-F

Chair(s): Monica Bordegoni, *Politecnico di Milano, Italy*.

Development of Wide Area Tracking System for Augmented Reality
Hirotake Ishii, Hidenori Fujino, Bian Zhiqiang, Tomoki Sekiyama, Toshinori Nakai, Hiroshi Shimoda, *Kyoto University, Japan*.

C-Band: A Flexible Ring Tag System for Camera-Based User Interface
Kento Miyaoku, *Nippon Telegraph and Telephone Corp., Japan*; Anthony Tang, Sidney Fels, *University of British Columbia, Canada*.

Super-Feet: A Wireless Hand-free Navigation System for Virtual Environments
Beatriz Rey, José A. Lozano, Mariano Alcañiz, *Universidad Politécnica de Valencia, Spain*; Luciano Gamberini, *University of Padova, Italy*; Merche Calvet, *Universidad Politécnica de Valencia, Spain*; Daniel Kerrigan, Francesco Martino, *University of Padova, Italy*.

Measurement of Suitability of a Haptic Device in a Virtual Reality System
Jose San Martin, *Universidad Rey Juan Carlos, Spain*; Gracian Trivino, *Universidad Politecnica de Madrid, Spain*.

Virtual validation of an on-board infotainment system based on tactons
Umberto Giraudo, Giandomenico Caruso, Francesco Ferrise, Monica Bordegoni, *Politecnico di Milano, Italy*.

Visual Hull with Silhouette Maps
Chulhan Lee, Junho Cho, Kyoungsu Oh, *University of Soongsil, Korea*.

Towards Transparent Telepresence
Gordon Mair, *University of Strathclyde, UK*.

Parallel Sessions

UI

Usability and Internationalization

Cross-Cultural HCI Design: Best Practices and Next Practices

305-C Conference Room

Chair(s): Aaron Marcus, *Aaron Marcus and Associates, Inc. (AM+A), USA.*

Emerging Issues in Doing Cross-Cultural Research in Multicultural and Multilingual Societies
Henry Been-Lirn Duh, Vivian Hsueh-Hua Chen, *Nanyang Technological University, Singapore.*

"Only Famous Companies I Would Ever Buy": Understanding How People Learn to Trust Web Sites
Emilie Gould, *Acadia University, Canada.*

The Digital Packaging of Electronic Money
Supriya Singh, *RMIT University, Australia.*

User Validation of Cultural Dimensions of a Website Design
Aaron Marcus, Chava Alexander, *Aaron Marcus and Associates, Inc. (AM+A), USA.*

Cultural Environment for Social Learning and Adaptation in Different Countries - A Comparison of Minority Foreigners and Majority Foreigners
Masaaki Kurosu, *National Institute of Multimedia Education, Japan*; Masako Morishita, *Waseda University, Japan.*

An Activity Approach to Cross-Cultural Design
Huatong Sun, *Grand Valley State University, USA.*

The Role of Annotation in Intercultural Communication
Tomohiro Shigenobu, *National Institute of Information and Communications Technology, Japan*; Kunikazu Fujii, Takashi Yoshino, *Wakayama University, Japan.*

User Interface Design for Mobile Devices

311-B Conference Room

Chair(s): Sung Han, *Pohang University of Science and Technology, Korea.*

The Mobile Phone's Optimal Vibration Frequency in Mobile Environments
Jinho Yim, *Samsung Electronics Co., Korea*; Rohae Myung, Byongjun Lee, *Korea University, Korea.*

Developing Character Input Methods for Driver Information Systems
Youngseok Cho, Sung Han, *Pohang University of Science and Technology, Korea*; Sang W. Hong, *SK Telecom, Korea*; Yong S. Park, Wonkyu Park, *Pohang University of Science and Technology, Korea*; Sunghyun Kang, *Hyundai-Kia, Korea.*

A Study for Usability Risk Level in Physical User Interface of Mobile Phone
Beom Suk Jin, Sang Min Ko, Jae Seung Mun, Yong Gu Ji, *Yonsei University, Korea.*

A Framework for Evaluating the Usability of Spoken Language Dialogue Systems (SLDSs)
Wonkyu Park, Sung Han, Yong S. Park, Jungchul Park, Huichul Yang, *Pohang University of Science and Technology, Korea.*

Performance Evaluation of the Wheel Navigation Key used for Mobile Phone and MP3
Hyun-Wook Jung, Jung-Yong Kim, *Hanyang University, Korea.*

Usability of Adaptable and Adaptive Menus
Jungchul Park, Sung Han, Yong S. Park, Youngseok Cho, *Pohang University of Science and Technology, Korea.*

Effect of Different Modal Feedback on Attention Recovery
Min Cheol Whang, H.J. Hyun, Joa Sang Lim, Kang Ryoung Park, Yongjoo Cho, *Sangmyung University, Korea*; Junseok Park, *Electronics and Telecommunication Research Institute (ETRI), Korea.*

Designing for Emerging Countries – Is It New Wine in a New Bottle?

Exhibition Hall 2-A

Chair(s): Apala Lahiri Chavan, *Human Factors International, Pvt. Ltd., India.*

Entrepreneurial Digital Photography - A Case Study for Design Research Method in the Emerging Indian Market
Naznin Rao, *Human Factors International, Pvt. Ltd., India.*

"A Quick Dip at the Iceberg's Tip" Rapid Immersion Approaches to Understanding Emerging Markets
Anjali Kelkar, *Illinois Institute of Technology, USA.*

The Challenge of Dealing with Cultural Differences in Industrial Design in Emerging Countries: Latin-American Case Studies
Alvaro Enrique Diaz, *Bee-Design Inc., Canada.*

When in Rome… be Yourself: A Perspective on Dealing with Cultural Dissimilarities in Ethnography
Apala Lahiri Chavan, Rahul Ajmera, *Human Factors International, Pvt. Ltd., India.*

Shanghaied in a User-friendly Manner - An American's Initial Experiences in a Full-time Usability Job in China
Brian Glucroft, *HFI China, China.*

ICT for Low-Literate Youth in Ethiopia: The Usability Challenge
Marije Geldof, *Royal Holloway, University of London, UK.*

Localization in Korea of User Interface of the 3G Mobile Handset Built on Open OS
Sungmoo Hong, *KTF, Korea.*

OCSC

Online Communities and Social Computing

Social Computing

308 Conference Room

Chair(s): Karrie Karahalios, *University of Illinois in Urbana Champaign, USA.*

The Hidden Order of Wikipedia
Fernanda Viegas, Martin Wattenberg, Matthew McKeon, *IBM, USA.*

Artistic Data Visualization: Beyond Visual Analytics
Fernanda Viegas, Martin Wattenberg, *IBM, USA.*

Toward Machine Therapy: Parapraxis of Machine Design and Use
Kelly Dobson, *MIT Media Lab, USA.*

What Would Jiminy Cricket Do? Lessons From the First Social Wearable
Timothy Bickmore, *Northeastern University, USA.*

Social Puppets: Towards Modular Social Animation for Agents and Avatars
Hannes Vilhjálmsson, *Reykjavík University, Iceland*; Chirag Merchant, *University of Southern California, USA*; Prasan Samtani, *USC Information Sciences Institute, USA.*

The Social Implications of an Assisted Living Reminder System
Bedoor Al-shebli, Eric Gilbert, Karrie Karahalios, *University of Illinois in Urbana Champaign, USA.*

From Clicks to Touches: Enabling Face-to-Face Shared Social Interface on Multi-Touch Tabletops
Chia Shen, *Mitsubishi Electronic, USA.*

AC

Augmented Cognition

Neurotechnology and AugCog Applications: Present and Future

Exhibition Hall 2-B

Chair(s): Chris Berka, *Advanced Brain Monitoring, Inc., USA*; Laurel King, *University of Hawaii, USA*.

Integrating Innovative Neuro-Educational Technologies (I-Net) into K-12 Science Classrooms
Ronald Stevens, Trysha Galloway, *University of California, USA*; Chris Berka, *Advanced Brain Monitoring, Inc., USA*.

Exploring Neural Trajectories of Scientific Problem Solving Skill Acquisition
Ronald Stevens, Trysha Galloway, *University of California, USA*; Chris Berka, *Advanced Brain Monitoring, Inc., USA*.

Inclusive Design for Brain Body Interfaces
Paul Gnanayutham, *University of Portsmouth, UK*; Jennifer George, *SAE Institute, UK*.

The Effect of Fatigue on Cognitive and Psychomotor Skills of Surgical Residents
Kanav Kahol, *SimET Center/Arizona State University, USA*; Mark Smith, *Banner Good Samaritan Hospital, USA*; Stephanie Mayes, *Phoenix Integrated Surgical Residency Program, USA*; Mary Deka, Vikram Deka, *SimET Center, USA*; John Ferrara, *Banner Good Samaritan Medical Center, USA*; Sethuraman Panchanathan, *Arizona State University, USA*.

Using Eye Blinks as a Tool for Augmented Cognition
Ric Heishman, Zoran Duric, *George Mason University, USA*.

Low Power Technology for Wearable Cognition Systems
David Yates, Alexander Casson, Esther Rodriguez-Villegas, *Imperial College London, UK*.

DHM

Digital Human Modeling

Virtual Reality and Movement Modeling

Exhibition Hall 2-C

Chair(s): Chuan-Jun Su, *Yuan Ze University, Taiwan China*; Shu-Kai Fan, *Yuan Ze University, Taiwan China*.

Dynamic Generation of Human-populated VR Models for Workspace Ergonomic Evaluation
Tien-Lung Sun, *Yuan Ze University, Taiwan China*; Wen-Yang Feng, *Chung Yuan Christian University, Taiwan China*; Chin-Jung Chao, *Chung-Tung University, Taiwan China*.

Enhancing Sense of Reality by Efficient and Precise Collision Detection in Virtual Environments
Chuan-Jun Su, *Yuan Ze University, Taiwan China*.

A Modified Particle Swarm Optimizer using an Adaptive Dynamic Weight Scheme
Shu-Kai Fan, Ju-Ming Chang, *Yuan Ze University, Taiwan China*.

Motion Retrieval based on an Efficient Index Method for Large-Scale Mocap Database
Jian Xiang, *Zhejiang University, China*; HongLi Zhu, *City College of Zhejiang University, China*.

Comparison of Human and Machine Recognition of Everyday Human Actions
Trevor Jones, Shaun Lawson, *University of Lincoln, UK*; David Benyon, Alistair Armitage, *Napier University, UK*.

Modeling of Layered Fuzzy Facial Expression Generation
Yu-Li Xue, Xia Mao, Zheng Li, Wei-He Diao, *Beijing University of Aeronautics and Astronautics, China*.

Human Articulation Efforts Estimation in the Automobile Vehicle Accessibility Movement - A Pilot Study
Jean-François Debril, Philippe Pudlo, Mohand Ouidir Ait El Menceur, *Université de Valenciennes et du Hainaut-Cambrésis, France*; Philippe Gorce, *Université du Sud Toulon et du Var, France*; François Xavier Lepoutre, *Université de Valenciennes et du Hainaut-Cambrésis, France*.

Digital Patient

Exhibition Hall 2-D

Chair(s): Ioannis Tollis, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Kostas Marias, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Kang Li, *University of Illinois at Urbana, Champaign, USA*.

FPF-SB: a Scalable Algorithm for Microarray Gene Expression Data Clustering
Filippo Geraci, Mauro Leoncini, Manuela Montangero, Marco Pellegrini, M. Elena Renda, *National Research Council (CNR), Italy*.

An Integrated Approach for Reconstructing Surface Models of the Proximal Femur from Sparse Input Data for Surgical Navigation
Guoyan Zheng, Miguel A. González Ballester, *University of Bern, Switzerland*.

Methodologies to Evaluate Simulations of Cardiac Tissue Abnormalities at a Cellular Level
Nicos Maglaveras, Ioanna Chouvarda, *Aristotle University, Greece*.

Simulating Cancer Radiotherapy on a Multi-level Basis: Biology, Oncology and Image Processing
Dimitra D. Dionysiou, Georgios S. Stamatakos, *National Technical University of Athens, Greece*; Kostas Marias, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

Multi-level Analysis and Information Extraction Considerations for Validating 4D Models of Human Function
Kostas Marias, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Dimitra D. Dionysiou, Georgios S. Stamatakos, *National Technical University of Athens, Greece*; Fotini Zacharopoulou, *University of Crete, Greece*; Eleni Georgiadi, Thanasis Margaritis, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Thomas Maris, *University of Crete, Greece*; Ioannis Tollis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

Digital Human Modelling: A Global Vision and a European Perspective
Gordon J. Clapworthy, *University of Bedfordshire, UK*; Peter Kohl, *University of Oxford, UK*; Hans Gregerson, *Aalborg Hospital, Denmark*; S.R. Thomas, *Centre National de la Recherche Scientifique, France*; Marco Viceconti, *Istituti Ortopedici Rizzoli, Italy*; D.R. Hose, D. Pinney, John Fenner, K. McCormack, P. Lawford, *University of Sheffield, UK*; S. Van Sint Jan, *Universite Libre Bruxelles, Belgium*; S. Waters, *University of Nottingham, UK*; P. Coveney, *University College London, UK*.

A Method for Gene Identification by Dynamic Feature Choosing
Jia-Wei Luo, Li Yang, Xi-Zhen Zhang, *Hunan University, China*.

Technology for Education & Training

Exhibition Hall 2-E

Chair(s): Carl Washburn, *Greenville Technical College, USA*; Paris Stringfellow, *Clemson University, USA*; Sajay Sadasivan, *Clemson University, USA*.

Can We Use Technology to Train Inspectors to Be More Systematic?
Sajay Sadasivan, Anand Gramopadhye, *Clemson University, USA*.

Using Multimodal Technologies to Enhance Aviation Maintenance Inspection Training
Carl Washburn, *Greenville Technical College, USA*; Paris Stringfellow, Anand Gramopadhye, *Clemson University, USA*.

Advanced Technology Training for Operating the Microlithography Panel Printer
Bharat Upadrasta, Mohammad Khasawneh, Sarah S. Lam, *State University of New York at Binghamton, USA*.

Wiki-Based teaching in Industrial Engineering Courses
Xiaochun (Steven) Jiang, Paul Nuschke, *North Carolina A&T State University, USA*.

Understanding RUTH: Creating Believable Behaviors for a Virtual Human under Uncertainty
Insuk Oh, Matthew Stone, *Rutgers, The State University of New Jersey, USA*.

Facilitating Pronunciation Skills for Children with Phonological Disorders using Human Modelling
Jennifer George, *SAE Institute, UK*; Paul Gnanayutham, *University of Portsmouth, UK*.

Parallel Sessions

Wednesday 13:30 – 15:30

EHAWC

Ergonomics and Health Aspects of Work with Computers

Psychological and Kinematic Issues

Exhibition Hall 2-E

Chair(s): Ana Isabel Paraguay, *University of Sao Paulo, Brazil.*

Technostress: A Study among Academic and Non Academic Staff
Raja Zirwatul Aida Raja Ibrahim, Azlina Abu Bakar, Siti Balqis Md Nor, *University College of Science and Technology Malaysia (KUSTEM), Malaysia.*

Problematic Internet Use in South African Information Technology Workers
Andrew Thatcher, Gisela Wretschko, James Fisher, *University of the Witwatersrand, South Africa.*

Factors Relating to Computer Use for People with Mental Illness
Yan-Hua Huang, Ching-yi Wu, Tzyh-Chyang Chang, Yen-Ju Lai, Wen-shuan Lee, *Chang Gung University, Taiwan China.*

The impact of VDU Tasks and Continuous Feedback on Arousal and Well-Being: Preliminary Findings
Michel Varkevisser, David Keyson, *Delft University of Technology, Netherlands.*

Computer, Television and Playstation Use in Developmental Age: Friends or Enemies of Growth and Health? Study on a Northern Italy Sample 6-14 Year Old
Enrica Fubini, Margherita Micheletti Cremasco, Elisabetta Toscano, *University of Torino, Italy.*

An Experimental Study On Physiological Parameters Toward Driver Emotion Recognition
Hongjie Leng, Yingzi Lin, Lucas Zanzi, *Northeastern University, USA.*

Evaluation of Guiard's Theory of Bimanual Control for Navigation and Selection
Xu Xia, Pourang Irani, Jing Wang, *University of Manitoba, Canada.*

HIMI

Human Interface and the Management of Information

Embodied Interaction and Communication

201-A Conference Room

Chair(s): Tomio Watanabe, *Okayama Prefectural University, Japan.*

The Importance of Human Stance in Reading Machine's Mind (Intention)
Ito Akira, Kazunori Terada, *Gifu University, Japan.*

Internal Timing Mechanism for Real-time Coordination -Two Types of Control in Synchronized Tapping-
Yoshihiro Miyake, Koji Takano, *Tokyo Institute of Technology, Japan.*

Shadow Arts-Communication: System Supporting Communicability for Encounter among Remote Groups
Yoshiyuki Miwa, Shiroh Itai, Shoichi Hasegawa, Daichi Sakurai, *Waseda University, Japan.*

Embodied Communication between Human and Robot in Route Guidance
Guillermo Enriquez, Yoshifumi Buyo, Shuji Hashimoto, *Waseda University, Japan.*

Development of an Embodied Image Telecasting Method via a Robot with Speech-Driven Nodding Response
Michiya Yamamoto, Tomio Watanabe, *Okayama Prefectural University, Japan.*

Human-Entrained E-COSMIC: Embodied Communication System for Mind Connection
Tomio Watanabe, *Okayama Prefectural University, Japan.*

Context-Aware Information Agents for the Automotive Domain using Bayesian Networks
Markus Ablaßmeier, Tony Poitschke, Stefan Reifinger, Gerhard Rigoll, *Technische Universität München, Germany.*

Adaptive Interaction and Human Information Processing

201-B Conference Room

Chair(s): Katsunori Shimohara, *Doshisha University, Japan*; Naomi Inoue, *National Institute of Information and Communication Technology / ATR Cognitive Information Science Laboratories, Japan*; Tomomasa Nagashima, *Muroran Institute of Technology, Japan.*

Toward Adaptive Interaction -- the Effect of Ambient Sounds in an ultra-Realistic Communication System --
Noriko Suzuki, Ichiro Umata, Tatsuya Kitamura, Hiroshi Ando, Naomi Inoue, *National Institute of Information and Communication Technology / ATR Cognitive Information Science Laboratories, Japan.*

Human Evaluation of Visual and Haptic Interaction
Hiroshi Ando, *National Institute of Information and Communication Technology / ATR Cognitive Information Science Laboratories, Japan*; Yuichi Sakano, *Institute of Information and Communication Technology / ATR Cognitive Information Science Laboratories, Japan*; Hiroshi Ashida, *National Institute of Information and Communication Technology / Kyoto University, Japan.*

A Study of Information Flow between Designers and Users via Website Focused on Property of Hyper Links
Hidetsugu Suto, *Muroran Institute of Technology, Japan*; Hiroshi Kawakami, *Kyoto University, Japan*; Hisashi Handa, *Okayama University, Japan.*

Production Information Management Interface for Operators in Production Process
Tomonori Yuasa, Yoshihisa Aizu, *Muroran Institute of Technology, Japan.*

KANSEI Information Processing of Human Body Movement
Mamiko Sakata, *Doshisha University, Japan*; Kozaburo Hachimura, *Ritsumeikan University, Japan.*

Kansei Analysis for Robotic Motions in Ubiquitous Environment
Janaka Chaminada Balasuriya, *Saga University, Japan*; Chandrajith Ashuboda Marasinghe, *Nagaoka University of Technology, Japan*; Keigo Watanabe, *Saga University, Japan*; Minetada Osano, *University of Aizu, Japan.*

Artificial Psychology
Zhiliang Wang, *University of Science and Technology Beijing, China.*

Designing Ubiquitous Society: HCI Perspectives

201-C Conference Room

Chair(s): Hirohiko Mori, *Musashi Institute of Technology, Japan*; Sakae Yamamoto, *Tokyo University of Science, Japan.*

Design for Confident Communication of Information in Public Spaces
Shigeyoshi Iizuka, Yurika Katagiri, *Nippon Telegraph and Telephone Corp., Japan.*

Use of Socio-technical Guidelines in Collaborative System Development
Hiroyuki Miki, *OKI Electric Ind. Co., Ltd., Japan.*

Unconscious Transmission Services of Human Feelings
Mitsuhiko Karashima, Yuko Ishibashi, *Tokai University, Japan.*

Understanding Requirements of Ubiquitous Application in Context of Daily Life
Naoki Hirasawa, Tomonori Shibagaki, *Otaru University of Commerce, Japan*; KASAI Hideaki, *NEC Software Hokkaido, Ltd., Japan.*

Interaction Design of a Remote Clinical Robot for Ophthalmology
Kentaro Go, Yuki Ito, Kenji Kashiwagi, *University of Yamanashi, Japan.*

An Information Filtering Method Based on User's Moods, Situations, and Preferences
Makoto Oka, Hirohiko Mori, Masaru Saito, *Musashi Institute of Technology, Japan.*

A Development of Supporting Systems for Disaster Victims in the Initial Stage of Serious Earthquakes
Tamae Imafuku, Sakae Yamamoto, *Tokyo University of Science, Japan.*

Human-Computer Interaction

HCI

Intelligent HCI Convergence (I)

311-A Conference Room

Chair(s): Jahwan Koo, *Sungkyunkwan University, Korea.*

A Mobile Terminal User Interface for Intelligent Robots
Ji-Hwan Park, Gi-Oh Kim, Pham Dai Xuan, Key Ho Kwon, Soon-Hyuk Hong, Jae Jeon, *Sungkyunkwan University, Korea.*

A Modular User Interface of Robots
Ji-Hwan Park, Tae Houn Song, Key Ho Kwon, Jae Jeon, *Sungkyunkwan University, Korea.*

Selecting Target Word Using Contexonym Comparison Method
Hyungsuk Ji, *Sungkyunkwan University, Korea*; Bertrand Gaiffe, *INRIA, France*; Hyunseung Choo, *Sungkyunkwan University, Korea.*

Concept-Based Question Answering System
Seung-Eun Shin, Yu-Hwan Kang, Young-Hoon Seo, *Chungbuk National University, Korea.*

Context Aware Human Computer Interaction for Ubiquitous Learning
Chulho Jeong, Eunseok Lee, *Sungkyunkwan University, Korea.*

A Real-Time GPU-Based Wall Detection Algorithm for Mapping and Navigation in Indoor Environments
Hadi Moradi, *University of Southern California, USA*; Eun Kwon, Dae Neung Sohn, JungHyun Han, *Korea University, Korea.*

Design and Implementation of Enhanced Real Time News Service using RSS and VoiceXML
Hyeong-Joon Kwon, *Sungkyunkwan University, Korea*; Jeong-Hoon Shin, *Catholic University of Daegu, Korea*; Kwang-Seok Hong, *Sungkyunkwan University, Korea.*

Quality Methodologies for the Diffusion of the Cultural Heritage through Hypermedia Systems: e-Learning, e-Commerce and Tourism

301 Conference Room

Chair(s): Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy.*

Guidelines of Quality for Industrial Online Tourism
Miguel Cipolla-Ficarra, *Asociacion Internacional de Comunicacion Interactiva (AINCI), Italy*; Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy.*

Towards an Effective Evaluation Framework for IMS LD-Based Didactic Materials: Criteria and Measures
Carmen Padrón Napoles, Paloma Díaz, Ignacio Aedo, *Universidad Carlos III de Madrid, Spain.*

How Panoramic Photography Changed Multimedia Presentations in Tourism
Nelson Gonçalves, *Contacto Visual Lta., Portugal.*

Effectiveness of Content Preparation in Information Technology Operations:Synopsis of a Working Paper
April Savoy, Gavriel Salvendy, *Purdue University, USA.*

Development of an Adaptive Multi-Agent Based Content Collection System for Digital Libraries
R. Ponnusamy, *College of Engineering Anna University, India*; T.V. Gopal, *Anna University, India.*

Detecting Learning Difficulties on Ubiquitous Scenarios
Marco De Sá, Luís Carriço, *University of Lisbon, Portugal.*

A Novel Infrastructure of Digital Storytelling Theme Museums based on RFID Systems
Myunjin Park, Keechul Jung, *Soongsil University, Korea.*

Emotions in HCI: Theory, Synthesis and Evaluation

302 Conference Room

Chair(s): Asimina Vasalou, *Imperial College, UK*; Marc Fabri, *Leeds Metropolitan University, UK.*

Can Virtual Humans be More Engaging than Real Ones?
Jonathan Gratch, Ning Wang, *University of Southern California, USA*; Anna Okhmatovskaia, *McGill University, USA*; Francois Lamothe, *French Army, France*; Mathieu Morales, *Ecole Spéciale Militaire de St-Cyr, France*; R. J. Van der Werf, *University of Twente, Netherlands*; Louis-Philippe Morency, *Massachusetts Institute of Technology, USA.*

Emotional Experiences and Quality Perceptions of Interactive Products
Sascha Mahlke, *Berlin University of Technology, Germany*; Gitte Lindgaard, *Carleton University, Canada.*

e-Stores Design: The Influence of e-Store Design and Product Type on Consumers' Emotions and Attitudes
Talya Porat, Rinat Liss, Noam Tractinsky, *Ben Gurion University of the Negev, Israel.*

EREC-II in Use – Studies on Usability and Suitability of a Sensor System for Affect Detection and Human Performance Monitoring
Christian Peter, Randolf Schultz, Jörg Voskamp, Bodo Urban, *Fraunhofer, Germany*; Nadine Nowack, Hubert Janik, Karin Kraft, *University of Rostock, Germany*; Roland Göcke, *Australian National University, Australia.*

Emotionally Expressive Avatars for Chatting, Learning and Therapeutic Intervention
Marc Fabri, Salima Y Awad Elzouki, David Moore, *Leeds Metropolitan University, UK.*

Deconstructing Web Experience: More than Just Usability and Good Design
Chandra Harrison, Helen Petrie, *University of York, UK.*

Understanding the Social Relationship between Humans and Virtual Humans
Sung Park, Richard Catrambone, *Georgia Institute of Technology, USA.*

Smart Textiles

308 Conference Room

Chair(s): Gilsoo Cho, *Yonsei University, Korea.*

Preparation of Conductive Materials for Smart Clothing: Doping and Composite of Conducting Polymer
Jooyong Kim, No-Woo Park, *Soongsil University, Korea.*

Modification of Plastic Optical Fiber for Side-illumination
Min Ho Im, Eun Ju Park, Chang Heon Kim, Moo Sung Lee, *Chonnam National University, Korea.*

Design and Evaluation of Textile-based Signal Transmission Lines and Keypads for Smart Wear
Jayoung Cho, Jihye Moon, Moonsoo Sung, *Yonsei University, Korea*; Keesam Jeong, *Yong-in Songdam College, Korea*; Gilsoo Cho, *Yonsei University, Korea.*

Exploring Possibilities of ECG Electrodes for Bio-monitoring Smartwear with Cu Sputtered Fabrics
Seeun Jang, Jayoung Cho, *Yonsei University, Korea*; Keesam Jeong, *Yong-in Songdam College, Korea*; Gilsoo Cho, *Yonsei University, Korea.*

An Investigation of Usability Evaluation for Smart Clothing
Haeng-suk Chae, Ji-young Hong, Hyun-Seung Cho, Kwang-hee Han, Joohyeon Lee, *Yonsei University, Korea.*

A Study on the Acceptance Factors of the Smart Clothing
Ji-young Hong, Haeng-suk Chae, Kwang-hee Han, *Yonsei University, Korea.*

Development of Design Prototype of Smart Healthcare Clothing for Silver Generation Based on Bio-medical Sensor Technology
Hakyung Cho, Joohyeon Lee, *Yonsei University, Korea.*

Parallel Sessions

HCI

Pattern Recognition Technologies for Interactive Interface (I)

309 Conference Room

Chair(s): Keechul Jung, *Soongsil University, Korea.*

Customer-dependent Storytelling Tool with Authoring and Viewing Functions
Sunhee Won, Miyoung Choi, Gye-Young Kim, Hyunghil Choi, *Soongsil University, Korea.*

Vision Based Laser Pointer Interaction for Flexible Screens
Nam Woo Kim, Seung Jae Lee, Byung Gook Lee, Joon Jae Lee, *Dongseo University, Korea.*

"Shooting a Bird": Game System using Facial Feature Tracking for the Handicapped People
Jinsun Ju, Yunhee Shin, Eun Yi Kim, *Konkuk University, Korea.*

Modeling of Places based on Feature Distribution
Hu Yi, Chang Woo Lee, *Kunsan National University, Korea*; Jong Yeol Yang, *Soongsil University, Korea*; Bum-Joo Shin, *Pusan National University, Korea.*

Human Pose Estimation using a Mixture of Gaussians based Image Modeling
Do Joon Jung, Kyung Su Kwon, Hang Joon Kim, *Kyungpook National University, Korea.*

Classification of a Person Picture and Scenery Picture using Structured Simplicity
Myoung-Bum Chung, Il-Ju Ko, *Soongsil University, Korea.*

Immersive Viewer System for 3D User Interface
Dongwuk Kyoung, Yunli Lee, Keechul Jung, *Soongsil University, Korea.*

Location Awareness and Environment Navigation

Exhibition Hall 2-F

Chair(s): Laura Burzagli, *National Research Council (CNR), Italy.*

Minimising Pedestrian Navigational Ambiguities through Geoannotation and Temporal Tagging
Ashweeni Beeharee, Anthony Steed, *University College London, UK.*

Enhancing the Map Usage for Indoor Location-Aware Systems
Hui Wang, Henning Lenz, Andrei Szabo, Joachim Bamberger, *Siemens AG, Germany*; Uwe Hanebeck, *Universität Karlsruhe (TH), Germany.*

Multiple People Labeling and Tracking Using Stereo for Human Computer Interaction
Nurul Arif Setiawan, Seok-Ju Hong, Chil-Woo Lee, *Chonnam National University, Korea.*

Advanced Drivers Assistant Systems in Automation
Caterina Calefato, *University of Torino, Italy*; Roberto Montanari, *University of Modena and Reggio Emilia, Italy*; Fabio Tango, *Centro Ricerche Fiat, Italy.*

Region-Based Model of Tour Planning Applied to Interactive Tour Generation
Inessa Seifert, *University of Bremen, Germany.*

Reliable Partner System Always Providing Users with Companionship through Video Streaming
Takumi Yamaguchi, *Kochi National College of Technology, Japan*; Kazunori Shimamura, *Kochi University of Technology, Japan*; Haruya Shiba, *Kochi National College of Technology, Japan.*

Multi-users and Multi-contextuality – a Mobile Tourism Setting
Carina Ihlström Eriksson, Maria Åkesson, *Halmstad University, Sweden.*

EPCE

Engineering Psychology and Cognitive Ergonomics

User's Working Memory, Mental Workload, and Task Performance

311-B Conference Room

Chair(s): Xiaolan Fu, *Chinese Academy of Sciences, China.*

Lightweight Collaborative Activity Patterns in Project Management
Shaoke Zhang, Chen Zhao, *IBM, China*; Paul Moody, *IBM Cambridge Lab, USA*; Qinying Liao, Qiang Zhang, *IBM, China.*

Adaptive User Interactive Sketching for Teaching Based on Pen Gesture
Haiyan Yang, Cuixia Ma, Dongxing Teng, Guozhong Dai, Hong'an Wang, *Chinese Academy of Sciences, China.*

Multi-window System and the Working Memory
Ayako Hashizume, *Waseda University, Japan*; Masaaki Kurosu, *National Institute of Multimedia Education, Japan*; Takao Kaneko, *Waseda University, Japan.*

The Effect of Traffic on Situation Awareness and Mental Workload Simulator-Based Study
Xueqin Hao, Zhiguo Wang, Fan Yang, Ying Wang, Yanru Guo, Kan Zhang, *Chinese Academy of Sciences, China.*

Effects of Pattern Complexity on Information Integration: Evidence from Eye Movements
Yanju Ren, Yuming Xuan, Xiaolan Fu, *Chinese Academy of Sciences, China.*

The Influence of Visual Angle on the Performance of Static Images Scanning
Xiang Qiu, *Chinese Academy of Sciences, China*; Yong Niu, *Beijing Jiao Tong University, China*; Xiaolan Fu, *Chinese Academy of Sciences, China.*

How Does Distraction Task Influence the Interaction of Working Memory and Long-Term Memory?
Ye Liu, Xiaolan Fu, *Chinese Academy of Sciences, China.*

UAHCI

Universal Access in Human-Computer Interaction

Facing Virtual Environments with Innovative Interaction Techniques

303 Conference Room

Chair(s): Oliver Stefani, *COAT-Basel, Switzerland*; Alex Bullinger, *COAT-Basel, Switzerland.*

Merging of Next Generation VR and Ambient Intelligence – from Retrospective to Prospective User Interfaces
Oliver Stefani, Ralph Mager, *COAT-Basel, Switzerland*; Evangelos Bekiaris, Maria Gemou, *CERTH, Greece*; Alex Bullinger, *COAT-Basel, Switzerland.*

iTeach: Ergonomic Evaluation Using Avatars in Immersive Environments
Hilko Hoffmann, *Fraunhofer, Germany*; Roman Shirra, *Robert Bosch GmbH,, Germany*; Phil Westner, *Fraunhofer, Germany*; Katrin Meinken, *University of Stuttgart, Germany*; Manfred Dangelmaier, *Fraunhofer, Germany.*

Computer Interface for Learning and Using Virtual Instrument
Yongkai Fan, Tianze Sun, *Tsinghua University, China*; Jun Lin, *Jilin University, China*; Xiaolong Fu, *Tsinghua University, China*; Yangyi Sui, *Jilin University, China.*

Towards a Physical Based Interaction-Model for Information Visualization
Roland Blach, Guenter Wenzel, Manfred Dangelmaier, *Fraunhofer, Germany*; Joerg Frohnmaier, *Merz Akademie, Germany.*

Steady-state VEPs in CAVE for Walking Around the Virtual World
Hideaki Touyama, Michitaka Hirose, *The University of Tokyo, Japan.*

A First Person Visuo-Haptic Environment
Sabine Coquillart, *INRIA, France.*

Controlling an Anamorphic Projected Image for Off-axis Viewing
Jiyoung Park, Myoung-Hee Kim, *Ewha Womans University, Korea.*

Evaluation of Educational Software for Universal Access

305-A Conference Room

Chair(s): Mark Dixon, *University of Plymouth, UK.*

Comparative Study of Disabled vs. Non-disabled Evaluators in User-testing: Dyslexia and First Year Students Learning Computer Programming
Mark Dixon, *University of Plymouth, UK.*

Taking Account of the Needs of Software Developers / Programmers in Universal Access Evaluations
Chris Law, Elspeth McKay, *RMIT University, Australia.*

Basic Skills Training to Disabled and Adult Learners Through an Accessible e-Learning Platform
Olga Santos, Jesús G. Boticario, *UNED, Spain*; Alicia Fernández Del Viso, Santiago Pérez De la Cámara, Carlos Rebate Sánchez, *SOLUZIONA, Spain*; Emmanuelle Gutiérrez y Restrepo, *SIDAR Foundation, Spain.*

ICT Educational Tools and Visually Impaired Students: Different Answers to Different Accessibility Needs
Stefania Bocconi, *National Research Council (CNR), Italy*; Silvia Dini, *Istituto D. Chiossone for blind Onlus, Italy*; Lucia Ferlino, *National Research Council (CNR), Italy*; Cristina Martinoli, *Istituto D. Chiossone for blind Onlus, Italy*; Michela Ott, *National Research Council (CNR), Italy.*

Developing and Evaluating A TriAccess Reading System
Ming-Chung Chen, Chien-Chuan Cko, Lih-Yuan Chen, Chun-Han Chiang, *Chiayi University, Taiwan China.*

AudioStoryTeller: Enforcing Blind Children Reading Skills
Jaime Sánchez, Ivan Galaz, *University of Chile, Chile.*

HCI Tools and Procedures as m-Learning Enablers

305-B Conference Room

Chair(s): Vlado Glavinic, *University of Zagreb, Croatia.*

Multimodal Technology for Municipal Inspections: An Evaluation Framework
Irina Kondratova, *National Research Council of Canada, Canada*; Jeff Rankin, Ashley Goggin, *University of New Brunswick, Canada.*

Agents in m-Learning Systems Based on Intelligent Tutoring
Vlado Glavinic, *University of Zagreb, Croatia*; Marko Rosic, Marija Zelic, *University of Split, Croatia.*

On some Aspects of Improving Mobile Applications for the Elderly
Andreas Holzinger, Gig Searle, *Medical University Graz, Austria*; Alexander Nischelwitzer, *University of Applied Sciences FH JOANNEUM, Austria.*

The Impact of m-Learning in School Contexts: An "Inclusive" Perspective
Francesca Pozzi, *National Research Council (CNR), Italy.*

The Use of Interactive Visual Metaphors to Enhance Group Discussions Using Mobile Devices
John McGinn, Rich Picking, Liz Picking, *North East Wales Institute, UK*; Vic Grout, *University of Wales, UK.*

How Can HCI Factors Improve Accessibility of m-Learning for Persons with Special Needs?
Matjaz Debevc, Mateja Verlic, Primoz Kosec, Zoran Stjepanovic, *University of Maribor, Slovenia.*

Intelligent Interfaces in e-Learning: a Myth or Pragma

305-C Conference Room

Chair(s): Andrina Granić, *University of Split, Croatia.*

User Modeling for Intelligent Interfaces in e-Learning
Ray Adams, *Middlesex University, UK.*

A Holistic Approach to the Evaluation of e-Learning Systems
Maria Francesca Costabile, Teresa Roselli, Rosa Lanzilotti, Carmelo Ardito, Veronica Rossano, *Università degli Studi di Bari, Italy.*

Designing Intelligent Interfaces for e-Learning Systems: The Role of User Individual Characteristics
Andrina Granić, Jelena Nakić, *University of Split, Croatia.*

The Role of Web-Based Learning Environments in Fostering Collaboration
Jasna Kuljis, Lorna Lines, *Brunel University, UK.*

Learning by e-Learning: Breaking Down Barriers and Creating Opportunities for the Visually-Impaired
Barbara Leporini, Marina Buzzi, *National Research Council (CNR), Italy.*

Feed the Dragon Wisely: Designing for Childhood Awareness as a Means of Lifelong Obesity Prevention
Shunying Blevis, Jeffrey Bardzell, *Indiana University, USA*; Nancy Wroblewski, *Monroe County YMCA, USA.*

Older Adults and Technology: Understanding and Improving the User Experience

306 Conference Room

Chair(s): Vicki Hanson, *IBM, USA.*

Aging Well: The Use of Assistive Technology to Enhance the Lives of Elders
Cathy Bodine, *University of Colorado at Denver, USA.*

An Investigation of Older Persons' Browser Usage
Prush Sa-nga-ngam, Sri Kurniawan, *The University of Manchester, UK.*

Web Access for Older Adults: Voice Browsing?
Vicki Hanson, John Richards, *IBM, USA*; Chin Chin Lee, *University of Miami, USA.*

Senior Surfers 2.0: A Re-Examination of the Older Web User and the Dynamic Web
Ann Chadwick-Dias, Marguerite Bergel, Thomas Tullis, *Fidelity Investments, USA.*

Older Adults and the Web: Lessons Learned from Eye-Tracking
Thomas Tullis, *Fidelity Investments, USA.*

Methodologies for Involving Older Adults in the Design Process
Alan Newell, John Arnott, Alex Carmichael, Maggie Morgan, *University of Dundee, UK.*

Parallel Sessions

UAHCI

Smart Environments and Ambient Intelligence (II): Tools, Architectures and Infrastructures

Exhibition Hall 2-A

Chair(s): Anthony Savidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

An Agent-based Framework for Context-Aware Services
Axel Bürkle, Wilmuth Müller, Uwe Pfirrmann, *Fraunhofer, Germany*; Nikolaos Dimakis, John Soldatos, Lazaros Polymenakos, *Athens Information Technology, Greece.*

Coupling Interaction Resources and Technical Support
Nicolas Barralon, Joëlle Coutaz, Christophe Lachenal, *Université Joseph Fourier, France.*

An MDE-SOA Approach to Support Plastic User Interfaces in Ambient Spaces
Joëlle Coutaz, Lionel Balme, Xavier Alvaro, Gaelle Calvary, Alexandre Demeure, Jean-Sebastien Sottet, *Université Joseph Fourier, France.*

Whole-system Programming of Adaptive Ambient Intelligence
Simon Dobson, Paddy Nixon, *UCD Dublin, Ireland.*

Architectural Backpropagation Support for Managing Ambiguous Context in Smart Environments
Davy Preuveneers, Yolande Berbers, *Katholieke Universiteit Leuven, Belgium.*

A new Approach for Pedestrian Navigation for Mobility Impaired Users based on Multimodal Annotation of Geographical Data
Thorsten Völkel, *Mobile Communication and Service GmbH, Germany*; Gerhard Weber, *Technical University of Dresden, Germany.*

Dynamic Conflict Detection and Resolution in a Human-Centered Ubiquitous Environment
Haining Lee, Jaeil Park, Peom Park, Myungchul Jung, *Ajou University, Korea*; Dongmin Shin, *Hanyang University, Korea.*

VR

Virtual Reality

Novel Applications of VR (I)

Exhibition Hall 2-D

Chair(s): Yin-Leng Theng, *Nanyang Technological University, Singapore.*

Developing a Mobile Service-Based Augmented Reality Tool for Modern Maintenance Work
Paula Savioja, Paula Järvinen, Tommi Karhela, Pekka Siltanen, Charles Woodward, *VTT Technical Research Centre of Finland, Finland.*

An Egocentric Augmented Reality Interface for Spatial Information Management in Crisis Response Situations
Anthony Costello, Arthur Tang, *University of Central Florida, USA.*

Mixed Reality Systems for Learning: A Pilot Study Understanding User Perceptions and Acceptance
Yin-Leng Theng, Charissa Lim Mei-Ling, *Nanyang Technological University, Singapore*; Wei Liu, Adrian Cheok, *National University of Singapore, Singapore.*

VR-based Virtual Test Technology and Its Application in Instrument Development
Tiantai Guo, *China Jiliang Univeristy, China*; Xiaojun Zhou, *Zhejiang University, China.*

A Novel Interface for Simulator Training: Describing and Presenting Manipulation Skill through VR Annotations
Mikko Rissanen, *Kyoto University, Japan*; Yoshihiro Kuroda, *Osaka University, Japan*; Tomohiro Kuroda, Hiroyuki Yoshihara, *Kyoto University Hospital, Japan.*

User Studies of a Multiplayer First Person Shooting Game with Tangible and Physical Interaction
ZhiYing Zhou, Jefry Tedjokusumo, Stefan Winkler, Bingbing Ni, *National University of Singapore, Singapore.*

The Value of Re-used the Historic Building by Virtual Preservation: A Case Study of Former British Consulate in Kaohsiung
Zong-Xian Lin, *Yunlin University of Science and Technology, Taiwan China*; Hong-Sheng Chen, *Ling Tung University, Taiwan China.*

UI

Usability and Internationalization

Designing for Security and Privacy across Cultures and Social Contexts

307 Conference Room

Chair(s): Supriya Singh, *RMIT University, Australia.*

Security Design Based on Social and Cultural Practice: Sharing of Passwords
Supriya Singh, Anuja Cabraal, *RMIT University, Australia*; Catherine Demosthenous, *Smart Internet Technology CRC / Griffith University, Australia*; Gunela Astbrink, Michele Furlong, *GSA Information Consultants, Australia.*

A Dramatic Day in the Life of a Shared Indian Mobile Phone
Apala Lahiri Chavan, *Human Factors International, Pvt. Ltd., India.*

Transborder Data Protection and the Effects on Business and Government
Julian Ligertwood, Margaret Jackson, *RMIT University, Australia.*

Regulating India's Digital Public Cultures: A Grey or Differently Regulated Area
Nimmi Rangaswamy, *Microsoft Research Labs, India, India.*

The Technologist and Internet Security and Privacy Practices
Greg Adamson, *IEEE Society on Social Implications of Technology, Australia.*

Cultural and Social Aspects of Security and Privacy – The Critical Elements of Trusted Online Service
Yinan Yang, *IEEE, Australia*; Ed Lewis, Lawrie Brown, *UNSW@ADFA, Australia.*

Computer Mediated Banking: A Cross-cultural Analysis of SMEs
Alison Ruth, *Smart Internet Technologies Cooperative Research Centre, Australia*; Jenine Beekhuyzen, *Griffith University, Australia.*

OCSC

Online Communities and Social Computing

HCI Research in Culture-Driven Mediated Communication, Cognition & Recreation

311-C Conference Room

Chair(s): Anthony Faiola, *Indiana University (IUPUI), USA*; Alexander Voiskounsky, *Moscow State University, Russia.*

A Cross-Cultural Study of Flow Experience in the IT Environment: The Beginning
Alexander Voiskounsky, *Moscow State University, Russia.*

Unveiling the Structure: Effects of Social Feedback on Communication Activity in Online Multiplayer Videogames
Luciano Gamberini, Francesco Martino, Fabiola Scarpetta, Andrea Spoto, Anna Spagnolli, *University of Padova, Italy.*

Flow Experience of MUD Players: Investigating Multi-user Dimension Gamers from the USA
Anthony Faiola, *Indiana University (IUPUI), USA*; Alexander Voiskounsky, *Moscow State University, Russia.*

Cooperation and Competition Dynamics in an Online Game Community
Ruixi Yuan, Li Zhao, *Tsinghua University, China*; Wenyu Wang, *Carnegie-Mellon University, USA.*

Recognition of Affect Conveyed by Text Messaging in Online Communication
Alena Neviarouskaya, *The University of Tokyo, Japan*; Helmut Prendinger, *National Institute of Informatics, Japan*; Mitsuru Ishizuka, *The University of Tokyo, Japan.*

CINeSPACE: Interactive Access to Cultural Heritage While On-The-Move
Pedro Santos, André Stork, *Fraunhofer, Germany*; Maria Teresa Linaza, *VicomTech, Spain*; Oliver Machui, *Trivisio GmbH, Germany*; Don McIntyre, *The Lighthouse, UK*; Elisabeth Jorge, *Fomento de San Sebastián, Spain.*

An E-health Community of Practice: Online Communication in an E-Health Service Delivery Environment
Elsa Marziali, *University of Toronto, Canada*; Tira Cohene, *Microsoft, USA.*

AC

Augmented Cognition

Sensors and Algorithms for Mental State Estimation

Exhibition Hall 2-H

Chair(s): Leonard Trejo, *Quantum Applied Science and Research, Inc., USA*; Robert Matthews, *Quantum Applied Science and Research, Inc., USA*.

Novel Hybrid Bioelectrodes for Ambulatory Zero-Prep EEG Measurements using Multi-channel Wireless EEG System
Robert Matthews, Neil McDonald, Harini Anumula, Jamison Woodward, Peter J. Turner, Martin A. Steindorf, Kaichun Chang, Joseph Pendleton, *Quantum Applied Science and Research, Inc., USA*.

EEG-based Drivers' Drowsiness Monitoring using a Hierarchical Gaussian Mixture Model
Roman Rosipal, *Austrian Research Institute for Artificial Intelligence, Austria*; Björn Peters, *Swedish National Road and Transport Research Institute, Sweden*; Göran Kecklund, Torbjörn Åkerstedt, *Karolinska Institutet, Sweden*; Georg Gruber, *The Siesta Group Schlafanalyse GmbH, Austria*; Michael Woertz, *Austrian Research Institute for Artificial Intelligence, Austria*; Peter Anderer, Georg Dorffner, *Medical University of Vienna, Austria*.

EEG-Based Estimation of Mental Fatigue: Convergent Evidence for a Three-State Model
Leonard Trejo, *Quantum Applied Science and Research, Inc., USA*; Kevin Knuth, *University at Albany, USA*; Raquel Prado, *University of California, Santa Cruz, USA*; Roman Rosipal, *Austrian Research Institute for Artificial Intelligence, Austria*; Karla Kubitz, *Towson University, USA*; Rebekah Kochavi, Bryan Matthews, *Mission Critical Technologies, Inc., USA*; Yuzheng Zhang, *University of California, Santa Cruz, USA*.

Development of Gauges for the QinetiQ Cognition Monitor
Andrew Belyavin, Chris Ryder, Blair Dickson, *QinetiQ Ltd, UK*.

A Human Computer Interface using SSVEP-based BCI Technology
Chuan Jia, Honglai Xu, Bo Hong, Xiaorong Gao, Zhiguan Zhang, Gao Shangkai, *Tsinghua University, China*.

Enhanced P300-based Cursor Movement Control
Zhongwei Ma, Xiaorong Gao, Gao Shangkai, *Tsinghua University, China*.

DHM

Digital Human Modeling

Advanced Shape and Size Analysis

Exhibition Hall 2-B

Chair(s): Afzal Godil, *National Institute of Standards & Technology (NIST), USA*.

A Case Study of Multi-resolution Representation of Heads
Jianwei Niu, Zhizhong Li, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

A Computer-Aided Ergonomic Assessment and Product Design System using Digital Hands
Yui Endo, Satoshi Kanai, Takeshi Kishinami, *Hokkaido University, Japan*; Natsuki Miyata, Makiko Kouchi, Masaaki Mochimaru, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

Human Body Modeling for Riding Comfort Simulation
Hyung Yun Choi, Kyung Min Kim, Jiwon Han, Sungjin Sah, *Hongik University, Korea*; Seok-Hwan Kim, Su-Hwan Hwang, Kwang No Lee, Jong-Kweon Pyun, *Hyundai Motor Company, Korea*; Nicole Montmayeur, Christian Marca, Eberhard Haug, Inhyeok Lee, *ESI Group, Korea*.

Advanced Human Body and Head Shape Representation and Analysis
Afzal Godil, *National Institute of Standards & Technology (NIST), USA*.

Color 3D Digital Human Modeling and its Applications to Animation and Anthropometry
Bao-zhen Ge, Qing-guo Tian, *Tianjin University, China*; K. David Young, *The Hong Kong University of Science & Technology, Hong Kong*; Yu-chen Sun, *Tianjin University, China*.

Validating Optical Motion Capture Assessments of the Dynamic Aspects of Work
Jacqueline Sutherland, Vincent Duffy, *Purdue University, USA*.

Functional Modeling and Rehabilitation (I)

Exhibition Hall 2-C

Chair(s): Dewen Jin, *Tsinghua University, China*; Jue Wang, *Xi'an Jiaotong University, China*.

A Finite Element 3D Model of In Vivo Human Knee Joint based on MRI for the Tibiofemoral Joint Contact Analysis
Zhixiu Hao, Dewen Jin, Yu Zhang, Jichuan Zhang, *Tsinghua University, China*.

Brain-Computer Interfaces Based on Attention and Complex Mental Tasks
Jue Wang, Yan Nan, Hailong Liu, Mingyu Liu, *Xi'an Jiaotong University, China*; Changfeng Tai, *University of Pittsburgh, China*.

An Inverse Dynamical Model for Slip Gait
Jiankun Yang, Dewen Jin, Linhong Ji, Jichuan Zhang, Rencheng Wang, *Tsinghua University, China*; Xin Fang, Dawei Zhou, *China Center of Orthopedic Technology (CHICOT), China*.

Optimal Control and Synergic Pattern Analysis of Upper Limb Reaching-Grasping Movements
Yiyong Yang, *China University of Geosciences, China*; Rencheng Wang, *Tsinghua University, China*; Ming Zhang, *The Hong Kong Polytechnic University, Hong Kong*; Dewen Jin, Fangfang Wu, *Tsinghua University, China*.

Finite Element Modeling to Aid in Refining the Rehabilitation of Amputees using Osseointegrated Prostheses
Winson Lee, Laurent Frossard, Nicola Cairns, *Queensland University of Technology, Australia*; Rickard Branemark, *Sahlgrenska University Hospital, Australia*; John Evans, Clayton Adam, Mark Pearcy, *Queensland University of Technology, Australia*.

Effect of Noise-Enhanced on the Balance Control Ability in Older Adults
Fangfang Wu, Rencheng Wang, Dewen Jin, Xiao Hu, *Tsinghua University, China*; Yiyong Yang, *China University of Geosciences, China*; Jichuan Zhang, *Tsinghua University, China*; Noboru Youshimura, *Akita University, Japan*.

Finite Element Analysis of a Six-component Force Sensor for the Trans-femoral Prosthesis
Xiao Hu, Rencheng Wang, Fangfang Wu, Dewen Jin, Xiaohong Jia, Jichuan Zhang, Fuwen Cai, Shuangxi Zheng, *Tsinghua University, China*.

Digital Human Modeling in Medical and Rehabilitation Applications

Exhibition Hall 2-G

Chair(s): Caterina Rizzi, *Università di Bergamo, Italy*.

Actions of an External Electrical Shock on Human Atrial Excitation – A Computer Model Study
Jihong Liu, *Northeastern University, China*; A.V. Holden, *University of Leeds, UK*; Henggui Zhang, *The University of Manchester, UK*.

Study and Application of Medical Image Visualization Technology
Jihong Liu, Weina Ma, Fei Liu, *Northeastern University, China*; Ying Hu, *Dalian Maritime University, China*; Jinzhu Yang, Xinhe Hu, *Northeastern University, China*.

Novel Methods for Human-computer Interaction in Multimodal and Multidimensional Noninvasive Medical Imaging
Tomasz Soltysinski, *Warsaw University of Technology, Poland*.

ICT Methodologies to Model and Simulate Parts of Human Body for Prosthesis Design
Giorgio Colombo, *Politecnico di Milano, Italy*; Stefano Filippi, *Università di Udine, Italy*; Paolo Rissone, *Università di Firenze, Italy*; Caterina Rizzi, *Università di Bergamo, Italy*.

3D Modeling of the Vessels from X-Ray Angiography
Na-Young Lee, Gye-Young Kim, Hyoung-il Choi, *Soongsil University, Korea*.

A New Virtual Dynamic Dentomaxillofacial System for Analyzing Mandibular Movement, Occlusal Contact, and TMJ Condition
Chi Zhang, *Chinese Academy of Sciences, China*; Lei Chen, *Peking University, China*; Fengjun Zhang, *Chinese Academy of Sciences, China*; Hao Zhang, Hailan Feng, *Peking University School / Hospital of Stomatology, China*; Guozhong Dai, *Chinese Academy of Sciences, China*.

Parallel Sessions

Wednesday 16:00 – 18:00

EHAWC

Ergonomics and Health Aspects of Work with Computers

Ergonomic Design

Exhibition Hall 2-E

Chair(s): Ben-Tzion Karsh, *University of Wisconsin-Madison, USA*.

A Study of Personal Space in Communicating Information
Shigeyoshi Iizuka, *Nippon Telegraph and Telephone Corp., Japan*; Yusuke Goto, *Keio Research Institute at SFC, Japan*; Katsuhiko Ogawa, *Nippon Telegraph and Telephone Corp., Japan*.

Development of Electric Wheelchair with Operational Force Detecting Interface for Persons with Becker's Muscular Dystrophy
Motoki Shino, *The University of Tokyo, Japan*; Takenobu Inoue, *National Rehabilitation Center for Persons with Disabilities, Japan*; Minoru Kamata, *The University of Tokyo, Japan*.

An Evaluation Study for a 3D Input Devices Based on Ergonomic Design Criteria
Tobias Nowack, Stefan Lutherdt, Torsten Gramsch, Peter Kurtz, *Technische Universität Ilmenau, Germany*.

Design of an Adaptive Feedback Based Steering Wheel
Mauro Dell'Amico, Stefano Marzani, Luca Minin, Roberto Montanari, Francesco Tesauri, Michele Mariani, Cristina Iani, *University of Modena and Reggio Emilia, Italy*; Fabio Tango, *Centro Ricerche Fiat, Italy*.

Interaction and Ergonomics Issues in the Development of a Mixed Reality Construction Machinery Simulator for Safety Training
Álvaro Segura, Aitor Moreno, *VICOMTech Association, Spain*; Gino Brunetti, Thomas Henn, *Fraunhofer, Germany*.

The Path not Taken: Rediscovering and Applying the Vision of Doug Engelbart
Marvin Dainoff, *Miami University, USA*.

A Study on the Ergonomic Effect of the Force Difference Applying Diverse types of Control Buttons to One Device
Chiwon Song, Jeongyun Heo, SangHyun Park, *LG Electronics, Korea*.

HIMI

Human Interface and the Management of Information

Virtual Reality 2.0

201-C Conference Room

Chair(s): Michitaka Hirose, *The University of Tokyo, Japan*.

Brain Computer Interface via Stereoscopic Images in CAVE
Hideaki Touyama, Michitaka Hirose, *The University of Tokyo, Japan*.

A Study on Haptic Interaction and Simulation of Motion and Deformation of Elastic Object
Kazuyoshi Tagawa, Koichi Hirota, Michitaka Hirose, *The University of Tokyo, Japan*.

Spatial Electronic Mnemonics: a Virtual Memory Interface
Yasushi Ikei, Hirofumi Ota, *Tokyo Metropolitan University, Japan*; Takuro Kayahara, *Miyagi University, Japan*.

Real IT: Information Technology in Real Spaces
Ronald Sidharta, Tomohiro Tanikawa, Michitaka Hirose, *The University of Tokyo, Japan*.

Study on Public User Interface
Atsushi Hiyama, Kotaro Hashimoto, Tomohiro Tanikawa, Michitaka Hirose, *The University of Tokyo, Japan*.

3D World from 2D Photos
Takashi Aoki, Tomohiro Tanikawa, Michitaka Hirose, *The University of Tokyo, Japan*.

Text Analysis and Mining: Theory and Applications

301 Conference Room

Chair(s): Mark Lehto, *Purdue University, USA*.

Development of an Approach for Optimizing the Accuracy of Classifying Claims Narratives Using a Machine Learning Tool (TEXTMINER[4])
Helen Corns, Helen Marucci Wellman, *Liberty Mutual Research Institute for Safety, USA*; Mark Lehto, *Purdue University, USA*.

Text Analysis of Consumer Reviews: The case of Virtual Travel Firms
Xinran Lehto, Jung Kun Park, Ounjoung Park, Mark Lehto, *Purdue University, USA*.

Hybrid Singular Value Decomposition: a Model of Human Text Classification
Amirali Noorinaeini, Mark Lehto, Sze-jung Wu, *Purdue University, USA*.

Computer Classification of Injury Narratives Using a Fuzzy Bayes Approach: Improving the Model
Helen Marucci Wellman, *Liberty Mutual Research Institute for Safety, USA*; Mark Lehto, *Purdue University, USA*; Helen Corns, *Liberty Mutual Research Institute for Safety, USA*.

A Bayesian Methodology for Semi-Automated Task Analysis
Shu-Chiang Lin, Mark Lehto, *Purdue University, USA*.

Self-Help Troubleshooting by Q-KE-CLD Based on a Fuzzy Bayes Model
Pilsung Choe, Mark Lehto, Jan Allebach, *Purdue University, USA*.

Brain Functions in Mobile Interactions

311-A Conference Room

Chair(s): Masaru Miyao, *Nagoya University, Japan*; Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*.

NIRS Trajectories in Oxy-Deoxy Hb Plane and the Trajectory Map to Understand Brain Activities Related to Human Interface
Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*; Masako Omori, *Kobe Women's University, Japan*; Masami Choui, *Hiroshima International University, Japan*.

Brain Activities Related to Legibility of Text, Studied by Means of Near Infrared Spectroscopy
Masako Omori, *Kobe Women's University, Japan*; Satoshi Hasegawa, *Nagoya Bunri University, Japan*; Masaru Miyao, *Nagoya University, Japan*; Masami Choui, *Hiroshima International University, Japan*; Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*.

A Comparative Study of Brain Activities Engaged in Interface Operations by Means of NIRS Trajectory Map
Miki Fuchigami, Akira Okada, *Osaka City University, Japan*; Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*; Masako Omori, *Kobe Women's University, Japan*.

Measuring Brain Activities related to Understanding using Near-Infrared Spectroscopy (NIRS)
Masayoshi Nagai, Nobutaka Endo, Takatsune Kumada, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

Functional Brain Imaging for Analysis of Reading Effort for Computer-Generated Text
Erin Nishimura, Evan Rapoport, *Archinoetics, LLC, USA*; Benjamin Darling, Jason Cervenka, *University of Virginia, USA*; Jeanine Stefanucci, *The College of William & Mary, USA*; Dennis Proffitt, *University of Virginia, USA*; Traci Downs, J. Hunter Downs, III, *Archinoetics, LLC, USA*.

e-Learning and m-Learning

Exhibition Hall 2-A

Chair(s): Jan-Torsten Milde, *Fulda University of Applied Sciences, Germany*.

Efficient Creation of Multi Media eLearning Modules
Hans-Martin Pohl, Patrycja Tulinska, Jan-Torsten Milde, *Fulda University of Applied Sciences, Germany*.

Webcasting Made Interactive: Integrating Real-time Videoconferencing in Distributed Learning Spaces
Ronald Baecker, Jeremy Birnholtz, Rhys Causey, Simone Laughton, Kelly Rankin, Clarissa Mak, Alison Weir, Peter Wolf, *University of Toronto, Canada*.

HCI for m-learning in Image Processing by Handhelds
Danco Davcev, Marjan Arsic, Dalibor Ilievski, Andrea Kulakov, *Sts. Cyril and Methodius University, Former Yugoslav Republic of Macedonia*.

Webcasting Made Interactive: Persistent Chat for Text Dialogue During and About Learning Events
Ronald Baecker, David Fono, Lillian Blume, Christopher Collins, Delia Couto, *University of Toronto, Canada*.

Impact of Interactive Learning on Knowledge Retention
Mohamed Ibrahim, Osama Alshara, *Higher Colleges of Technology, United Arab Emirates*.

A Mobile Environment for Chinese Language Learning
Chang-Chih Tseng, *Tsing-Hua University, Taiwan China*; Chun-Hung Lu, Wen-Lian Hsu, *Academia Sinica, Taiwan China*.

Networks and Communication

Exhibition Hall 2-H

Chair(s): Youngho Rhee, *Samsung Electronics, Korea*.

Peer-to-Peer File Sharing Communication Detection System Using Network Traffic Mining
Satoshi Togawa, *Shikoku University, Japan*; Kazuhide Kanenishi, Yoneo Yano, *Tokushima University, Japan*.

Mining Attack Correlation Scenarios for Multi-agent System
Sisi Huang, Zhitang Li, Li Wang, *Huazhong University of Science and Technology, China*.

An Adaptive Frame-based Admission Control for Multimedia Traffic in Wireless LAN
Jinsuk Pak, *Kyungpook National University, Korea*; Yongsik Kwon, *KT, Korea*; Kijun Han, *Kyungpook National University, Korea*.

Converting Information through a Complete and Minimal Unit Transcoder for QoS Adaptation
SungMi Chon, DongYeop Ryu, YoungWhan Lim, *Soongsil University, Korea*.

Rapid and Precise Mobile Data Processing for Fire Brigades and Rescue Services (SAFeR/GÜTER/SHARE)
Rainer Koch, Ruediger Harnasch, Bo-Sik Lee, Jens Pottebaum, *University of Paderborn, Germany*.

Media Sharing and Collaboration within Mobile Community: Self Expression and Socialization
Youngho Rhee, Kiran Pal Sagoo, Jayoun Lee, Juyoun Lee, Deokwon Kim, Youngwan Seo, *Samsung Electronics, Korea*.

Towards an Optimal Information Architecture Model for Mobile Multimedia Devices
Timo-Pekka Viljamaa, Tuomas Vaittinen, *Nokia Research Center, Finland*; Akseli Anttila, *Nokia Corporation, Finland*.

HCI

Technologies and Intelligent Systems (I)

302 Conference Room

Chair(s): Fang Chen, *National ICT Australia, Australia*.

User Expectations from Dictation on Mobile Devices
Santosh Basapur, Shuang Xu, Mark Ahlenius, *Motorola Labs, USA*; Young Seok Lee, *Virginia Tech, USA*.

Wearable Healthcare Gadgets for Life Log Service based on WPAN
Sang-Hyun Kim, Dong Wan Ryoo, Changseok Bae, *Electronics and Telecommunication Research Institute (ETRI), Korea*.

Personal Life Logger and Belonging Monitor Using Reliable ZigBee Networks
Kwang Hee Lee, KyoungJu Noh, Changseok Bae, *Electronics and Telecommunication Research Institute (ETRI), Korea*.

MEMORIA: Personal Memento Service Using Intelligent Gadget
Hyeju Jang, Jongho Won, Changseok Bae, *Electronics and Telecommunication Research Institute (ETRI), Korea*.

Implementation of a New H.264 Video Watermarking Algorithm with Usability Test
Mohd Afizi Mohd Shukran, Vera Yuk Ying Chung, Xiaoming Chen, *University of Sydney, Australia*.

An Improved H.264 Error Concealment Algorithm with User Feedback Design
Xiaoming Chen, Vera Yuk Ying Chung, *University of Sydney, Australia*.

Towards Automatic Cognitive Load Measurement from Speech Analysis
Bo Yin, *National ICT Australia Ltd, Australia*; Fang Chen, *National ICT Australia, Australia*.

Presence and Copresence: Toward Understanding the User's Perception in Human-Computer Interaction

305-B Conference Room

Chair(s): Chang Nam, *University of Arkansas, USA*.

Entelechy and Embodiment in (Artistic) Human-Computer Interaction
Uwe Seifert, Jin Hyun Kim, *University of Cologne, Germany*.

Co-Presence in Shared Virtual Environments: Avatars Beyond the Opposition of Presence and Representation
Jan Söffner, *Universität zu Köln, Germany*; Chang Nam, *University of Arkansas, USA*.

Influence of Avatar Creation on Attitude, Empathy, Presence, and Para-Social Interaction
Donghun Chung, *Kwangwoon University, Korea*; Brahm Daniel DeBuys, Chang Nam, *University of Arkansas, USA*.

Being Together: User's Subjective Experience of Social Presence in CMC Environments
Ha Sung Hwang, SungBok Park, *Hanyang University, Korea*.

Presence, Creativity and Collaborative Work in Virtual Environments
Ilona Heldal, *Chalmers University of Technology, Sweden*; David Roberts, *University of Salford, UK*; Lars Bråthe, *Volvo Powertrain, Sweden*; Robin Wolff, *University of Salford, UK*.

Maximizing Environmental Validity: Remote Recording of Desktop Videoconferencing
Sean Rintel, *University at Albany (SUNY), USA*.

Hit Me Baby One More Time: A Haptic Rating Interface
Christoph Bartneck, Philomena Athanasiadou, *Technische Universiteit Eindhoven, Netherlands*; Takayuki Kanda, *ATR, Japan*.

Parallel Sessions

HCI

The Computer Games and Interactive 3D Graphics System

305-C Conference Room

Chair(s): Hung-Kuang Chen, *Chin-Yi University of Technology, Taiwan China.*

Using Agent Technology to Study Human Action and Perception through a Virtual Street Simulator
Chiung-Hui Chen, *Asia University, Taiwan China*; Mao-Lin Chiu, *Cheng Kung University, Taiwan China.*

The Practice of Combining Cinematic Narrative With Realtime 3D Game Play
Charles Shih-I Yeh, *Playtron Technology, Inc., Taiwan China.*

A Wearable Computing Environment for the Security of a Large-Scale Factory
Jiung-yao Huang, *Taipei University, Taiwan China*; Chung-Hsien Tsai, *Central University, Taiwan China.*

A Camera-Based Multi-touch Interface Builder for Designers
Han-Hong Lin, *Chiao Tung University, Taiwan China*; Teng-Wen Chang, *Yunlin University of Science and Technology, Taiwan China.*

Interacting Play—Design as a Metaphor for Developing Interactive Games
Teng-Wen Chang, *Yunlin University of Science and Technology, Taiwan China.*

Implementing an Interactive Collage Table System with Design Puzzle Exploration
Teng-Wen Chang, Yuan-Bang Cheng, *Yunlin University of Science and Technology, Taiwan China.*

3D Modeling and Design Supported via Interscopic Interaction Strategies
Frank Steinicke, Timo Ropinski, Gerd Bruder, Klaus Hinrichs, *WWU Münster, Germany.*

Usability Practice in China

306 Conference Room

Chair(s): Xiaowei Yuan, *ISAR User Interface Design, China.*

Scenario-based Installability Design
Shanghong Xiao, *Huawei Technologies Co., Ltd, China.*

UX Office - A New Software Application for User Experience Services
Li Ma, Xiaowei Yuan, *ISAR User Interface Design, China.*

An Ignored Factor of User Experience FEEDBACK-QUALITY
Hong Ji, *Shanghai Research / China Telecom, China*; Xubo Jiang, *ISAR, China.*

How to Use Emotional Usability to Make the Product Serves a Need beyond the Traditional Functional Objective to Satisfy the Emotion Needs of the User in Order to Improve the Product Differentiator - Focus on Home Appliance Product
Ning Liu, *Haier Group, China*; Ting Shang, *ISAR User Interface Design, China.*

The Experimental Approaches of Assessing the Consistency of User Interface
Yan Chen, Lixian Huang, Lulu Li, Qi Luo, Ying Wang, Jing Xu, *Tencent Technology (Shenzhen) Ltd., China.*

Usability engineered requirement analysis
Li Manhai, Yang Jinh, *ZTE Corporation, China.*

Gathering User Feedback with Usability Test in the Product Design Process
Qianying Wang, *Legend Corporate Research, China*; Baihong Chen, *Lenovo Corporate Research China, China.*

Empower Elders to Enjoy New Technologies

308 Conference Room

Chair(s): Qin Gao, *Tsinghua University, China.*

Design Effective Navigation Tools for Older Web Users
Qin Gao, *Tsinghua University, China*; Hitomi Sato, *Nippon Telegraph and Telephone Corp., Japan*; Pei-Luen Patrick Rau, *Tsinghua University, China*; Yoko Asano, *Nippon Telegraph and Telephone Corp., Japan.*

Perception of Movements and Transformations in Flash Animations of Older Adults
Lin Wang, *Tsinghua University, China*; Hitomi Sato, *Nippon Telegraph and Telephone Corp., Japan*; Ling Jin, Pei-Luen Patrick Rau, *Tsinghua University, China*; Yoko Asano, *Nippon Telegraph and Telephone Corp., Japan.*

The Impact of Moving Around and Zooming of Objects on Users' Performance in Web Pages: A Cross-Generation Study
Hitomi Sato, Kaori Fujimura, *Nippon Telegraph and Telephone Corp., Japan*; Lin Wang, Ling Jin, *Tsinghua University, China*; Yoko Asano, Masahiro Watanabe, *Nippon Telegraph and Telephone Corp., Japan*; Pei-Luen Patrick Rau, *Tsinghua University, China.*

Tips for Designing Mobile Phone Web Pages for the Elderly
Yoko Asano, Harumi Saito, Hitomi Sato, *Nippon Telegraph and Telephone Corp., Japan*; Lin Wang, Qin Gao, Pei-Luen Patrick Rau, *Tsinghua University, China.*

Why Does IT Support Enjoyment of Elderly Life? - Case Studies Performed in Japan -
Kaori Fujimura, Hitomi Sato, Takayoshi Mochizuki, Koichiro Kubo, Kenichiro Shimokura, Yoshihiro Itoh, Setsuko Murata, Kenji Ogura, Takumi Watanabe, Yuichi Fujino, Toshiaki Tsuboi, *Nippon Telegraph and Telephone Corp., Japan.*

Age Differences in Performance, Operation Methods, and Workload While Interacting with an MP3 Player
Neung Eun Kang, Wan Chul Yoon, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Searching for Information on the Web: Role of Aging and Ergonomic Quality of Website
Aline Chevalier, Aurélie Dommès, Daniel Martins, Cécile Valérian, *University of Paris 10, France.*

HCI in MIS (I)

311-B Conference Room

Chair(s): Fiona Fui-Hoon Nah, *University of Nebraska-Lincoln, USA*; Ping Zhang, *Syracuse University, USA*; Scott McCoy, *The Mason School of Business, USA.*

User Response to Free Trial Restrictions: A Coping Perspective
Xue Yang, Chuan-Hoo Tan, Hock-Hai Teo, *National University of Singapore, Singapore.*

Exploring Multi-dimensional Conceptualization of Social Presence in the Context of Online Communities
Kathy Ning Shen, Mohamed Khalifa, *City University of Hong Kong, Hong Kong.*

Online Ad Intrusiveness
Scott McCoy, *The Mason School of Business, USA*; Andrea Everard, *University of Delaware, USA*; Peter Polak, *University of Miami, USA*; Dennis Galletta, *University of Pittsburgh, USA.*

Perceived Usefulness and Usability of Weblogs for Collaborative Learning
Yin-Leng Theng, Elaine Lew Yee Wan, *Nanyang Technological University, Singapore.*

The Effects of Mobile Service Quality and Technology Compatibility on Users' Perceived Playfulness
Felix Tan, Jacky Chou, *AUT University, New Zealand.*

What makes Game Players Want to Play More? A Mathematical and Behavioral Understanding of Online Game Design
De Liu, Xun Li, Radhika Santhanam, *University of Kentucky, USA.*

Predicting the Outcome of a Computer Literacy Course Based on a Candidate's Personal Characteristics
Andries Burger, Pieter Blignaut, *University of the Free State, South Africa.*

Adaptive Interfaces and Environments

Exhibition Hall 2-F

Chair(s): Oswaldo Velez-Langs, *Universidad Rey Juan Carlos, Spain.*

Adaptation in Intelligent Tutoring Systems: Development of Tutoring and Domain Models
Oswaldo Velez-Langs, *Universidad Rey Juan Carlos, Spain*; Xiomara Arguello, *Universidad del Sinu, Colombia.*

A Location-Adaptive Human-Centered Audio Email Notification Service for Multi-User Environments
Ralf Jung, Tim Schwartz, *Saarland University, Germany.*

Using Content-based Multimedia Data Retrieval for Multimedia Content Adaptation
Adriana Reveiu, Marian Dardala, Felix Furtuna, *Academy of Economic Studies, Romania.*

A Generic Design Guideline for Intelligent Adaptive Interfaces
Ming Hou, *Defence R&D Canada, Canada*; Michelle Gauthier, Simon Banbury, *Greenley & Associates, Canada.*

Tasks Models Merging for High-Level Component Composition
Arnaud Lewandowski, *Universite du Littoral, France*; Sophie Lepreux, *University of Valenciennes, France*; Grégory Bourguin, *Universite du Littoral, France.*

A Multidimensional Classification Model for the Interaction in Reactive Media Rooms
Ali Asghar Nazari Shirehjini, *Fraunhofer, Germany.*

Adaptive Evaluation Strategy Based on Surrogate Model
Yi-nan Guo, Dun-wei Gong, Hui Wang, *China University of Mining and Technology, China.*

Intelligent Interaction Environments

Exhibition Hall 2-G

Chair(s): Gregg Vanderheiden, *University of Wisconsin-Madison, USA.*

Social Intelligence as the Means for Achieving Emergent Interactive Behaviour in Ubiquitous Computing Environments
Ioannis Zaharakis, Achilles Kameas, *Computer Technology Institute, Greece.*

The Research on Human-Computer Interaction in Ambient Intelligence
Yong Zhang, Yibin Hou, Zhangqin Huang, Hui Li, Rui Chen, *Beijing University of Technology, China*; Haitao Shang, *LanZhou Commercial College, China.*

End User Tools for Ambient Intelligence Environments: an Overview
Irene Mavrommati, *University of the Aegean / Computer Technology Institute, Greece*; John Darzentas, *University of the Aegean, Greece.*

A Taxonomy of Physical Contextual Sensors
Philippe Truillet, *IRIT, France.*

Visualizing Interaction in Digitally Augmented Spaces: Steps toward a Formalism for Location-Aware and Token-Based Interactive Systems
Yngve Dahl, Dag Svanaes, *Norwegian University of Science and Technology (NTNU), Norway.*

Coin Size Wireless Sensor Interface for Interaction with Remote Displays
Ayman Atia, Shin Takahashi, Jiro Tanaka, *University of Tsukuba, Japan.*

The Universal Control Hub - An Open Platform for Remote User Interfaces in the Digital Home
Gottfried Zimmermann, *Access Technologies Group, Germany*; Gregg Vanderheiden, *University of Wisconsin-Madison, USA.*

EPCE

Engineering Psychology and Cognitive Ergonomics

Human Factors Integration(s) in Aviation Systems

201-B Conference Room

Chair(s): Peter Jorna, *National Aerospace Laboratory, Netherlands.*

Human Performance Enhancements: From Certification to Innovation
Peter Jorna, *National Aerospace Laboratory, Netherlands.*

Future Trends in Flight Deck Equipment
Alison Starr, *Smiths Aerospace, UK*; Piet Hoogeboom, *National Aerospace Laboratory, Netherlands.*

HCI Testing in Flight Simulator: Set Up and Crew Briefing Procedures - Design and Test Cycles for the Future
Rolf Zon, Mariska Roerdink, *National Aerospace Laboratory, Netherlands.*

HILAS Flight Operations Research: Development of Risk/Safety Management, Process Improvement & Task Support Tools
Joan Cahill, Nicholas Mc Donald, *Trinity College, Dublin, Ireland*; Pernilla Ulfvengren, *Royal Institute of Technology (KTH), Sweden*; Franklyn Young, *Rockwell Collins, UK*; Yeray Ramos, *Universidad de La Laguna, Spain*; Gabriel Losa, *Iberia Airlines, Spain.*

An European Approach to the Integrated Management of Human Factors in Aircraft Maintenance: Introducing the IMMS
Marie Ward, Nicholas Mc Donald, *Trinity College, Dublin, Ireland.*

Human Integration in the Lifecycle of Aviation Systems
Nicholas Mc Donald, *Trinity College, Dublin, Ireland.*

Analysis of Human Factors Integration Aspects for Aviation Accidents and Incidents
Ruishan Sun, Lei Wang, Ling Zhang, *Civil Aviation University of China, China.*

UAHCI

Universal Access in Human-Computer Interaction

Multimodal Efficient Interaction within Learning e-Environments

201-A Conference Room

Chair(s): Dimitris Tolias, *Hellenic American Union, Greece*; George Exadaktylos, *Hellenic American Union, Greece.*

Methodology and Application in a Technologically Enhanced Environment: The Case of the Writing Center at the Hellenic American Union and the Hellenic American University
Vassiliki Kourbani, Yiannis Petropoulos, *Hellenic American University, Greece*; Dimitris Tolias, *Hellenic American Union, Greece.*

Reaching Beyond the Invisible Barriers: Serving a Community of Users with Multiple Needs
Dianna Newman, Gary Clure, *University at Albany / SUNY, USA.*

Instructional Technology and Faculty Development: How iWRITE Challenges Course Design and Teaching Methods
Margaret Procter, *University of Toronto, Canada.*

Technology-Mediated Provision of Models: Observational Learning for First Year Students
J. Barbara Rose, *University of Toronto, Canada.*

English for Academic Purposes in Israel: Perceptions of E-learning from the Perspectives of Learners and Teachers
Bella Rubin, Helen Sarid, *Tel Aviv University, Israel.*

Learning Through Exploration, Autonomy, Collaboration, and Simulation: The 'All-in-One' Virtual School of the Hellas Alive© Online, Language-Learning Platform
Dimitris Tolias, George Exadaktylos, *Hellenic American Union, Greece.*

Effects of Group Composition in Collaborative Learning of EFL Writing
Siew-Rong Wu, *Yang-Ming University, Taiwan China.*

Parallel Sessions

UAHCI

FUITEL: Future Interfaces in Technology Enhanced Learning (I)

303 Conference Room

Chair(s): Andreas Holzinger, *Medical University Graz, Austria*.

Students' Attitudes towards Novel Interfaces in E-Learning
Margit Pohl, Ilona Herbst, Franz Reichl, Sylvia Wiltner, *Vienna University of Technology, Austria*.

Virtual and Mixed Reality Interfaces for e-Training: Examples of Applications in Light Aircraft Maintainance
Johannes Christian, *Leeds Metropolitan University, UK*; Horst Krieger, *ipcenter.at, Vienna, Austria*; Andreas Holzinger, *Medical University Graz, Austria*; Reinhold Behringer, *Leeds Metropolitan University, UK*.

Co-Learn: Collaborative Learning Engine A Vision for Pervasive Collaboration in E-Learning
Vaibhav Tyagi, Sheikh Ahamed, *Marquette University, USA*.

Towards Cultural Adaptability to Broaden Universal Access in Future Interfaces of Driver Information Systems
Rüdiger Heimgärtner, Lutz-Wolfgang Tiede, Jürgen Leimbach, Steffen Zehner, *Siemens AG, Germany*; Nhu Nguyen-Thien, *Siemens VDO Automotive AG, Germany*; Helmut Windl, *Siemens AG, Germany*.

Detailed Monitoring of User's Gaze and Interaction to Improve Future E-Learning
Heiko Drewes, Richard Atterer, *Ludwig-Maximilians Universität München, Germany*; Albrecht Schmidt, *Fraunhofer, Germany*.

Accessible and Adaptive e-Learning Materials: Considerations for Design and Development
Matjaz Debevc, Zoran Stjepanovic, Petra Povalej, Mateja Verlic, Peter Kokol, *University of Maribor, Slovenia*.

Ambient Intelligence in Assisted Living: Enable Elderly People to Handle Future Interfaces
Thomas Kleinberger, Martin Becker, Eric Ras, *Fraunhofer, Germany*; Andreas Holzinger, *Medical University Graz, Austria*; Paul Müller, *Technical University Kaiserslautern, Germany*.

Enhancing Universal Access – EEG based Learnability Assessment
Christian Stickel, *VirtualTrends Int. Ltd. & Co. KG, Germany*; Josef Fink, *University of Applied Sciences Frankfurt, Austria*; Andreas Holzinger, *Medical University Graz, Austria*.

Accessible e-Learning

307 Conference Room

Chair(s): Carlos Rebate Sánchez, Alicia Fernández Del Viso, *SOLUZIONA, Spain*; Olga Santos, Alejandro Rodriguez-Ascaso, *UNED, Spain*; Loïc Martínez Normand, *Universidad Politécnica de Madrid, Spain*.

Panel Discussion

Enhancing User Input

Exhibition Hall 2-B

Chair(s): Margherita Antona, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

A Flexible On-screen Keyboard: Dynamically Adaptive for Individuals' Needs
Yun-Lung Lin, *Taiwan Normal University, Taiwan China*; Ming-Chung Chen, *Chiayi University, Taiwan China*; Ya-Ping Wu, Yao-Ming Yeh, Hwa-Pey Wang, *Taiwan Normal University, Taiwan China*.

Performance of Different Pointing Devices on Children with Cerebral Palsy
Ting-Fang Wu, *Taiwan Normal University, Taiwan China*; Ming-Chung Chen, *Chiayi University, Taiwan China*.

CAT Motor: An Innovative System to Detect the Behavior of Human Computer Interaction for People with Upper Limb Impairment
Chien-Chuan Cko, Ming-Chung Chen, *Chiayi University, Taiwan China*; Ting-Fang Wu, *Taiwan Normal University, Taiwan China*; Su-Ying Chen, *Chiayi University, Taiwan China*; Chih-Ching Yeh, *Taiwan Normal University, Taiwan China*.

An On-screen Keyboard for Users with Poor Pointer Control
Rick Kjeldsen, *IBM, USA*.

Embedding Expert System into a Computerized Assessment Tool for Mouse Proficiency
Chih-Ching Yeh, *Taiwan Normal University, Taiwan China*; Ming-Chung Chen, *Chiayi University, Taiwan China*; Chi Nung Chu, *China University of Technology, Taiwan China*; Chien-Chuan Cko, *Chiayi University, Taiwan China*; Ting-Fang Wu, *Taiwan Normal University, Taiwan China*.

Chatting with an AAC (Augmentative/Alternative Communication) Device
Scott Kuebler, Ronald Kuebler, *Lingual Perfection, USA*.

BetweenKeys: Looking for Room between Keys
Youngwoo Yoon, Geehyuk Lee, *Information and Communications University, Korea*.

VR

Virtual Reality

VR and Health

Exhibition Hall 2-C

Chair(s): Albert Rizzo, *University of Southern California, USA*.

Comparing Symptoms of Visually Induced Motion Sickness Among Viewers of Four Similar Virtual Environments with Different Color
Richard So, S.L. Yuen, *Hong Kong University of Science and Technology, Hong Kong*.

A Time-Varying Factors Model with Different Time-Scales for Studying Cybersickness
Tohru Kiryu, Eri Uchiyama, Masahiro Jimbo, Atsuhiko Iijima, *Niigata University, Japan*.

Independent Component Analysis of Finger Photoplethysmography for Evaluating Effects of Visually-Induced Motion Sickness
Makoto Abe, Makoto Yoshizawa, Norihiro Sugita, *Tohoku University, Japan*; Akira Tanaka, *Fukushima University, Japan*; Shigeru Chiba, *Sharp Corporation, Japan*; Tomoyuki Yambe, Shin-ichi Nitta, *Tohoku University, Japan*.

Effects of Global Motion Included in Video Movie Provoking an Incident on Visually Induced Motion Sickness
Hiroyasu Ujike, *National Institute of Advanced Industrial Science and Technology, Japan*.

An Optical See-through Augmented Reality System for the Treatment of Phobias to Small Animals
M. Carmen Juan, Mariano Alcañiz, Jerome Calatrava, Irene Zaragoza, *Universidad Politécnica de Valencia, Spain*; Rosa Baños, *Universidad de Valencia, Spain*; Cristina Botella, *Universitat Jaume I, Spain*.

VIDEODOPE: Applying Persuasive Technology to Improve Awareness of Drugs Abuse Effects
Luciano Gamberini, Luca Breda, Alessandro Grassi, *University of Padova, Italy*.

Evaluation Approach for Post-Stroke Rehabilitation via Virtual Reality Aided Motor Training
Shih-Ching Yeh, Jill Stewart, Margaret McLaughlin, *University of Southern California, USA*; Thomas Parsons, *Institute for Creative Technologies, USA*; Carolee Winstein, Albert Rizzo, *University of Southern California, USA*.

UI

Usability and Internationalization

Physical Computing, Open Source and Data Visualization: Collaboration between Parsons The New School for Design, New York, U.S. and Tsinghua University, Beijing, China

305-A Conference Room

Chair(s): Ben Bacon, *Parsons The New School for Design, USA*; Colleen Macklin, *Parsons The New School for Design, USA*.

Panel Discussion

Global Software Design Solutions

309 Conference Room

Chair(s): Esin Kiris, *CA Inc., USA*.

Testing Remote Users: An Innovative Technology
Rebecca Baker, Esin Kiris, *CA Inc., USA*; Omar Vasnaik, *Microsoft Corporation, USA*.

User-Centered Design: Component-Based Web Technology
Esin Kiris, Howard Abrams, Roman Longoria, *CA Inc., USA*.

Web Usability and Evaluation: Issues and Concerns
S. Batra, *Enterprise Rental Inc., USA*; R. Bishu, *University of Nebraska-Lincoln, USA*.

Local Websites as the New Existence of Traditional Local Cultures in the Virtual Space: An Overview on the Local Websites of Turkey
Kerem Rizvanoglu, Özgürol Öztürk, *Galatasaray University, Turkey*.

An Empirical Evaluation of Graphical Usable Interface on Mobile Chat
Victoria Yee Siew Yen, Daniel Su Kuen Seong, *The University of Nottingham, Malaysia, Malaysia*.

The Impact of Culture on Usability: Designing Usable Products for the International User
Carol Lodge, *Human Interactive Technologies Inc., Jamaica*.

Linguistic Analysis of Websites: A New Method of Analysing Language, the Poor Cousin of Usability
Sabrina Duda, Michael Schiessl, *eye square GmbH, Germany*; Gerald Wildgruber, *Humboldt Universität zu Berlin, Germany*; Christian Rohrer, Paul Fu, *eBay Inc, USA*.

OCSC

Online Communities and Social Computing

Security, Trust and Participation

Exhibition Hall 2-D

Chair(s): Peter Day, *University of Brighton, UK*.

A Trust-based Reputation System in Peer-to-Peer Grid
Xiong ZengGang, Yang Yang, *University of Science and Technology Beijing, China*; Xuemin Zhang, *Xiaogan University, China*; Dairong Yu, Li Liu, *University of Science and Technology Beijing, China*.

Presentation Desire of Digital Identity in Virtual Community
Hee-Woong Kim, Eunice Que, *National University of Singapore, Singapore*.

Chameleon-based Deniable Authenticated Key Agreement Protocol Secure against Forgery
Chunbo Ma, *Shanghai Jiao Tong University, China*; Jun Ao, *Xidian University, China*; Jianhua Li, *Shanghai Jiao Tong University, China*.

Managing Fairness: Reward Distribution in a Self-organized Online Game Player Community
Chyng-Yang Jang, *University of Texas at Arlington, USA*.

Ranking Method for Mediators in Social Network
Ryosuke Saga, Hiroshi Tsuji, *Osaka Prefecture University, Japan*.

Disaster-Response Information Sharing System Based on Cellular Phone With GPS
Masakatsu Aoki, Shunichi Yonemura, Kenichiro Shimokura, *Nippon Telegraph and Telephone Corp., Japan*.

Tags for Citizens: Integrating Top-down and Bottom-up Classification in the Turin Municipality Website
Franco Carcillo, *City of Torino Municipality, Italy*; Luca Rosati, *Luca Rosati, Italy*.

DHM

Digital Human Modeling

User Experience Modeling

311-C Conference Room

Chair(s): Xianjun Sam Zheng, *Siemens Corporate Research, USA*; James Lin, *Siemens AG, USA*.

User Experience Quality: A Conceptual Framework for Goal Setting and Measurement
Russell Beauregard, Philip Corriveau, *Intel Corporation, USA*.

User Experience Modeling and Enhancement for Virtual Environments that Employ Wide-Field Displays
James Lin, *Siemens AG, USA*; Donald E. Parker, *University of Washington, USA*.

Visualizing User Experience through "Perceptual Maps": Concurrent Assessment of Perceived Usability and Subjective Appearance in Car Infotainment Systems
Xianjun Sam Zheng, *Siemens Corporate Research, USA*; James Lin, Salome Zapf, Claus Knapheide, *Siemens AG, USA*.

Translating User Experiences to Requirements
Ji Gao, Glen Anderson, Brian W. Bramlett, Ryan Palmer, Delbert Marsh II, *Intel Corporation, USA*.

Applied User Performance Modeling in Industry – A Case Study from Medical Imaging
Marcela Esteves, Tobias Komischke, Salome Zapf, *Siemens AG, USA*; Antje Weiss, *Siemens AG, Germany*.

Involving Engineers in User Research and User Experience Design of ICT for China
Chaoyu Huang, Huogao He, *Intel Corporation, China*.

The Usability of Metaphors with Different Degree of Abstract in Interface Design
Ming-Chuen Chuang, Inglen Lo, *Chiao Tung University, Taiwan China*.

Parallel Sessions

Thursday 08:00 - 10:00

HIMI

Human Interface and the Management of Information

New Human Interface and System Developments for Energy and Environmental Problems

201-B Conference Room

Chair(s): Hidekazu Yoshikawa, *Kyoto University, Japan*; Fumiaki Obayashi, *Matsushita Electric Works, Ltd., Japan*.

Development of Cooperative Building Controller for Energy Saving and Comfortable Environment
Yoshifumi Murakami, Masaaki Terano, Fumiaki Obayashi, *Matsushita Electric Works, Ltd., Japan*; Mutuo Honma, *Nikken Sekkei, Ltd., Japan*.

A Suggestion for Analysis of Unexpected Obstacles in Embedded System
Yasufumi Sin-yashiki, Toshiro Mise, *Matsushita Electric Works, Ltd., Japan*; Masaaki Hashimoto, Keiichi Katamine, Naoyasu Ubayashi, *Kyusyu Institute of Technology, Japan*; Takako Nakatani, *University of Tsukuba, Japan*.

Development of Productivity Evaluation Method to Improve Office Environment
Hiroshi Shimoda, *Kyoto University, Japan*; Kyoko Ito, *Osaka University, Japan*; Yoko Hattori, Hirotake Ishii, Hidekazu Yoshikawa, *Kyoto University, Japan*; Fumiaki Obayashi, Masaaki Terano, *Matsushita Electric Works, Ltd., Japan*.

Development of an Illumination Control Method to Improve Office Productivity
Fumiaki Obayashi, Misa Kawauchi, Masaaki Terano, *Matsushita Electric Works, Ltd., Japan*; Kazuhiro Tomita, Yoko Hattori, Hiroshi Shimoda, Hirotake Ishii, Hidekazu Yoshikawa, *Kyoto University, Japan*.

Development of a Skill Acquisition Support System Using Expert's Eye Movement
Takashi Nagamatsu, Yohei Kaieda, Junzo Kamahara, Hiroyuki Shimada, *Kobe University, Japan*.

Design and Development of Computer-based Discussion Support Tool for Science and Technology Communication Exercise
Kyoko Ito, Eriko Mizuno, Shogo Nishida, *Osaka University, Japan*.

A Study on Analysis Support System of Energy and Environmental System for Sustainable Development Based on MFM and GIS
Qi Zhang, Hidekazu Yoshikawa, Hirotake Ishii, Hiroshi Shimoda, *Kyoto University, Japan*.

Mobile Application for the Future

309 Conference Room

Chair(s): Seongil Lee, *Sungkyunkwan University, Korea*.

Power Saving Medium Access for Beacon-Enabled IEEE 802.15.4 LR-WPANs
Joongheon Kim, *LG Electronics, Korea*; Wonjun Lee, *Korea University, Korea*.

Integrated Multi-View Compensation for Real Sense Video Interfaces
Jongbin Park, Byeungwoo Jeon, *Sungkyunkwan University, Korea*.

TCP NJ+ for Wireless HCI
Jungrae Kim, Jahwan Koo, Hyunseung Choo, *Sungkyunkwan University, Korea*.

Energy Efficient Route Discovery for Mobile HCI in Ad-hoc Networks
Kwonseung Shin, *Sungkyunkwan University, Korea*; Kwangjin Park, *Intelligent HCI Convergence Research Center, Korea*; Min Young Chung, Hyunseung Choo, *Sungkyunkwan University, Korea*.

Dynamic Cell Phone UI Generation for Mobile Agents
Gu Su Kim, Hyun-jin Cho, Young Eom, *Sungkyunkwan University, Korea*.

Ubiquitous Hands:Context-Aware Wearable Gloves with a RF Interaction Model
Jong Gon Kim, Byung Geun Kim, Seongil Lee, *Sungkyunkwan University, Korea*.

Mach: A Content Generating Engine for Adaptive Multimedia Applications in the Mobile Environment
Chian Wang, *Changhua University of Education, Taiwan China*.

Display and Operations in Mobile Interactions

Exhibition Hall 2-A

Chair(s): Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*.

Readability of Characters on Liquid Crystal Displays in Mobile Phones
Satoshi Hasegawa, *Nagoya Bunri University, Japan*; Masako Omori, *Kobe Women's University, Japan*; Kazuhiro Fujikake, Masaru Miyao, *Nagoya University, Japan*.

Readability of Character Size for Car Navigation Systems
Kazuhiro Fujikake, *Nagoya University, Japan*; Satoshi Hasegawa, *Nagoya Bunri University, Japan*; Masako Omori, *Kobe Women's University, Japan*; Hiroaki Takada, Masaru Miyao, *Nagoya University, Japan*.

Visibility Evaluation of Characters on Liquid Crystal Displays in Mobile Phones and Visual Function
Masako Omori, *Kobe Women's University, Japan*; Satoshi Hasegawa, *Nagoya Bunri University, Japan*; Kazuhiro Fujikake, Masaru Miyao, *Nagoya University, Japan*.

Operation-Action Mapping in 3D Information Space on Portable Information Terminal
Yu Shibuya, Hiromitsu Togeyama, Itaru Kuramoto, Yoshihiro Tsujino, *Kyoto Institute of Technology, Japan*.

Analysis of Naturalistic Driving Behavior while Approaching an Intersection and Implications for Route Guidance Presentation
Toshihisa Sato, Motoyuki Akamatsu, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

Use of Chinese Short Messages
Dafei Ma, *CAS, China*; Fumiko Ichikawa, *Nokia Design Tokyo, Japan*; Ying Liu, *Nokia, China*; Li Jiang, *CAS, China*.

A Navigation System using Ultrasonic Directional Speaker with Rotating Base
Kentaro Ishii, Yukiko Yamamoto, Michita Imai, *Keio University, Japan*; Kazuhiro Nakadai, *Honda Research Institute Japan Co., Ltd., Japan*.

HCI

Human-Computer Interaction

Textile E-business

305-B Conference Room

Chair(s): Gilsoo Cho, *Yonsei University, Korea*.

Development of Educational Program for Quick Response System on Textile and Fashion E-Business
Kyung-Yong Jung, *Sangji University, Korea*; Jong-Hun Kim, Jung-Hyun Lee, Young-Joo Na, *Inha University, Korea*.

A Study on the Characteristics for the Day and Night Time Consumer Groups of Internet Shopping Malls
Sung-Hee Yoon, Soo Kweon, *Chungbuk National University, Korea*.

Textile Touch Visualization for Clothing E-business
Gilsoo Cho, Seeun Jang, Jinhee Chae, *Yonsei University, Korea*; Kyeong-Ah Jeong, Gavriel Salvendy, *Purdue University, USA*.

Smart Furoshiki: A Context Sensitive Cloth for Supporting Everyday Activities
Ryo Ohsawa, Kei Suzuki, Takuya Imaeda, Masayuki Iwai, Kazunori Takashio, Hideyuki Tokuda, *Keio University, Japan*.

The Experiential Preferences of the Online Consumers in Different Internet Shopping Lifestyles towards Online Shopping Websites
Yen Lee Chu, *Chiao Tung University, Taiwan China*; Jim Jiunde Lee, *Chiao-Tung University, Taiwan China*.

Augmented Reality E-Commerce Assistant System: Trying While Shopping
Yuzhu Lu, Shana Smith, *Iowa State University, USA*.

Reliability and Security for Information Engineering

305-C Conference Room

Chair(s): Yuan-Shun Dai, *Purdue University, USA.*

A Routing Algorithm for Random Error Tolerance in Network-on-Chip
Lei Zhang, Huawei Li, Xiaowei Li, *Chinese Academy of Sciences, China.*

Performance Evaluation for Automatic Protection Switching in a CDMA-TDD Wireless Communication System
Li Zhang, Hiroyuki Okamura, Tadashi Dohi, *Hiroshima University, Japan.*

Research of Distributed Data Mining Association Rules Model Based on Similarity
Shengjun Xue, Zhengqiu Lu, *Wuhan University of Technology, China.*

Dependability and Security in Medical Information System
Xukai Zou, Yuan-Shun Dai, *Purdue University, USA*; Bradley Doebbeling, *Indiana University Purdue University Indianapolis, USA*; Mingrui Qi, *Purdue University, USA.*

A Review of Possibilistic Approach to Reliability Analysis and Optimization in Engineering Design
Li-Ping He, *Dalian University of Technology, China*; Hong-Zhong Huang, Li Du, Xu-Dong Zhang, Qiang Miao, *University of Electronic Science and Technology of China, China.*

MKPS: A Multi-level Key Pre-distribution Scheme for Secure Wireless Sensor Networks
Sung Jin Choi, Hee Yong Youn, *Sungkyunkwan University, Korea.*

Traffic Classification - Towards Accurate Real Time Network Applications
Zhu Li, Ruixi Yuan, Xiaohong Guan, *Tsinghua University, China.*

Information Complexity of Systems and Displays

307 Conference Room

Chair(s): Chen Ling, *University of Oklahoma, USA.*

Information Complexity in Air Traffic Control Displays
Jing Xing, *United States Federal Aviation Administration (FAA), USA.*

Validating Information Complexity Questionnaires using Travel Web Sites
Chen Ling, Miguel Lopez, *University of Oklahoma, USA*; Jing Xing, *United States Federal Aviation Administration (FAA), USA.*

Effect of Glance Duration on Perceived Complexity and Segmentation of User Interfaces
Yifei Dong, Chen Ling, Lesheng Hua, *University of Oklahoma, USA.*

Analysis of Web Page Complexity Through Visual Segmentation
Guangfeng Song, *Penn State University, USA.*

Coping with Complexity through Adaptive Interface Design
Nadine Sarter, *University of Michigan, USA.*

Experimental Effect Estimation of an Integrated Decision Support System to Aid Operator's Cognitive Activities for Nuclear Power Plants
Seung Jun Lee, Poong Hyun Seong, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Watch, Press and Catch – Impact of Divided Attention on Requirements of Audiovisual Quality
Ulrich Reiter, *Technische Universitaet Ilmenau, Germany*; Satu Jumisko-Pyykkö, *Tampere University of Technology, Finland.*

Current Trends in Usability Engineering in Japan

308 Conference Room

Chair(s): Masaaki Kurosu, *National Institute of Multimedia Education, Japan.*

ATM Advertisement and Financial Preferences with Sensory Analysis
Naotsune Hosono, *OKI Consulting Solutions, Co. Ltd., Japan*; Sayuri Gotanda, *OKI Electric Ind. Co., Ltd., Japan*; Hiromitsu Inoue, *Chiba College of Health Science, Japan*; Yutaka Tomita, *Keio University, Japan.*

Effects of a Dual-Task Tracking on Eye Fixation Related Potentials (EFRP)
Hiroshi Daimoto, *Yamaha Motors Co., Ltd / The Graduate University for Advanced Studies, Japan*; Tsutomu Takahashi, Kiyoshi Fujimoto, *Kwansei Gakuin University, Japan*; Hideaki Takahashi, Masaaki Kurosu, *National Institute of Multimedia Education, Japan*; Akihiro Yagi, *Kwansei Gakuin University, Japan.*

Report on Project to Identify Excellent Local Government Web Sites: An Attempt to Educate Web Systems Developers on the Importance of Human-Centered Design Processes
Seiji Hayakawa, *Human-centered Design Organization (HCD-Net), Japan*; Haruhiko Urokohara, *U'eyes Design Inc., Japan*; Toshikazu Shinohara, *Human-centered Design Organization (HCD-Net), Japan*; Naoto Aizawa, *Otaru University of Commerce, Japan*; Yayoi Kitamura, *Human-centered Design Organization (HCD-Net), Japan.*

Design Principles Based on Cognitive Aging
Hiroko Akatsu, Hiroyuki Miki, *OKI Electric Ind. Co., Ltd., Japan*; Naotsune Hosono, *OKI Consulting Solutions, Co. Ltd., Japan.*

Long Term Usability; Its Concept and Research Approach - The Origin of the Positive Feeling toward the Product -
Masaya Ando, *The Graduate University for Advanced Studies (SOKENDAI), Japan*; Masaaki Kurosu, *National Institute of Multimedia Education, Japan.*

Design Tools for User Experience Design
Kazuhiko Yamazaki, *Chiba Institute of Technology, Japan*; Kazuo Furuta, *The University of Tokyo, Japan.*

Concept of Usability Revisited
Masaaki Kurosu, *National Institute of Multimedia Education, Japan.*

Gesture Recognition

Exhibition Hall 2-F

Chair(s): Reinhold Behringer, *Leeds Metropolitan University, UK.*

An Input-Parsing Algorithm Supporting Integration of Deictic Gesture in Natural Language Interface
Yong Sun, Fang Chen, Yu Shi, *National ICT Australia, Australia*; Vera Yuk Ying Chung, *University of Sydney, Australia.*

Gesture Interaction for Electronic Music Performance
Reinhold Behringer, *Leeds Metropolitan University, UK.*

GART: The Gesture and Activity Recognition Toolkit
Kent Lyons, Helene Brashear, Tracy Westeyn, Jung Soo Kim, Thad Starner, *Georgia Institute of Technology, USA.*

Multiple People Gesture Recognition for Human-Robot Interaction
Seok-Ju Hong, Nurul Arif Setiawan, Chil-Woo Lee, *Chonnam National University, Korea.*

EyeScreen: A Gesture Interface for Manipulating On-Screen Objects
Shanqing Li, Jingjun Lv, Yihua Xu, Yunde Jia, *Beijing Institute of Technology, China.*

Human-Computer Interaction System Based on Nose Tracking
Lumin Zhang, Fuqiang Zhou, Weixian Li, Xiaoke Yang, *Beihang University, China.*

Parallel Sessions

HCI

Emotion and Interaction

Exhibition Hall 2-G

Chair(s): Min Cheol Whang, *Sangmyung University, Korea.*

Study on Speech Emotion Recognition System in E-learning
Aiqin Zhu, Qi Luo, *Central China Normal University, China.*

Emotion and Sense of Telepresence : The Effects of Screen Viewpoint, Self-transcendence Style, and NPC in a 3D Game Environment
Jim Jiunde Lee, *Chiao-Tung University, Taiwan China.*

Emotional Web Usability Evaluation
Sylvia Tzvetanova, Ming-Xi Tang, Lorraine Justice, *The Hong Kong Polytechnic University, Hong Kong.*

Does the Web Design Disconnect the Emotional Connection?
Tara Shrimpton-Smith, Bieke Zaman, *Katholieke Universiteit Leuven, Belgium.*

Emotional Interaction through Physical Movement
Jong-hoon Lee, Jinyung Park, Tek-Jin Nam, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Affective User Modeling for Adaptive Intelligent User Interfaces
Fatma Nasoz, *University of Nevada, Las Vegas, USA*; Christine Lisetti, *Institut Eurecom, France.*

Product Design

Exhibition Hall 2-H

Chair(s): Fong-Gong Wu, *Cheng Kung University, Taiwan China.*

A Meta-Cognition Modeling of Engineering Product Designer in the Process of Product Design
Jun Liang, Zuhua Jiang, Yun-Song Zhao, Jin-Lian Wang, *Shanghai Jiao Tong University, China.*

Screen Layout on Color Search Task for Customized Product Color Combination Selection
Chieh-Ying Chen, *Fortune Institute of Technology, Taiwan China*; Ying-Jye Lee, *Kaohsiung University of Applied Sciences, Taiwan China*; Fong-Gong Wu, *Cheng Kung University, Taiwan China*; Chi-Fu Su, *Fooyin University, Taiwan China.*

A Study on the Improving Product Usability Applying the Kano's Model of Customer Satisfaction
Jeongyun Heo, SangHyun Park, Chiwon Song, *LG Electronics, Korea.*

DiFac: Digital Factory for Human Oriented Production System
Marco Sacco, Claudia Redaelli, *National Research Council (CNR), Italy*; Carmen Constantinescu, *Universität Stuttgart, Germany*; Glyn Lawson, Mirabelle D'Cruz, *University of Nottingham, UK*; Menelaos Pappas, *University of Patras, Greece.*

Towards Generic Interaction Styles for Product Design
Jacob Buur, Marcelle Stienstra, *University of Southern Denmark, Denmark.*

Measuring User Experiences of Prototypical Autonomous Products in a Simulated Home Environment
Martijn Vastenburg, David Keyson, Huib De Ridder, *Delft University of Technology, Netherlands.*

EPCE

Engineering Psychology and Cognitive Ergonomics

Command and Control

201-A Conference Room

Chair(s): Neville Stanton, *Brunel University, UK.*

Models of Command and Control
Neville Stanton, Guy Walker, Daniel Jenkins, Paul Salmon, Mark Young, Amardeep Aujla, *Brunel University, UK.*

Designing Human Computer Interfaces for Command and Control Environments
Amardeep Aujla, Neville Stanton, Daniel Jenkins, Paul Salmon, Guy Walker, Mark Young, *Brunel University, UK.*

What Really is Going on? Review, Critique and Extension of Situation Awareness Theory
Paul Salmon, Neville Stanton, Daniel Jenkins, Guy Walker, Mark Young, Amardeep Aujla, *Brunel University, UK.*

Sociotechnical Theory and NEC System Design
Guy Walker, Neville Stanton, Daniel Jenkins, Paul Salmon, Mark Young, Amardeep Aujla, *Brunel University, UK.*

The Development of a Cognitive Work Analysis Tool
Daniel Jenkins, Neville Stanton, Paul Salmon, Guy Walker, Mark Young, *Brunel University, UK*; Ian Whitworth, *Cranfield University at the UK Defence Academy, UK*; Andy Farmilo, Geoffrey Hone, *Human Factors Integration DTC, UK.*

A Study of the Second Vigilance and Improvement by Fuzzy Sets in supervisory control
Cheng-Li Liu, *Vanung University, Taiwan China.*

Who is Taking Over Control? A Psychological Perspective in Examining Effects of Agent-based Negotiation Support Technologies
Yinping Yang, John Lim, Yingqin Zhong, Xiaojia Guo, Xue Li, *National University of Singapore, Singapore.*

UAHCI

Universal Access in Human-Computer Interaction

Design for All and Ambient Intelligence

201-C Conference Room

Chair(s): Pier Luigi Emiliani, *National Research Council (CNR), Italy.*

Is the Intelligent Environment Smart Enough?
Laura Burzagli, Pier Luigi Emiliani, Francesco Gabbanini, *National Research Council (CNR), Italy.*

Gaze as a Supplementary Modality for Interacting with Ambient Intelligence Environments
Daniel Gepner, Jérôme Simonin, Noelle Carbonell, *LORIA, France.*

Non-homogenous Network, Control Hub and Smart controller (NCS) Approach to Incremental Smart Homes
Gregg Vanderheiden, *University of Wisconsin-Madison, USA*; Gottfried Zimmermann, *Access Technologies Group, Germany.*

A Context-aware Service Platform to Support Continuous Care Networks for Home-based Assistance
Federica Paganelli, Dino Giuli, *University of Firenze, Italy.*

Accessibility of Internet Portals in Ambient Intelligent Scenarios: Re-thinking their Design and Implementation
Evangelos Vlachogiannis, *University of the Aegean, Greece*; Carlos Velasco, Henrike Gappa, Gabriele Nordbrock, *Fraunhofer, Germany*; Jenny Darzentas, *University of the Aegean, Greece.*

Universal Access Issues in an Ambient Intelligence Research Facility
Constantine Stephanidis, Margherita Antona, Dimitris Grammenos, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

Cognition, Learning and Education

301 Conference Room

Chair(s): Simeon Keates, *ITA Software, USA*; Michael Pieper, *Fraunhofer, Germany*.

Establishing Design Best Practices for Users With Cognitive and Learning Difficulties
Simeon Keates, *ITA Software, USA*; Philip Varker, *IBM, USA*.

Cognitive Ability Measures for Accessible Web Content
Mark Laff, *IBM, USA*; Marian Rissenberg, *The Center for Neuropsychology, USA*.

Users and Trust: the New Threats, the New Possibilities
Kristiina Karvonen, *Helsinki University of Technology, Finland*.

User Modelling and Social Intelligence
Ray Adams, *Middlesex University, UK*; Satinder Gill, *Cambridge University, UK*.

Web Navigation for Individuals with Dyslexia: An Exploratory Study
Areej Al-Wabil, Panayiotis Zaphiris, Stephanie Wilson, *City University London, UK*.

Investigation of Adaption Dimensions for the Age-Differentiated Human-Computer-Interfaces
Nicole Schneider, Sabine Schreiber, Janet Wilkes, Morten Grandt, Christopher Schlick, *RWTH Aachen, Germany*.

Cognition, Learning and the Design of Accessible and Assistive Systems

302 Conference Room

Chair(s): Patrick Langdon, *University of Cambridge, UK.*

Formats for User Data in Inclusive Design
Joy Goodman, Patrick Langdon, P. John Clarkson, *University of Cambridge, UK*.

Cognitive Scales and Mental Models for Inclusive Design
Umesh Persad, Patrick Langdon, *University of Cambridge, UK*; David Brown, *Worcester Polytechnic Institute, UK*; P. John Clarkson, *University of Cambridge, UK*.

Cognitive Aspects Of Ageing and Product Interfaces: Interface Type
Tim Lewis, Patrick Langdon, P. John Clarkson, *University of Cambridge, UK*.

Does My Stigma Look Big in This? Considering Acceptability and Desirability in the Inclusive Design of Technology Products
Jo-Anne Bichard, Roger Coleman, *Royal College of Art, UK*; Patrick Langdon, *University of Cambridge, UK*.

Design of Interactive Technology for Ageing-in-Place
Shaun Lawson, David Nutter, Peter Wilson, *University of Lincoln, UK*.

Mobile Computing In Maintenance Activities: A 'Situational Induced Impairments and Disabilities' Perspective
Julie Jupp, Patrick Langdon, Simon Godsill, *University of Cambridge, UK*.

SMART Rehabilitation: Implementation of ICT Platform to Support Home-based Stroke Rehabilitation
Huiru (Jane) Zheng, R. Davies, *University of Ulster, UK*; T. Stone, S. Wilson, *University of Bath, UK*; J. Hammerton, S.J. Mawson, P.M. Ware, *Sheffield Hallam University, UK*; N.D. Black, *University of Ulster, UK*; N.D Harris, C. Eccleston, *University of Bath, UK*; H. Hu, H. Zhou, *University of Essex, UK*; G.A. Mountain, *Sheffield Hallam University, UK*.

Cross-Country/Cross-Culture Usability Studies

303 Conference Room

Chair(s): Zhengjie Liu, *Dalian Maritime University, China.*

Customer-Centered Product and Brand Experience Design in China -- What HP is Learning
Linn Johnk, *Hewlett-Packard, USA*; Nan-Xiang Sheng, *Hewlett-Packard, China*; Zhengxuan Zhao, *Hewlett-Packard, USA*.

Enabling International Usability Using Multicultural and Geographically Disperse Teams
Elisa Del Galdo, *Human Factors Europe, UK*; Sushmita Munshi, *Human Factors International, India*; Christine Truc-Modica, *Design Strategy Lab, France*.

Designing Homepages for Government Websites in Asia
Tahira Amir Sultan, Gul Amir Khan, *MicroUsability, Singapore*.

Dealing with the Challenges of Interpreting International User Research
Susan Dray, David Siegel, *Dray & Associates, Inc., USA*.

Strategic User Research at Home and Abroad
Sheryl Ehrlich, *Adobe, USA*.

Investigating the Use and Adoption of Self-service Technology in China
Maryam Aziz, *NCR Financial Solutions Group Ltd., UK*; Zhengjie Liu, *Dalian Maritime University, China*; Graham Johnson, *NCR Financial Solutions Group Ltd., UK*; Haixin Zhang, Junliang Chen, Huijuan Wu, Hao Jiang, *Dalian Maritime University, China*.

A Large Scale Study of English-Chinese Online Dictionary Search Behavior
Yong Liu, Jianmiao Fan, *Indiana University, USA*.

VR

Virtual Reality

3D Interaction in Virtual Reality

Exhibition Hall 2-C

Chair(s): Zhizhong Li, *Tsinghua University, China*.

3D-Image Visualization and its Performance in Teleoperation
Manuel Ferre, Salvador Cobos, Rafael Aracil, Miguel A. Sánchez Urán, *Universidad Politécnica de Madrid, Spain*.

Triangle Mesh Optimization for Improving Rendering Quality of 3D Virtual Environments
Qingwei Guo, Weining Yue, Qicheng Li, Guoping Wang, *Peking University, China*.

Designing Viewpoint Awareness for 3D Collaborative Virtual Environment Focused on Real-Time Manipulation of Multiple Shared Objects
Luciana Provenzano, Julie Delzons, Patricia Plenacoste, Johann Vandromme, *Université de Lille 1, France*.

A Reconfigurable Immersive Workbench and Wall-System for Designing and Training in 3D Environments
Jesus Gimeno, Marcos Fernandez, *Universidad de Valencia, Spain*; Pedro Morillo, *University of Louisiana at Lafayette, USA*; Inmaculada Coma, Manuel Perez, *Universidad de Valencia, Spain*.

Individualization of Head-Related Transfer Function for Three-Dimensional Virtual Auditory Display: A Review
Song Xu, Zhizhong Li, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

Manipulating Objects behind Obstacles
Jan Flasar, Jiri Sochor, *Masaryk University, Czech Republic*.

A True Spatial Sound System for CAVE-like Displays Using Four Loudspeakers
Torsten Kuhlen, Ingo Assenmacher, Tobias Lentz, *RWTH Aachen University, Germany*.

Parallel Sessions

Usability and Internationalization

UI

Cross Culture Design -- Taiwan Experience

305-A Conference Room

Chair(s): Rungtai Lin, *Taiwan University of Arts, Taiwan China.*

Kansei Design With Cross Cultural Perspectives
Kuohsiang Chen, Shu-chuan Chiu, Fang-chyuan Lin, *Cheng Kung University, Taiwan China.*

Designing User Interfaces for Mobile Entertaining Devices with Cross-Cultural Considerations
Chien-Hsiung Chen, Chia-Ying Tsai, *Taiwan University of Science and Technology, Taiwan China.*

The Universal Design Model of Set-Top Box
Yen-Yu Kang, Han-yu Lin, *Kaohsiung Normal University, Taiwan China.*

A Digital Training System for Freehand Sketch Practice
Ding-Bang Luh, Shao-Nung Chen, *Cheng Kung University, Taiwan China.*

Digital Archive Database for Cultural Product Design
Rungtai Lin, Ricer Cheng, Ming-Xian Sun, *Taiwan University of Arts, Taiwan China.*

The Effect of Morphological Elements on the Icon Recognition Rate in Smart Phones
Chiwu Huang, Chieh-Ming Tsai, *Taipei University of Technology, Taiwan China.*

Advanced and Adaptive Interactions between Humans and Systems in Crisis Control (ICIS-CHIM)

311-A Conference Room

Chair(s): Vanessa Evers, Henriette Cramer, *FNWI University of Amsterdam, Netherlands.*

Human Communication based on Icons in Crisis Environments
Siska Fitrianie, Dragos Datcu, Leon Rothkrantz, *Delft University of Technology, Netherlands.*

Developing Adaptive Mobile Support for Crisis Response in Synthetic Task Environments
Guido Te Brake, Nanja Smets, *TNO, Netherlands.*

Dynamic Scripting in Crisis Environments
Zhenke Yang, Leon Rothkrantz, *Delft University of Technology, Netherlands.*

User Interaction with User-Adaptive Information Filters
Henriette Cramer, Vanessa Evers, Maarten Van Someren, Bob Wielinga, Sam Besselink, *FNWI University of Amsterdam, Netherlands*; Lloyd Rutledge, *Telematica Institut, Netherlands*; Natalia Stash, *Vrije Universiteit Amsterdam, Netherlands*; Lora Aroyo, *Technische Universiteit Eindhoven, Netherlands.*

A System for Adaptive Multimodal Interaction in Crisis Environments
Dragos Datcu, Zhenke Yang, Leon Rothkrantz, *Delft University of Technology, Netherlands.*

PANEL: Global Innovative Design for Social Change

Exhibition Hall 2-B

Chair(s): Nuray Aykin, *New School University, USA.*

Global Innovative Design for Social Change
Nuray Aykin, *New School University, USA*; Apala Lahiri Chavan, *Human Factors International, Pvt. Ltd., India*; Susan Dray, *Dray & Associates, Inc., USA*; Girish Prabhu, *Intel Corporation, India.*

Online Communities and Social Computing

OCSC

Learning Communities

Exhibition Hall 2-D

Chair(s): Ronald Baecker, *University of Toronto, Canada.*

A Mobile Portfolio to Support Communities of Practice in Science Education
Sergio Ochoa, *Universidad de Chile, Chile*; Oriel Herrera, *Universidad Catolica de Temuco, Chile*; Andrés Neyem, *Universidad de Chile, Chile*; Maurizio Betti, *Universidad Católica de Temuco, Chile*; Roberto Aldunate, *University of Illinois, USA*; David Fuller, *Pontificia Universidad Católica de Chile, Chile.*

The Differences Between the Influences of Synchronous and Asynchronous Modes on Collaborative Learning Project of Industrial Design
Wenzhi Chen, *Chang Gung University, Taiwan China*; Man-Lai You, *Yunlin University of Sciences and Technology, Taiwan China.*

Towards Building a Math Discourse Community: Investigating Collaborative Information Behavior
Nan Zhou, Gerry Stahl, *Drexel University, USA.*

The Relationship Between Social Presence and Group Identification Within Online Communities and its Impact on the Success of Online Communities
Diana Schimke, Heidrun Stoeger, Albert Ziegler, *University of Ulm, Germany.*

Integrating Digital Library Resources in Elementary School Classrooms – A Case Study of Social Study Instruction
Kuo-Hung Huang, *Chiayi University, Taiwan China.*

Self-Awareness in a Computer Supported Collaborative Learning Environment
Kwangsu Cho, Moon-Heum Cho, *University of Missouri at Columbia, USA.*

Rural Internet Centre (RIC) as Catalysts for Building Knowledge-Based Society – the Case of Northern States of Malaysia
Nor Iadah Yusop, Zahurin Mat Aji, Huda Ibrahim, Rafidah Abd Razak, Wan Rozaini Sheik Osman, *Universiti Utara Malaysia, Malaysia.*

Augmented Cognition

AC

Adaptive Task Allocation and Support (I)

311-B Conference Room

Chair(s): Marc Grootjen, *Directorate Materiel Royal Netherlands Navy, Netherlands*; Mark Neerincx, Peter-Paul Van Maanen, *TNO Human Factors, Netherlands*.

Augmenting Cognition: Reviewing the Symbiotic Relation between Man and Machine
Tjerk De Greef, Kees Van Dongen, *TNO Human Factors, Netherlands*; Marc Grootjen, *Directorate Materiel Royal Netherlands Navy, Netherlands*; Jasper Lindenberg, *TNO Human Factors, Netherlands*.

Measuring Cognitive Task Load on a Naval Ship: Implications of a Real World Environment
Marc Grootjen, *Directorate Materiel Royal Netherlands Navy, Netherlands*; Mark Neerincx, Jochum Van Weert, Khiet Truong, *TNO Human Factors, Netherlands*.

A Model for Visio-haptic Attention for Efficient Resource Allocation in Multimodal Environments
Priyamvada Tripathi, *Arizona State University, USA*; Kanav Kahol, *SimET Center/Arizona State University, USA*; Anusha Sridaran, Sethuraman Panchanathan, *Arizona State University, USA*.

Towards Attention-Guided Human-Computer Collaborative Reasoning for Spatial Configuration and Design
Sven Bertel, *Universität Bremen, Germany*.

EMMA: An Adaptive Display for Virtual Therapy
Mariano Alcañiz, *Universidad Politécnica de Valencia, Spain*; Cristina Botella, *Universitat Jaume I, Spain*; Beatriz Rey, *Universidad Politécnica de Valencia, Spain*; Rosa Baños, *Universidad de Valencia, Spain*; José A. Lozano, *Universidad Politécnica de Valencia, Spain*; Nuria Lasso De la Vega, *Clínica y Psicobiología Universitat Jaume, Spain*; Diana Castilla, *Universitat Jaume, Spain*; Javier Montesa, *UPV, Spain*; Antonio Hospitaler, *Universidad Politécnica Valencia, Spain*.

AFFectIX - An Affective Component as Part of an E-Learning-System
Karina Oertel, Robin Kaiser, Jörg Voskamp, Bodo Urban, *Fraunhofer, Germany*.

Digital Human Modeling

DHM

Computer Aided Ergonomics Analysis (II)

311-C Conference Room

Chair(s): Xiugan Yuan, *Beihang University, China*.

Design and Implementation of Ergonomics Evaluation System of 3D Airplane Cockpit
Libo Zhang, *Beijing University of Aeronautics & Astronautics, China*; Xiugan Yuan, *Beihang University, China*; Lijing Wang, Dayong Dong, *Beijing University of Aeronautics and Astronautics, China*.

Development of a Test-Bed for Synthetical Ergonomics Evaluation of Pilot
Wei Liu, *Beijing University of Post Technology, China*; Xiugan Yuan, *Beihang University, China*; Zhong-qi Liu, Rui Ma, Wei-yong Kang, *Beijing University of Aeronautics and Astronautics, China*.

Experimental Research of Evaluation of Temperature Ergonomics of EVA Spacesuit Glove
Han Longzhu, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, *Beihang University, China*.

Design and Realization of Synthesis Assessment System for Cockpit Ergonomics
Yinxia Li, Kaiying La, *Zhengzhou University, China*; Xiugan Yuan, *Beihang University, China*.

Investigation on Ergonomics Characteristics of Protective Clothing based on Capture of Three-dimensional Body Movements
Huimin Hu, Li Ding, *Beihang University, China*; Chunxin Yang, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, *Beihang University, China*.

Study on the Appraisal Methods of Hand Fatigue
Li Ding, *Beihang University, China*; Feng Yang, *University of Illinois, USA*; Chunxin Yang, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, Yang Li, *Beihang University, China*.

Applications of Digital Human Modeling in Industry
H. Onan Demirel, Vincent Duffy, *Purdue University, USA*.

Parallel Sessions

Thursday 10:30 – 12:30

EHAWC

Ergonomics and Health Aspects of Work with Computers

Ergonomics in Interactive Systems

305-A Conference Room

Chair(s): Francisco Rebelo, *Technical University of Lisbon, Portugal*.

An Expert System to Support Clothing Design Process
Michele Santos, Francisco Rebelo, *Technical University of Lisbon, Portugal*.

An Interactive System to Measure the Human Behaviour: An Analysis Model for the Human-Product-Environment Interaction
Ernesto Filgueiras, *University of Beira Interior, Portugal*; Francisco Rebelo, *Technical University of Lisbon, Portugal*.

Methodology to Apply a Usability Testing by non Specialized People: Evaluation of the European Platform "e-Exhibitions"
Elisangela Vilar, *Technical University of Lisbon, Portugal*; Ernesto Vilar Filgueiras, *University of Beira Interior (UBI) / Technical University of Lisbon (UTL), Portugal*; Francisco Rebelo, *Technical University of Lisbon, Portugal*.

Virtual Reality in the Study of Warnings Effectiveness
Emília Duarte, Francisco Rebelo, *Technical University of Lisbon, Portugal*.

Effectiveness of Multimedia Systems in Children's Education
Francisco Rebelo, *Technical University of Lisbon, Portugal*; Ernesto Vilar Filgueiras, *University of Beira Interior (UBI) / Technical University of Lisbon (UTL), Portugal*.

A Novel Design for an Ultra-Large Screen Display for Industrial Process Control
Øystein Veland, Malvin Eikås, *Institute of Energy Technology, Norway*.

Dynamic Mouse Speed Scheme Design Based on Trajectory Analysis
Eric Kuo-Hao Tang, Alva Yueh-Hua Lee, *Feng Chia University, Taiwan China*.

HIMI

Human Interface and the Management of Information

Advanced Interfaces for Communication and Collaboration Support (II)

201-A Conference Room

Chair(s): Yoshio Nakatani, *Ritsumeikan University, Japan*; Shogo Nishida, *Osaka University, Japan*.

Driver Support System: Spatial Cognitive Ability and its Application to Human Navigation
Kanako Ichikawa, Yoshio Nakatani, *Ritsumeikan University, Japan*.

Walk Navigation System using Photographs for People with Dementia
Hiroki Kaminoyama, *Ritsumeikan University, Japan*; Masayuki Matsuo, *ATR IRC Labs., Japan*; Fumio Hattori, *Ritsumeikan University, Japan*; Kenji Susami, Noriaki Kuwahara, Shinji Abe, *ATR IRC Labs., Japan*.

AR-Navi: an in-Vehicle Navigation System Using Video-Based Augmented Reality Technology
Yoshihisa Yamaguchi, Takashi Nakagawa, *Mitsubishi Electric Corporation, Japan*; Kengo Akaho, Mitsushi Honda, Hirokazu Kato, Shogo Nishida, *Osaka University, Japan*.

Virtual Pop-Up Book based on Augmented Reality
Nobuko Taketa, Kenichi Hayashi, Hirokazu Kato, Shogo Nishida, *Osaka University, Japan*.

Case-Based Snow Clearance Directive Support System for Novice Directors
Yoshinori Ikeda, Yoshio Nakatani, *Ritsumeikan University, Japan*.

Development of Facial Expression Training System
Kyoko Ito, Hiroyuki Kurose, Ai Takami, Shogo Nishida, *Osaka University, Japan*.

An Assistant Tool for Concealing Personal Information in Text
Tomoya Iwakura, Seishi Okamoto, *Fujitsu Laboratories Ltd., Japan*.

Intelligent HCI Convergence (II)

305-C Conference Room

Chair(s): Jahwan Koo, *Sungkyunkwan University, Korea*.

MyView: Personalized Event Retrieval and Video Compositing from Multi-camera Video Images
Cheng Chris Zhang, *University of British Columbia, Canada*; Sung-Bae Cho, *Yonsei University, Korea*; Sidney Fels, *University of British Columbia, Canada*.

The Implementation of Adaptive User Interface Migration Based on Ubiquitous Mobile Agents
Gu Su Kim, Hyun-jin Cho, Young Eom, *Sungkyunkwan University, Korea*.

Performance Improvement of SCTP for Heterogeneous Ubiquitous Environment
Doo-Won Seo, *Sungkyunkwan University, Korea*; Hyuncheol Kim, *Namseoul University, Korea*; Jahwan Koo, Jinwook Chung, *Sungkyunkwan University, Korea*.

A Network Framework on Adaptive Power Management in HCI Mobile Terminals
Hyemee Park, *Sungkyunkwan University, Korea*; Kwangjin Park, *Intelligent HCI Convergence Research Center, Korea*; Tae-Jin Lee, Hyunseung Choo, *Sungkyunkwan University, Korea*.

Real-Time Stereoscopic Conversion with Adaptable Viewing Distance at Personal Stereoscopic Viewing Devices
Ilkwon Park, Hyeran Byun, *Yonsei University, Korea*.

Correlation Analysis of Available Bandwidth Estimators for Mobile HCI
Doohyung Lee, *Korea Telecom, Korea*; Chihoon Lee, *Samsung SDS, Korea*; Jahwan Koo, Jinwook Chung, *Sungkyunkwan University, Korea*.

On Achieving Proportional Loss Differentiation Using Dynamic-MQDDP with Differential Drop Probability
Kyungrae Cho, *Sungkyunkwan University, Korea*; Sangtae Bae, *Korea Institute of S&T Evaluation and Planning, Korea*; Jahwan Koo, Jinwook Chung, *Sungkyunkwan University, Korea*.

Enhancing Information Search

311-C Conference Room

Chair(s): Tania Di Mascio, *University of L'Aquila, Italy*.

ZEUS – Zoomable Explorative User Interface for Searching and Object Presentation
Fredrik Gundelsweiler, Thomas Memmel, Harald Reiterer, *University of Konstanz, Germany*.

The interface of VISTO, a New Vector Image Search Tool
Tania Di Mascio, *University of L'Aquila, Italy*; Luigi Laura, Valeria Mirabella, *University of Roma "La Sapienza", Italy*.

A Treemap-based Result Interface for Search Engine Users
Shixian Chu, Jinfeng Chen, Zonghuan Wu, Chee-Hung Henry Chu, Vijay Raghavan, *University of Louisiana at Lafayette, USA*.

HCI and Information Search: Capturing Task and Searcher Characteristics through 'User Ability to Specify Information Need'
Naresh Kumar Agarwal, Danny C.C. Poo, *National University of Singapore, Singapore*.

Distance-Based Bloom Filter for an Efficient Search in Mobile Ad Hoc Networks
Byungryong Kim, Kichang Kim, *Inha University, Korea*.

Involving the User in Semantic Search
Axel-Cyrille Ngonga Ngomo, Frank Schumacher, *University of Leipzig, Germany*.

Browsing and Sorting Digital Pictures Using Automatic Image Classification and Quality Analysis
Otmar Hilliges, Peter Kunath, Alexey Pryakhin, Andreas Butz, Hans-Peter Kriegel, *Ludwig-Maximilians-Universität München, Germany*.

HCI

Technologies and Intelligent Systems (II)

305-B Conference Room

Chair(s): Fang Chen, *National ICT Australia, Australia.*

Challenges and Solutions of Multilingual and Translingual Information Service Systems
Hans Uszkoreit, Feiyu Xu, *DFKI GmbH, Germany*; Weiquan Liu, *Capinfo Co Ltd, China.*

ICT-mediated Synchronous Communication in Creative Teamwork: From Cognitive Dust to Semantics
Vivian Nguyen, Paul Swatman, *University of South Australia, Australia.*

Design Discussion of the [braccetto] Research Platform: Supporting Distributed Intensely Collaborating Creative Teams of Teams
Claudia Schremmer, Alex Krumm-Heller, *Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia*; Rudi Vernik, *Defence Science and Technology Organisation (DSTO), Australia*; Julien Epps, *National ICT Australia, Australia.*

Construction and Validation of a Neurophysio-Technological Framework for Imagery Analysis
Andrew Cowell, *Pacific Northwest National Laboratory, USA*; Kelly Hale, *Design Interactive, Inc., USA*; Chris Berka, *Advanced Brain Monitoring, Inc., USA*; Sven Fuchs, Angela Baskin, David Jones, *Design Interactive, Inc., USA*; Gene Davis, Robin Johnson, Robin Fatch, *Advanced Brain Monitoring, Inc., USA.*

Towards Affective Sensing
Gordon McIntyre, Roland Göcke, *Australian National University, Australia.*

Enrich Web Applications with Voice Internet Persona — Text-to-Speech for Anyone, Anywhere
Min Chu, Yusheng Li, Xin Zou, Frank Soong, *Microsoft Research Asia, China.*

Face to Face Communications in Multiplayer Online Games: A Real-Time System
Ce Zhan, Wanqing Li, Farzad Safaei, Philip Ogunbona, *University of Wollongong, Australia.*

HCI in MIS (II)

307 Conference Room

Chair(s): Scott McCoy, *The Mason School of Business, USA*; Fiona Fui-Hoon Nah, *University of Nebraska-Lincoln, USA*; Ping Zhang, *Syracuse University, USA.*

Designing Product List on E-tailing Websites: The Effect of Sorting on Consumer Decision
Cai Shun, Xu Yunjie, *National University of Singapore, Singapore.*

First Impressions with Websites: The Effect of the Familiarity and Credibility of Corporate Logos on Perceived Consumer Swift Trust of Websites
Paul Benjamin Lowry, *Brigham Young University, USA*; Tom Roberts, *Louisiana Tech University, USA*; Trevor Higbee, *Brigham Young University, USA.*

Influence of Culture on Attitude towards Instant Messaging: Balance between Awareness and Privacy
Jinwei Cao, Andrea Everard, *University of Delaware, USA.*

Attitudes in ICT Acceptance and Use
Ping Zhang, Shelley Aikman, *Syracuse University, USA.*

An Investigation of Online Group-Buying Institution and Buyer Behavior
Chuan-Hoo Tan, Khim-Yong Goh, Hock-Hai Teo, *National University of Singapore, Singapore.*

The Role of Task Characteristics and Organization Culture in Non-Work Related Computing (NWRC)
Gee-Woo Bock, Huei-Huang Kuan, Ping Liu, Hua Sun, *National University of Singapore, Singapore.*

Analysis of Internet Users' Interests Based on Windows GUI Messages
Jinhyuk Choi, Geehyuk Lee, *Information and Communications University, Korea*; Yonghoon Um, *IBM, Korea.*

Pattern Recognition Technologies for Interactive Interface (II)

308 Conference Room

Chair(s): Keechul Jung, *Soongsil University, Korea.*

Human Motion Modeling using Multivision
Byoung-Doo Kang, Jae-Seong Eom, Jong-Ho Kim, Chul-Soo Kim, Sang-Ho Ahn, *Inje University, Korea*; Bum-Joo Shin, *Pusan National University, Korea*; Sang-Kyoon Kim, *Inje University, Korea.*

Real-Time Face Tracking System using Adaptive Face Detector and Kalman Filter
Jong-Ho Kim, Byoung-Doo Kang, Jae-Seong Eom, Chul-Soo Kim, Sang-Ho Ahn, *Inje University, Korea*; Bum-Joo Shin, *Pusan National University, Korea*; Sang-Kyoon Kim, *Inje University, Korea.*

Human Shape Tracking for Gait Recognition using Active Contours with Mean Shift
Kyung Su Kwon, *Kyungpook National University, Korea*; Se Hyun Park, *Daegu University, Korea*; Eun Yi Kim, *Konkuk University, Korea*; Hang Joon Kim, *Kyungpook National University, Korea.*

Position and Pose Computation of a Moving Camera using Geometric Edge Matching for Visual SLAM
HyoJong Jang, Gye-Young Kim, Hyunghil Choi, *Soongsil University, Korea.*

Frame Segmentation used MLP-based X-Y Recursive for Mobile Cartoon Content
Eunjung Han, Kirak Kim, *Soongsil University, Korea*; HwangKyu Yang, *Dongseo University, Korea*; Keechul Jung, *Soongsil University, Korea.*

Force Field Based Expression for 3D Shape Retrieval
Xi Geng, Wenyu Liu, Hairong Liu, *Huazhong University of Science and Technology, China.*

Usability and Software Engineering

Exhibition Hall 2-B

Chair(s): Christophe Kolski, *University of Valenciennes, France.*

CRUISER: a Cross-Discipline User Interface & Software Engineering Lifecycle
Thomas Memmel, Fredrik Gundelsweiler, Harald Reiterer, *University of Konstanz, Germany.*

Traces Using Aspect Oriented Programming and Interactive Agent-Based Architecture for Early Usability Evaluation: Basic Principles and Comparison
Jean-Claude Tarby, *University Lille 1, France*; Houcine Ezzedine, *University of Valenciennes, France*; José Rouillard, *Université des Sciences et Technologies de Lille, France*; Chi Dung Tran, *University of Valenciennes, France*; Philippe Laporte, *University Lille 1, France*; Christophe Kolski, *University of Valenciennes, France.*

Design Science-Oriented Usability Modelling for Software Requirements
Sisira Adikari, Craig McDonald, Neil Lynch, *University of Canberra, Australia.*

DEPTH TOOLKIT: A Web-Based Tool for Designing and Executing Usability Evaluations of E-Sites Based on Design Patterns
Petros Georgiakakis, Symeon Retalis, *University of Piraeus, Greece*; Yannis Psaromiligkos, *Technological Education Institute of Piraeus, Greece*; George Papadimitriou, *University of Piraeus, Greece.*

Usability and Software Development: Roles of the Stakeholders
Tobias Uldall-Espersen, Erik Froekjaer, *University of Copenhagen, Denmark.*

Incorporating User Centered Requirement Engineering in Agile Software Development
Markus Düchting, *University of Paderborn, Germany*; Dirk Zimmermann, *T-Mobile Deutschland GmbH, Germany*; Karsten Nebe, *University of Paderborn, Germany.*

Parallel Sessions

HCI

Mobile Devices (I)

Exhibition Hall 2-C

Chair(s): Luís Carriço, *University of Lisbon, Portugal*.

Perceived Magnitude and Power Consumption of Vibration Feedback in Mobile Devices
Jaehoon Jung, Seungmoon Choi, *Pohang University of Science and Technology, Korea*.

Accelerated Rendering of Vector Graphics on Mobile Devices
Gaoqi He, *Zhejiang University, China*; Baogang Bai, *Wenzhou University, China*; Zhigeng Pan, Cheng Xi, *Zhejiang University, China*.

Developing a Motion-based Input Model for Mobile Devices
Mark Richards, Tim Dunn, Binh Pham, *Queensland University of Technology, Australia*.

Playback of Rich Digital Books on Mobile Devices
Carlos Duarte, Luís Carriço, Fernando Morgado, *University of Lisbon, Portugal*.

Mobile Magic Hand:Camera Phone Based Interaction Using Visual Code and Optical Flow
Yuichi Yoshida, Kento Miyaoku, Takashi Satou, *Nippon Telegraph and Telephone Corp., Japan*.

Support Zooming Tools for Mobile Devices
Kwang Lee, *SAMSUNG Electronics Co, Ltd., Korea*.

Reading Performance of Chinese Text with Automatic Scrolling
Yao-Hung Hsieh, Chiuhsiang Lin, Hsiao-Ching Chen, Ting-Ting Huang, James C. Chen, *Chung Yuan Christian University, Taiwan China*.

HCI Design (I)

Exhibition Hall 2-D

Chair(s): Jianming Dong, *PayPal Inc., USA*.

Enhancing User-Centered Design by Adopting the Taguchi Philosophy
Wei Zhou, David Heesom, *University of Wolverhampton, UK*; Panagiotis Georgakis, *West Midlands Centre for Constructing Excellence (WMCCE), UK*.

Wizard of Oz for Multimodal Interfaces Design: Deployment Considerations
Ronnie Taib, Natalie Ruiz, *National ICT Australia, Australia*.

10 Heuristics for Designing Administrative User Interfaces – A Collaboration between Ethnography, Design, and Engineering
Luke Kowalski, Kristyn Greenwood, *Oracle Corporation, USA*.

Quantifying the Narration Board for Visualising Final Design Concepts by Interface Designers
Chui Yin Wong, Chee Weng Khong, *Multimedia University, Malaysia*.

Alignment of Product Portfolio Definition and User Centered Design Activities
Ron Hofer, *Siemens IT Business Services, Germany*; Dirk Zimmermann, *T-Mobile Deutschland GmbH, Germany*; Melanie Jekal, *Universität Paderborn, Germany*.

A Requirement Engineering Approach to User Centered Design
Dirk Zimmermann, *T-Mobile Deutschland GmbH, Germany*; Lennart Grötzbach, *Siemens Business Services, Germany*.

Activity Theoretical Analysis and Design Model for Web-based Experimentation
Anh Vu Nguyen-Ngoc, *University of Leicester, UK*.

Learning Environments (I)

Exhibition Hall 2-H

Chair(s): Jasna Kuljis, *Brunel University, UK*.

Interaction Design Patterns for Classroom Environments
Henning Breuer, *Waseda University, Japan*; Nelson Baloian, *University of Chile, Chile*; Christian Sousa, Mitsuji Matsumoto, *Waseda University, Japan*.

KaLeSy-CJ: Kanji Learning System Focusing on Differences between Chinese and Japanese
Sa Lu, Naoko Yamashita, Hiroyuki Tominaga, Toshihiro Hayashi, Toshinori Yamasaki, *Kagawa University, Japan*.

The Effects of Visual versus Verbal Metaphors on Novice and Expert Learners' Performance
Yu-chen Hsu, *Tsing Hua University, Taiwan China*.

Breaking the Traditional E-Learning Mould: Support for the Learning Preference Approach
Fang Liu, Jasna Kuljis, Lorna Lines, *Brunel University, UK*.

An Entertainment System for Improving Motivation in Repeated Practice of Musical Instruments
Itaru Kuramoto, Yuya Shibata, Yu Shibuya, Yoshihiro Tsujino, *Kyoto Institute of Technology, Japan*.

EPCE

Engineering Psychology and Cognitive Ergonomics

Cognitive Issues in User Interface Design (II)

Exhibition Hall 2-F

Chair(s): Matti Vartiainen, *Helsinki University of Technology, Finland*.

Defining a Work Support and Training Tool for Automation Design Engineers
Paula Savioja, Leena Salo, *VTT Technical Research Centre of Finland, Finland*; Outi Laitinen, David Hästbacka, Topi Judén, Ville Valve, *Tampere University of Technology (TUT), Finland*.

Using Root Cause Data Analysis for Requirements and Knowledge Elicitation
Zhao Xia Janet Jin, *Honeywell, China*; John Hajdukiewicz, Geoffrey Ho, Donny Chan, *Honeywell, USA*; Yong Ming Kow, *In-Situ Research, Singapore*.

Ergonomists and Usability Engineers Encounter Test Method Dilemmas with Virtual Work Environments
Ari Putkonen, Ursula Hyrkkänen, *Turku University of Applied Sciences, Finland*.

Analysis of Multilocational Knowledge Workers' Work Spaces
Matti Vartiainen, *Helsinki University of Technology, Finland*.

Embodied Virtual Agents: An Affective and Attitudinal Approach of the Effects on Man-Machine Stickiness in a Product/Service Discovery
Pablo Brice De Diesbach, *ESSEC Asian Center, Singapore*; David Midgley, *INSEAD, France*.

Experts Validation Results of a Tailored Communication Framework through e-Health
Eva Del Hoyo-Barbolla, *Universidad Politécnica de Madrid, Spain*; Emanuele Carisio, *Universidad Politécnica de Madrid - ETSI Telecomunicación, Spain*; Marta Ortega-Portillo, Maria Teresa Arredondo, *Universidad Politécnica de Madrid, Spain*.

Mental Workload

Exhibition Hall 2-G

Chair(s): Mats Lind, *Uppsala University, Sweden*.

Context-Aware Notification for Mobile Police Officers
Jan Willem Streefkerk, Myra Van Esch-Bussemakers, *TNO Defence, Security and Safety, Netherlands*; Mark Neerincx, *TNO Human Factors, Netherlands*.

Theoretical and Methodological Considerations in the Comparison of Performance and Physiological Measures of Mental Workload
Julien Cegarra, *Centre Universitaire Jean-François Champollion, France*; Aline Chevalier, *University of Paris 10, France*.

A Mental Workload Predicator Model for the Design of pre Alarm Systems
Sheue-Ling Hwang, Yi-Jan Yau, Yu-Ting Lin, Jun Hao Chen, Tsun-Hung Huang, *Tsing Hua University, Taiwan China*; Tzu-Chung Yenn, Chong-Cheng Hsu, *Institute of Nuclear Energy Research, Taiwan China*.

Mental Workload in Command and Control Teams: Musings on the Outputs of EAST and WESTT
Mark Young, Neville Stanton, Guy Walker, Daniel Jenkins, Paul Salmon, *Brunel University, UK*.

Monitoring Performance and Mental Workload in an Automated System
Indramani Singh, Anju Singh, Proshanto Saha, *Banaras Hindu University, India*.

Time Estimation as a Measure of Mental Workload
Mats Lind, Henning Sundvall, *Uppsala University, Sweden*.

Examining the Moderating Effect of Workload on Controller Task Distribution
Paul Lee, Joey Mercer, *SJSU / NASA Ames Research Center, USA*; Todd Callantine, *NASA Ames Research Center, USA*.

UAHCI

Universal Access in Human-Computer Interaction

HCI Concepts for the Future Driver

201-C Conference Room

Chair(s): Evangelos Bekiaris, *CERTH, Greece*.

HMI Principles for Lateral Safe Applications
Lars Danielsson, Henrik Lind, *Volvo Car Corporation, Sweden*; Evangelos Bekiaris, Maria Gemou, *CERTH, Greece*; Angelos Amditis, *Institute of Communication and Computer Systems, Greece*; Maurizio Miglietta, *Centro Ricerche Fiat (CRF), Italy*; Per Stålberg, *Volvo Technology (VTEC), Sweden*.

WATCH-OVER HMI for vulnerable road users' protection
Katrin Meinken, *University of Stuttgart, Germany*; Roberto Montanari, *University of Modena and Reggio Emilia, Italy*; Mark Fowkes, *MIRA Limited, UK*; Adriani Mousadakou, *CERTH, Greece*.

GOOD ROUTE HMI for Actors Involved in Dangerous Goods Transportation
Marco Santi, Katrin Meinken, *University of Stuttgart, Germany*; Harald Widlroither, *Fraunhofer, Germany*; Evangelos Bekiaris, *CERTH, Greece*.

A DIYD (Do It Yourself Design) e-Commerce System for Vehicle Design Based on Ontologies and 3D Visualization
Lambros Makris, Nikolaos Karatzoulis, Dimitrios Tzovaras, *Informatics & Telematics Institute, Greece*.

INSAFES HCI Principles for Integrated ADAS Applications
Lars Danielsson, Henrik Lind, Stig Jonasson, *Volvo Car Corporation, Sweden*.

Development and Application of a Universal, Multimodal Hypovigilance-Management-System
Lorenz Hagenmeyer, *Fraunhofer, Germany*; Pernel Van den Hurk, *University of Stuttgart, Germany*; Stella Nikolaou, Evangelos Bekiaris, *CERTH, Greece*.

Occurrence of Secondary Tasks and Quality of Lane Changes
Laurence Rognin, *L.A.B., France*; Sophie Alidra, *INTA, France*; Clément Val, *C.E.E.S.A.R., France*; Antoine Lescaut, *PSA Peugeot Citroën, France*.

Designing for Mobile Interaction

301 Conference Room

Chair(s): Stephen Kimani, *JKUAT, Kenya*.

Addressing Concepts for Location-based Mobile Information Services
Wolfgang Narzt, Gustav Pomberger, Alois Ferscha, *University of Linz, Austria*; Dieter Kolb, *Siemens, Germany*; Reiner Müller, *Siemens Corporate Technology Munich, Germany*; Horst Hörtner, Roland Haring, *Ars Electronica Futurelab, Austria*.

A User-based Method for Speech Interface Development
Yael Dubinsky, Tiziana Catarci, *Universitá di Roma "La Sapienza", Italy*; Stephen Kimani, *JKUAT, Kenya*.

Accessibility and Usability Evaluation of MAIS Designer: A New Design Tool for Mobile Services
Laura Burzagli, Marco Billi, Enrico Palchetti, *National Research Council (CNR), Italy*; Tiziana Catarci, Giuseppe Santucci, *Universitá di Roma "La Sapienza", Italy*; Enrico Bertini, *University of Rome "La Sapienza", Italy*.

An Accessible and Collaborative Tourist Guide Based on Augmented Reality and Mobile Devices
Fidel Diez Diaz, Martin Gonzalez Rodriguez, Agueda Vidau, *University of Oviedo, Spain*.

Intuitive Map Navigation on Mobile Devices
Stefan Winkler, Karthik Rangaswamy, ZhiYing Zhou, *National University of Singapore, Singapore*.

An RFID-based Point and Listen Interface Providing Library Access for the Visually Impaired
Daniel Fallman, *Umeå University, Sweden*; Kent Lindbergh, Oskar Fjellstrom, Lars Johansson, Fredrik Nilbrink, Linda Bogren, *Umea University, Sweden*.

Pedestrian Navigation System Implications on Visualization
Thorsten Mahler, Markus Reuff, Michael Weber, *University of Ulm, Germany*.

Facilitating Computer Interaction in Older Adults

302 Conference Room

Chair(s): Thomas Plocher, *Honeywell, USA*; Zhao Xia Janet Jin, *Honeywell, China*.

Touch Screen User Interfaces for Older Adults: Button Size and Spacing
Zhao Xia Janet Jin, *Honeywell, China*; Thomas Plocher, Liana Kiff, *Honeywell, USA*.

User-specific Design of Interfaces and Interaction Techniques: What do Older Computer Users Need?
Christine Sutter, Jochen Müsseler, *RWTH Aachen University, Germany*.

Effects of Mouse Tremor Smoothing Adapter on Ease of Computer Mouse Use by Individuals with Essential Tremor: A Pilot Study
Cathy Bodine, *University of Colorado at Denver, USA*; James Levine, *IBM Corporation, USA*; James Sandstrum, Laura Meyer, *University of Colorado at Denver / Health Sciences Center, USA*.

Beyond the Constraints of QWERTY Keyboard: Challenges to Provide Alternative Input Methods for Japanese Older Adults
Hiroyuki Umemuro, *Tokyo Institute of Technology, Japan*.

RFID Cards: A New Deal for Elderly Accessibility
Robert Pastel, Charles Wallace, *Michigan Technological University, USA*; Jesse Heines, *University of Massachusetts Lowell, USA*.

Comparison of Computer Pointing Devices for Aging People
Li Hongting, *Zhejiang University, China*; Xu Weidan, *Zhejiang Gongshang University, China*; Ge Liezhong, *Zhejiang University, China*.

Creating Home Network Access for the Elderly
Kristiina Karvonen, *Helsinki University of Technology, Finland*.

Parallel Sessions

UAHCI

Health Applications and Services

311-B Conference Room

Chair(s): Panayiotis Zaphiris, *City University London, UK.*

From Ambient Devices to Smart Care for Blind People: A Metaphor of Independent Living with Responsive Service Scenarios
Ying Liu, *University of Cambridge, UK*; Roger Wilson-Hinds, *Choice Technology (UK) Limited, UK.*

Distributive Medical Management System
Barbara Sorensen, *Us Air Force, USA*; Judith Riess, *Education & Training Solutions, USA*; Eric Allely, *American Medical Diagnostics, USA.*

E- Health System for Coagulation Function Management by Elderly People
Noemi Bitterman, Eyal Lerner, Haim Bitterman, *Technion - Israel Institute of Technology, Israel.*

Managing Disclosure of Personal Health Information in Smart Home Healthcare
Umar Rashid, Hedda Schmidtke, Woontack Woo, *Gwangju Institute of Science and Technology (GIST), Korea.*

The Augmented Patient Chart: Seamless Integration of Physical and Digital Artifacts for Hospital Work
Myrna Zamarripa, *CICESE Research Center, Mexico*; Victor Gonzalez, *University of Manchester, UK*; Jesus Favela, *CICESE Research Center, Mexico.*

User Interaction Design for a Wearable and IT based Heart Failure System
Elena Villalba, Ignacio Peinado, Maria Teresa Arredondo, *Universidad Politécnica de Madrid, Spain.*

Computer Games Meet Universal Access

Exhibition Hall 2-A

Chair(s): Dimitris Grammenos, *Foundation for Research and Technology - Hellas (FORTH), Greece*; Anthony Savidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

Adaptive Virtual Reality Games for Rehabilitation of Motor Disorders
Minhua Ma, Michael McNeill, Darryl Charles, Suzanne McDonough, Jacqui Crosbie, Louise Oliver, Clare McGoldrick, *University of Ulster, UK.*

Unified Design of Universally Accessible Games
Dimitris Grammenos, Anthony Savidis, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

Interface of Online Mini-Go-Game with Pen Input Guide for the Blind
Michio Shimizu, *Nagano-ken College, Japan*; Masahiko Sugimoto, *Takushoku University, Kazakhstan*; Kazunori Itoh, *Shinshu University, Japan.*

Digital Game-Based Learning: An Agent Approach
Christian Anthony Go, Won-Hyung Lee, *Chung-Ang University, Korea.*

Designing Games to Address 'Mute English' among Children in China
Jason Li, *Brown University, USA*; Neema Moraveji, *Microsoft Research Asia, China*; Jiarong Ding, *University of Michigan, USA*; Patrick O'Kelley, Suze Woolf, *Microsoft, USA.*

The Virtual Paddle: A Universall Interaction for Accessible Video Games
Guillaume Lepicard, *UPS, France*; Vella Frédéric, Vigouroux Nadine, *Institut de Recherche en Informatique de Toulouse (IRIT), France*; Benoît Rigolleau, David Chautard, Elian Pucheu, *ENAC, France.*

Tile Dreamer: Game Tiles Made Easy
Effie Karouzaki, Anthony Savidis, Anthony Katzourakis, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

VR

Virtual Reality

VR for Digital Museum and Digital Heritage

201-B Conference Room

Chair(s): Zhigeng Pan, *Zhejiang University, China.*

Cultural Heritage as Digital Experience: A Singaporean Perspective
Wolfgang Müller-Wittig, Chao Zhu, Gerrit Voss, *Nanyang Technological University, Singapore.*

Colour Correct Digital Museum on the Internet
Janos Schanda, Cecilia Sik Lanyi, *University of Pannonia, Hungary.*

3D Simulation Technology of Cultural Relics in the Digitalized Yin Ruins
Chuangming Shi, Xinyu Duan, *Anyang Normal University, China.*

Plant Modeling and Its Application in Digital Agriculture Museum
Tonglin Zhu, *South China Agricultural University, China*; Yan Zhou, *South China Agriculture University, China*; Hock Soon Seah, Feng Tian, *Nanyang Technological University, China*; Xiaolong Yan, *South China Agriculture University, China.*

AR Pottery: Experiencing Pottery Making in the Augmented Space
Gabjong Han, Jane Hwang, Seungmoon Choi, *Pohang University of Science and Technology, Korea*; Gerard Kim, *Korea University, Korea.*

Learning Cooperation in a Tangible Moyangsung
Kyoung Park, *Dankook University, Korea*; Hyun Sang Cho, *Information and Communications University, Korea*; Jaewon Lim, Yongjoo Cho, *Sangmyung University, Korea*; Seungmook Kang, Soyon Park, *Jeonju University, Korea.*

Summary of Usability Evaluations of an Educational Augmented Reality Application
Hannes Kaufmann, *Vienna University of Technology, Austria*; Andreas Duenser, *University of Canterbury, New Zealand.*

UI

Usability and Internationalization

Cross-Cultural HCI * from an Ibero-American Perspective

303 Conference Room

Chair(s): Christian Sturm, *Universidad Tecnológica de la Mixteca, Mexico.*

Integrating Emotions and Knowledge in Aesthetics Designs Using Cultural Profiles
Rosa Gil, *Universitat de LLeida, Spain*; César Collazos, *Universidad del Cauca, Colombia.*

Guidelines to Develop Emotional Awareness Devices from a Cultural-Perspective: A Latin American Example
César Collazos, *Universidad del Cauca, Colombia*; María Paula González, *Universitat de Lleida, Spain*; Andrés Neyem, *Universidad de Chile, Chile*; Christian Sturm, *Universidad Tecnológica de la Mixteca, Mexico.*

Assessing Usability Problems in Latin American Academic Webpages with Cognitive Walkthroughs and Datamining Techniques
María Paula González, Jesús Lorés, Antoni Granollers, *Universitat de Lleida, Spain.*

Dealing with Computer Literacy and Age Differences in the Design of a Ubicomp System to Cope with Cognitive Decline in Lonely Elders
Marcela Rodriguez, Alejandro Aguirre, Alberto Moran, *Universidad Autónoma de Baja California (UABC), Mexico*; Oscar Mayora-Ibarra, *Create-Net, Italy.*

Word Processing in Spanish Using an English Keyboard: A Study of Spelling Errors
Nestor Rodriguez, Maria Diaz, *University of Puerto Rico at Mayagüez, Puerto Rico.*

Validating a Multilingual and Multimodal Affective Database
Juan Miguel López, Idoia Cearreta, *University of the Basque Country, Spain*; Inmaculada Fajardo, *University of Granada, Spain*; Nestor Garay, *University of the Basque Country, Spain.*

AC

Augmented Cognition

Augmented Cognition: From Laboratory to Application

309 Conference Room

Chair(s): David Kobus, *Pacific Science & Engineering Group (PS&E), USA*; Jan Stelovsky, *University of Hawaii, USA*.

Augmenting Task-Centered Design with Operator State Assessment Technologies
Karl Van Orden, Erik Viirre, *Naval Health Research Center, USA*; David Kobus, *Pacific Science & Engineering Group (PS&E), USA*.

Simulation Fidelity Design Informed by Physiologically-Based Measurement Tools
Jack Vice, Cori Lathan, Anna Lockerd, *AnthroTronix, Inc., USA*; James Hitt, II, *Independent Consultant, USA*.

Designing for Augmented Cognition - Problem Solving for Complex Environments
Joseph Juhnke, Timothy Mills, Jennifer Hoppenrath, *Tanagram Partners, USA*.

Ad-hoc Wireless Body Area Network for Augmented Cognition Sensors
Curtis Ikehara, Edoardo Biagioni, *University of Hawaii, USA*; Martha Crosby, *University of Hawaii at Manoa, USA*.

Highly Configurable Software Architecture Framework for Acquisition and Visualization of Biometric Data
Jan Stelovsky, *University of Hawaii, USA*.

Embedding Hercule Poirot in Networks: Addressing Inefficiencies in Digital Forensic Investigations
Barbara Endicott-Popovsky, *University of Washington, USA*; Deborah A. Frincke, *Pacific Northwest National Laboratory, USA*.

DHM

Digital Human Modeling

Functional Modeling and Rehabilitation (II)

311-A Conference Room

Chair(s): Dewen Jin, *Tsinghua University, China*; Ming Zhang, *The Hong Kong Polytechnic University, Hong Kong*.

Mechanism of Bifurcation-Dependent Coherence Resonance of Excitable Neuron Model
Guang-Jun Zhang, Jue Wang, Jian-Xue Xu, *Xi'an Jiaotong University, China*; Xiang-Bo Wang, Hong Yao, *Air Force Engineering University, China*.

A Hybrid AB-RBF Classifier for Surface Electromyography Classification
Rencheng Wang, *Tsinghua University, China*; Yiyong Yang, *China University of Geosciences, China*; Xiao Hu, Fangfang Wu, Dewen Jin, Xiaohong Jia, Fang Li, Jichuan Zhang, *Tsinghua University, China*.

Redundant Muscular Force Analysis of Human Lower Limbs During Rising from a Squat
Yiyong Yang, *China University of Geosciences, China*; Rencheng Wang, *Tsinghua University, China*; Ming Zhang, *The Hong Kong Polytechnic University, Hong Kong*; Dewen Jin, Fangfang Wu, *Tsinghua University, China*.

The Effects of the False Vocal Fold Gaps in a Model of the Larynx on Pressures Distributions and Flows
Sheng Li, MingXi Wan, SuPin Wang, *Xi'an Jiaotong University, China*.

Wavelet Transform and Singular Value Decomposition of EEG Signal for Pattern Recognition of Complicated Hand Activities
Xiaodong Zhang, Weifeng Diao, Zhiqiang Cheng, *Xi'an Jiaotong University, China*.

An Epileptic Seizure Prediction Algorithm From Scalp EEG Based on Morphological Filter and Kolmogorov Complexity
Guanghua Xu, Jing Wang, *Xi'an Jiaotong University, China*; Junming Zhu, *Zhejiang Provincial People's Hospital, China*.

Fractal Modeling of Human Psychomotor Skills Acquisition Process
James Wanliss, Dahai Liu, *Embry-Riddle Aeronautical University, USA*; Vadim Uritsky, *University of Calgary, Canada*; Michael Wuergler, *Embry-Riddle Aeronautical University, USA*.

Parallel Sessions

Human Interface and the Management of Information

Thursday 13:30 – 15:30

HIMI

Business Management

308 Conference Room

Chair(s): Bernhard Zimolong, *Ruhr University Bochum, Germany*.

A More Comprehensive Approach for Enhancing Business Process Efficiency
Seung-Hyun Rhee, *Seoul National University, Korea*; Nam Wook Cho, *Seoul National University of Technology, Korea*; Hyerim Bae, *Pusan National University, Korea*.

Business Integration Using the Interdisciplinary Project Based Learning Model (IPBL)
Osama Alshara, Mohamed Ibrahim, *Higher Colleges of Technology, United Arab Emirates*.

Business Insights Workbench – An Interactive Insights Discovery Solution
Amit Behal, Ying Chen, Cheryl Kieliszewski, Ana Lelescu, Bin He, *IBM, USA*; Jie (Jessica) Cui, *IBM, China*; Jeffrey Kreulen, James Rhodes, Scott Spangler, *IBM, USA*.

A Decision Making Model for the Taiwanese Shipping Logistics Company in China to Select the Container Distribution Center Location
Chien-Chang Chou, *Kaohsiung Marine University, Taiwan China*.

A Workflow Based Management System for Virtual Teams in Production Networks
Bernhard Zimolong, Bjoern Kraemer, *Ruhr University Bochum, Germany*.

The Inspiring Store: Decision Support System for Shopping Based on Individual Interests
Akihiro Ogino, Sae-ueng Somkia, Toshikazu Kato, *Chuo University, Japan*.

Interacting with the World Wide Web

311-A Conference Room

Chair(s): Gunilla Bradley, *Royal Institute of Technology, Sweden*.

Measuring the Screen Complexity on Web pages
Fongling Fu, *Cheng-chi University, Taiwan China*; Shao-Yuan Chiu, *University of Missouri-Columbia, USA*; Chiu Hung Su, *Cheng-chi University, Taiwan China*.

Using Long Term Memory for Bookmark Management
Ming-Jen Wang, Kuen-Meau Chen, *Center for High-Performance Computing, Taiwan China*; Tee Koon Hau, *Chiao Tung University, Taiwan China*.

A Conceptual Design for Children's WebOPAC Interface: Graphic Design Issues
Tengku Wook Tengku Siti Meriam, *National University of Malaysia, Malaysia*; Siti Salwa Salim, *University of Malaysia, Malaysia*.

Web Services as a Solution for Maritime Port Information Interoperability
Pedro Isaias, *Portuguese Open University, Portugal*; Fernanda Macedo, *Administração do Porto de Lisboa, Portugal*.

Collaboration between People for Sustainability in the ICT Society
Gunilla Bradley, *Royal Institute of Technology, Sweden*.

A Video Digest and Delivery System: "ChocoParaTV"
Kota Hidaka, Naoya Miyashita, Masaru Fujikawa, Masahiro Yuguchi, Takashi Satou, Katsuhiko Ogawa, *Nippon Telegraph and Telephone Corp., Japan*.

Education and Entertainment Environments

Exhibition Hall 2-G

Chair(s): Chaochang Chiu, *Yuan Ze University, Taiwan China*.

Simulation-based Automated Intelligent Tutoring
Barbara Sorensen, *Us Air Force, USA*; Sowmya Ramachandran, *Stotter Henke Associates, Inc., USA*.

The Effectiveness of Educational Technology: A Preliminary Study of Learners from Small and Large Power Distance Cultures
Elizabeth Koh, John Lim, *National University of Singapore, Singapore*.

Function Interfaces Assessment of Online Game Websites in Great China Area using Content Analysis
Chi-I Hsu, *Kai-Nan University, Taiwan China*; Chaochang Chiu, Chich Hua Su, Ping-Ju Wu, *Yuan Ze University, Taiwan China*; Yuan Jie Yang, *Central University, Taiwan China*.

Game Player Modeling using D-FSMs
Tae Bok Yoon, Dong Moon Kim, Kyo Hyeon Park, Jee Hyong Lee, Kwan-Ho You, *Sungkyunkwan University, Korea*.

A Quantitative Approach for the Design of Academic Curricula
Carlos Castro, Broderick Crawford, Eric Monfroy, *Universidad Tecnica Federico Santa Maria, Chile*.

The Impact of Verbal Stimuli in Motivating Consumer Response at the Point of Purchase Situation Online
Asle Fagerstrøm, *The Norwegian School of Information Technology, Norway*.

Public and Personal Information Spaces

Exhibition Hall 2-H

Chair(s): Klaus-Peter Fähnrich, *Universität Leipzig, Germany*.

Information Design for User's Reassurance in Public Space
Yurika Katagiri, Minoru Kobayashi, *Nippon Telegraph and Telephone Corp., Japan*.

Evaluating Interfaces to Publicly Available Environmental Information
Peter Mooney, *National Center for Geocomputation, Ireland*; Adam Winstanley, *National University of Ireland, Maynooth, Ireland*.

Disseminating and Sharing Information through Time-Aware Public Displays
Marcela Rodriguez, Angel Andrade, Maria-Luisa Gonzalez, Alberto Moran, *Universidad Autónoma de Baja California (UABC), Mexico*.

Using Social Metadata in Email Triage: Lessons from the Field
Danyel Fisher, A J Brush, *Microsoft Research, USA*; Bernie Hogan, *University of Toronto, USA*; Marc Smith, Andy Jacobs, *Microsoft Research, USA*.

A Tactile Emotional Interface for Instant Messenger Chat
Heesook Shin, Junyoung Lee, Junseok Park, *Electronics and Telecommunication Research Institute (ETRI), Korea*; Youngjae Kim, Hyunjoo Oh, Taehwa Lee, *Information and Communications University, Korea*.

Using Autobiographic Information to Retrieve Real and Electronic Documents
Daniel Gonçalves, Tiago Guerreiro, Renata Marin, Joaquim Jorge, *INESC-ID, Portugal*.

A Communicative Behaviour Analysis of Art-Technology Collaboration
Yun Zhang, Linda Candy, *University of Technology, Sydney, Australia*.

HCI

Mobile Storytelling, Sharing, and Video

201-A Conference Room

Chair(s): Anxo Cereijo Roibas, *University of Brighton, UK*; Riccardo Sala, *Dare Digital, UK*; Aaron Marcus, *Aaron Marcus and Associates, Inc. (AM+A), USA*.

m-YouTube Mobile UI: Video Selection Based on Social Influence
Aaron Marcus, Angel Perez, *Aaron Marcus and Associates, Inc. (AM+A), USA*.

Can Video Support City-based Communities?
Raquel Navarro-Prieto, *Universitat Pompeu Fabra, Spain*; Nidia Berbegal, *Barcelona Media – Innovation Center, Spain*.

Mobile Phone Video Camera in Social Context
Erika Reponen, Jaakko Lehikoinen, Jussi Impiö, *Nokia, Finland*.

m-LoCoS UI: a Universal Visible Language for Global Mobile Communication
Aaron Marcus, *Aaron Marcus and Associates, Inc. (AM+A), USA*.

Media Convergence, an Introduction
Sepideh Chakaveh, Manfred Bogen, *Fraunhofer, Germany*.

nan0sphere: Location-Driven Fiction for Groups of Users
Kevin Eustice, V. Ramakrishna, Alison Walker, Matthew Schnaider, Nam Nguyen, Peter Reiher, *University of California, Los Angeles, USA*.

Sharing Video Browsing Style by Associating Browsing Behavior with Low-level Features of Videos
Akio Takashima, Yuzuru Tanaka, *Hokkaido University, Japan*.

Multimodal Interaction

311-B Conference Room

Chair(s): Astrid Beck, *Hochschule Esslingen University of Applied Sciences, Germany*.

Evaluation of Multimodal Interactive Systems
Kristiina Jokinen, *University of Helsinki, Finland*.

A Toolkit for Multimodal Interface Design: An Empirical Invstigation
Dimitris Rigas, Mohammad Alsuraihi, *University of Bradford, UK*.

Towards Multimodal User Interface Composition based on UsiXML and MBD principles
Sophie Lepreux, Anas Hariri, *University of Valenciennes, France*; José Rouillard, *Université des Sciences et Technologies de Lille, France*; Dimitri Tabary, *University of Valenciennes, France*; Jean-Claude Tarby, *University Lille 1, France*; Christophe Kolski, *University of Valenciennes, France*.

Exploiting Speech-Gesture Correlation in Multimodal Interaction
Fang Chen, Eric Choi, *National ICT Australia, Australia*; Ning Wang, *University of New South Wales, Australia*.

A Tangible User Interface with Multimodal Feedback
Laehyun Kim, Hyunchul Cho, Sehyung Park, Manchul Han, *Korea Institute of Science and Technology (KIST), Korea*.

Subjective Measurement of Workload Related to a Multimodal Interaction Task: NASA-TLX vs. Workload Profile
Dominique Fréard, *France Telecom R&D, France*; Eric Jamet, Olivier Le Bohec, *Université Rennes 2, France*; Gérard Poulain, Valérie Botherel, *France Telecom R&D, France*.

Character Agents in E-learning Interface Using Multimodal Real-time Interaction
Hua Wang, *University of Toronto, Japan*; Jie Yang, *The University of Tokyo, Japan*; Mark Chignell, *University of Toronto, Canada*; Mitsuru Ishizuka, *The University of Tokyo, Japan*.

Speech and Voice

311-C Conference Room

Chair(s): Christina Alexandris, *Institute for Language and Speech Processing (ILSP), Greece*.

An Empirical Study on Users' Acceptance of Speech Recognition Errors in Text-messaging
Shuang Xu, Santosh Basapur, Mark Ahlenius, Deborah Matteo, *Motorola Labs, USA*.

Error correction for handwritten mathematical expression recognition by pen and speech
Yingying Jiang, Xiang Ao, Guozhong Dai, *Chinese Academy of Sciences, China*.

Performance Analysis of Perceptual Speech Quality and Modules Design for Management over IP Network
Jinsul Kim, Hyun-Woo Lee, *Electronics and Telecommunications Research Institute (ETRI), Korea*; Won Ryu, *ETRI, Korea*; Seung Ho Han, Minsoo Hahn, *Information and Communications University, Korea*.

Customized Message Generation and Speech Synthesis in Response to the Characteristic Behavioral Patterns of Children
Ho-Joon Lee, Jong C. Park, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Preferences and Patterns of Paralinguistic Voice Input to Interactive Media
Samaa Al Hashimi, *Middlesex University, UK*.

User Centered Design & Evaluation of a Concurrent Voice Communication & Media Sharing Application
David Wheatley, *Motorola Labs, USA*.

The Exploration of Possibility of Multithreaded Conversations Using a Voice Communication System
Kanayo Ogura, Kazushi Nishimoto, Kozo Sugiyama, *Japan Advanced Institute of Science and Technology, Japan*.

Usability Evaluation Methods

Exhibition Hall 2-A

Chair(s): Nigel Bevan, *Professional Usability Services, UK*.

Evaluating Usability Evaluation Methods: Criteria, Method and a Case Study
Panayiotis Koutsabasis, Thomas Spyrou, John Darzentas, *University of the Aegean, Greece*.

Developing Instrument for Handset Usability Evaluation: A Survey Study
Ting Zhang, Pei-Luen Patrick Rau, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

Development of Usability Evaluation Framework with QFD : From Customers' Sensation to Product Design
Yong Gu Ji, Beom Suk Jin, Kyeyoun Choi, Seeun Jang, Gilsoo Cho, *Yonsei University, Korea*.

The Practices of Usability Analysis to Wireless Facility Controller for Conference Room
Ding-Hau Huang, You-Zhao Liang, Wen-Ko Chiou, *Chang Gung University, Taiwan China*.

Are Guidelines and Standards for Web Usability Comprehensive?
Nigel Bevan, *Professional Usability Services, UK*; Lonneke Spinhof, *Katholic University of Leuven, Belgium*.

A Task Model Proposal for Web Sites Usability Evaluation for the ErgoMonitor Environment
André Luis Schwerz, *State University of Maringa, Brazil*; Marcelo Morandini, *University of São Paulo, Brazil*; Sergio Roberto Da Silva, *State University of Maringa, Brazil*.

Parallel Sessions

HCI

Usability Case Studies

Exhibition Hall 2-B

Chair(s): X. Sherab Chen, *The Ohio State University, USA.*

Usability Implications of Context-Aware Tour Guides
Stephen Gulliver, Gheorghita Ghinea, Tacha Serif, Minesh Patel, *Brunel University, UK.*

Usability Test for Cellular Phone Interface Design that Controls Home Appliances
Haeinn Lee, *St Cloud State University, USA.*

A Usability Test of Exchanging Context in a Conference Room via Mobile Device Interactions
Doyoon Kim, SeungChul Shin, Cheolho Cheong, Tack-Don Han, *Yonsei University, Korea.*

Usability Assessment of the E-learning Courseware for Basic Cataloging Training
X. Sherab Chen, Tingting Lu, *The Ohio State University, USA.*

Evaluating Usability Improvements by Combining Visual and Audio Modalities in the Interface
Carlos Duarte, Luís Carriço, Nuno Guimarães, *University of Lisbon, Portugal.*

"My Money in E-Purse" Searching Problems in Self Service User Interface
Eylem Kılıç, *Middle East Technical University, Turkey.*

Usability of Hybridmedia Services – PC and Mobile Applications Compared
Jari Laarni, Liisa Lähteenmäki, Johanna Kuosmanen, *Technical Research Centre of Finland (VTT), Finland*; Niklas Ravaja, *Helsinki School of Economics, Finland.*

Mobile Services

Exhibition Hall 2-C

Chair(s): Lasse Berntzen, *Vestfold University College, Norway.*

Ideas for Mobile Services Created and Explored in an Ethnographical Study
Bente Skattør, *Agder University College, Norway.*

A Framework for Mobile Services Supporting Mobile Non-Office Workers
Bente Skattør, *Agder University College, Norway*; Lasse Berntzen, *Vestfold University College, Norway*; Tore Engvig, *University of Oslo, Norway*; Per Hasvold, *Norwegian Centre for Telemedicine, Norway.*

Understanding Influence of Mobile Internet Services on Life Behavior of Mobile Users
Sang Min Ko, Yong Gu Ji, *Yonsei University, Korea*; Dongsoo Kim, *Soongsil University, Korea.*

A Successful Field Test of a Mobile and Multilingual Information Service System COMPASS2008
Hans Uszkoreit, Feiyu Xu, *DFKI GmbH, Germany*; Weiquan Liu, *Capinfo Co Ltd, China*; Jörg Steffen, Ihlan Aslan, *DFKI GmbH, Germany*; Jin Liu, Christel Müller, *T-Systems, Germany*; Bernhard Holtkamp, Manfred Wojciechowski, *Fraunhofer, Germany.*

A Study of Mobile Searching for Location-Based Information
Chengyi Liu, Pei-Luen Patrick Rau, *Tsinghua University, China.*

Towards Web Services Oriented Unified Supervisory HCI
Djilali Idoughi, *University Abederrahmane Mira, Algeria*; Christophe Kolski, *University of Valenciennes, France.*

Subjective Impact of Delay and Jitter in Multimedia Networks
Gheorghita Ghinea, Stephen Gulliver, *Brunel University, UK.*

Interactive Digital TV

Exhibition Hall 2-D

Chair(s): Alma Leora Culén, *University of Oslo, Norway.*

A Study on User Satisfaction Evaluation about the Recommendation Techniques of a Personalized EPG System on Digital TV
Sang Min Ko, *Yonsei University, Korea*; Yeon Jung Lee, *Soongsil University, Korea*; Myo Ha Kim, Yong Gu Ji, *Yonsei University, Korea*; Soo Won Lee, *Soongsil University, Korea.*

Media Service Mediation Supporting Resident's Collaboration in ubiTV
Choonsung Shin, Hyoseok Yoon, Woontack Woo, *Gwangju Institute of Science and Technology (GIST), Korea.*

Innovative TV: from an Old Standard to a New Concept of Interactive TV – an Italian Job
Rossana Simeoni, *Telecom Italia, Italy*; Linnea Etzler, *University of Modena and Reggio Emilia, Italy*; Elena Guercio, Monica Perrero, Amon Rapp, *Telecom Italia, Italy*; Roberto Montanari, Francesco Tesauri, *University of Modena and Reggio Emilia, Italy.*

Designing Personalized Media Center with Focus on Ethical Issues of Privacy and Security
Alma Leora Culén, *University of Oslo, Norway*; Yonggong Ren, *Liaoning Normal University, China.*

Beyond Mobile TV: Understanding How Mobile Interactive Systems Enable Users to Become Digital Producers
Anxo Cereijo Roibas, *University of Brighton, UK*; Riccardo Sala, *Dare Digital, UK.*

A Usability Study on Personalized EPG (PEPG) UI of Digital TV
Myo Ha Kim, Sang Min Ko, Jae Seung Mun, Yong Gu Ji, *Yonsei University, Korea*; Moon Ryul Jung, *Sogang University, Korea.*

EPCE

Engineering Psychology and Cognitive Ergonomics

Manned-unmanned Teaming Collaborative Work in Vehicle Guidance

201-B Conference Room

Chair(s): Axel Schulte, *Munich University of the German Armed Forces, Germany.*

Operating Multiple Semi-Autonomous UGVs: Navigation, Strategies, and Instantaneous Performance
Patrik Lif, Johan Hedström, Peter Svenmarck, *Swedish Defence Research Agency (FOI), Sweden.*

A Comparative Study of Multimodal Displays for Multirobot Supervisory Control
Boris Trouvain, *FGAN, Germany*; Christopher Schlick, *RWTH Aachen, Germany.*

Asymmetric Synchronous Collaboration Within Distributed Teams
Mark Ashdown, Mary Cummings, *Massachusetts Institute of Technology, USA.*

Operator Assistance and Semi-Autonomous Functions as Key Elements of Future Systems for Multiple UAV Guidance
Michael Kriegel, Claudia Meitinger, Axel Schulte, *Munich University of the German Armed Forces, Germany.*

Situation Awareness and Secondary Task Performance While Driving
Martin Baumann, *Federal Highway Research Institute (BASt), Germany*; Diana Roesler, Josef Krems, *Chemnitz University of Technology, Germany.*

Effects of Driver Fatigue Monitoring – An Expert Survey
Katja Karrer, Matthias Rötting, *Berlin University of Technology, Germany.*

UAHCI

Universal Accessibility of Documents (I)

201-C Conference Room

Chair(s): Georgios Kouroupetroglou, *University of Athens, Greece.*

Ambient Documents: Intelligent Prediction for Ubiquitous Content Access
Gregory O'Hare, Michael O'Grady, Conor Muldoon, *University College Dublin (UCD), Ireland*; Caroline Byrne, *IT Carlow, Ireland.*

A Bayesian Network Approach to Semantic Labeling of Text Formatting in XML Corpora of Documents
Florendia Fourli-Kartsouni, Kostas Slavakis, Georgios Kouroupetroglou, Sergios Theodoridis, *University of Athens, Greece.*

Conveying Browsing Context Through Audio on Digital Talking Books
Carlos Duarte, Luís Carriço, *University of Lisbon, Portugal.*

The Effects of Spatially Enriched Browsing Shortcuts on Web Browsing of Blind Users
Christos Kouroupetroglou, Michail Salampasis, *T.E.I. of Thessaloniki, Greece*; Athanasios Manitsaris, *University of Macedonia, Greece.*

Accessing e-Government Services: Design Requirements for the Older User
Lorna Lines, Oluchi Ikechi, Kate Hone, *Brunel University, UK.*

Auditory Accessibility of Metadata in Books: a Design for All Approach
Dimitrios Tsonos, Gerasimos Xydas, Georgios Kouroupetroglou, *University of Athens, Greece.*

Perceptive Supplementation for an Access to Graphical Interfaces
Mounia Ziat, Charles Lenay, Olivier Gapenne, John Stewart, Amal Ali Ammar, Dominique Aubert, *University of Technology of Compiegne, France.*

Various Interfaces Designed for User

301 Conference Room

Chair(s): Toshiki Yamaoka, *Wakayama University, Japan.*

Basic Consideration for Various Interfaces from Viewpoint of Service
Toshiki Yamaoka, Mayuko Yoshida, *Wakayama University, Japan.*

Difficulties on Small-Touch-Screens for Various Ages
Chang-Franw Lee, Chen-Chia Kuo, *Yunlin University of Science & Technology, Taiwan China.*

Improvements of Chord Input Devices for Mobile Computer Users
Fong-Gong Wu, Chun-Yu Chen, Chien-Hsu Chen, *Cheng Kung University, Taiwan China.*

A Study of Motivated Interface Based on Human Centered Design
Atsuko Kuramochi, *SHARP Co., Japan*; Chiharu Yamamoto, *Wakayama University, Japan.*

Designing "Height" into Daily Used Products --A Case Study of Universal Design
Rungtai Lin, Shih-Wei Yang, Wun-Sin Siao, *Taiwan University of Arts, Taiwan China*; Han-yu Lin, Yen-Yu Kang, *Kaohsiung Normal University, Taiwan China.*

User Driven Innovation of Novel Applications (UDINA)

302 Conference Room

Chair(s): Veikko Ikonen, *VTT Technical Research Centre of Finland, Finland.*

Case Study of Applying Wireless Technologies into Healthcare Industry in China and UK
Guixia Kang, Li X Zhang, Shanghong Li, Ping Zhang, Said Boussakta, *Beijing University of Posts and Telecommunications, China.*

Attitude Toward Wireless Applications in Healthcare Industry in China
Guixia Kang, Yue Ouyang, *Beijing University of Posts and Telecommunications, China*; Da Liu, *Beijing University of Aeronautics and Astronautics, China*; Huaqing Wang, Ping Zhang, *Beijing University of Posts and Telecommunications, China.*

Local Voice in a Global World – User-centered Design in support of Everyday Practices
Kirsti Lehtimäki, *University of Art and Design Helsinki, Finland*; Taina Rajanti, *University Consortium of Pori, Finland.*

Idea Movement of Aging Citizens: Lessons-Learnt from Innovation Workshops
Jaana Leikas, *VTT Technical Research Centre of Finland, Finland.*

Scenario-Based Design as an Approach to Enhance User Involvement and Innovation
Veikko Ikonen, *VTT Technical Research Centre of Finland, Finland.*

WebLection: An accessible media player for browsing and working with the Web
Alexandros Mourouzis, Nikolaos Partarakis, Constantine Galanakis, Constantina Doulgeraki, George Margetis, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

Merging Medicine and VR: The INTUITION Working Group Medicine and Neuroscience

305-A Conference Room

Chair(s): Alex Bullinger, *COAT-Basel, Switzerland*; Oliver Stefani, *COAT-Basel, Switzerland.*

Multimodal Augmented Reality in Medicine
Matthias Harders, Gerald Bianchi, Benjamin Knoerlein, *ETH Zurich, Switzerland.*

New HCI Based on a Collaborative 3D Virtual Desktop for Surgical Planning and Decision Making
Pascal Le Mer, Dominique Pavy, *France Telecom, France.*

AKROPHOBIA Treatment Using Virtual Environments: Evaluation Using Real-time Physiology
Marcel Delahaye, Ralph Mager, Oliver Stefani, *COAT-Basel, Switzerland*; Evangelos Bekiaris, *CERTH, Greece*; Michael Studhalter, *COAT-BASEL, Switzerland*; Ulrich Hemmeter, *Philipps-Universität Marburg, Germany*; Alex Bullinger, Martin Traber, *COAT-Basel, Switzerland.*

Visuo-Haptic Blending applied to a Tele-touch-diagnosis Application.
Benjamin Bayart, Abdelhamid Drif, Abderrahmane Kheddar, Jean-Yves Didier, *IBISC / CNRS, France.*

VR-based Self Brain Surgery Game System by Deformable Volumetric Image Visualization
Naoto Kume, *Kyoto University Hospital, Japan*; Kazuya Okamoto, Tsukasa Takashi, *Kyoto University, Japan*; Hiroyuki Yoshihara, *Kyoto University Hospital, Japan.*

Parallel Sessions

UAHCI

Inclusive Design

305-B Conference Room

Chair(s): Hua Dong, *Brunel University, UK*; Julia Cassim, *Royal College of Art, UK.*

"It's Not What You Do, It's the Way That You Do It": The Challenge Workshop - A Designer-centred Inclusive Design Knowledge Transfer Mechanism for Different Contexts
Julia Cassim, *Royal College of Art, UK.*

Redesigning Earplugs: Issues Relating to Desirability and Universal Access
Stephen Green, *Human Centred Design Institute, UK*; Neil Thomas, *The Royal National Institute for Deaf (RNID), UK.*

Children-Computer Interaction: An Inclusive Design Process for the Design of Our Future Playground
Yanki Lee, *Royal College of Art, UK.*

Designing Data to be Inclusive: Enabling Cross-Disciplinary and Participative Processes
Alastair Macdonald, David Loudon, *The Glasgow School of Art, UK.*

The UD Phenomenon in Japan: Product Innovation through Universal Design
Alastair Macdonald, *The Glasgow School of Art, UK.*

Tenuta: Strategies for Providing Guidance on Usability and Accessibility
Nigel Bevan, *Professional Usability Services, UK*; Helen Petrie, *University of York, UK*; Nigel Claridge, *Halogen, Sweden.*

An Accessible Platform for Conference Administration and Management
George Margetis, Stavroula Ntoa, Maria Bouhli, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

VR

Virtual Reality

Novel Applications of VR (II)

309 Conference Room

Chair(s): Anand Gramopadhye, *Clemson University, USA.*

Video Game Technologies and Virtual Design: A Study of Virtual Design Teams in A Metaverse
Shaowen Bardzell, Kalpana Shankar, *Indiana University, USA.*

Improving the Mobility Performance of Autonomous Unmanned Ground Vehicles by Adding the Ability to 'Sense/Feel' Their Local Environment
Siddharth Odedra, Stephen Prior, Mehmet Karamanoglu, *Middlesex University, UK.*

A Virtual Environment for 3D Facial Makeup
Jeong-Sik Kim, Soo-Mi Choi, *Sejong University, Korea.*

Collaborative Virtual Environments: You Can't Do it Alone, Can You?
Arturo S. García, Diego Martínez, José P. Molina, Pascual González, *University of Castilla-La Mancha, Spain.*

Evaluation of Interaction Devices for Projector Based Virtual Reality Aircraft Inspection Training Environments
Sajay Sadasivan, Deepak Vembar, *Clemson University, USA*; Carl Washburn, *Greenville Technical College, USA*; Anand Gramopadhye, *Clemson University, USA.*

An Open-Source Virtual Reality Platform for Clinical and Research Applications
Giuseppe Riva, Andrea Gaggioli, *Università Cattolica del Sacro Cuore, Italy*; Daniela Villani, *Università Cattolica del Sacro Cuore / Istituto Auxologico Italiano, Italy*; Alessandra Preziosa, Francesca Morganti, Lorenzo Strambi, *Istituto Auxologico Italiano, Italy*; Riccardo Corsi, Gianluca Faletti, Luca Vezzadini, *Virtual Reality & Multi-Media Park, Italy.*

UI

Usability and Internationalization

Culture-friendly Interface Design

303 Conference Room

Chair(s): Alan Chan, *City University of Hong Kong, Hong Kong*; Ravindra Goonetilleke, *Hong Kong University of Science and Technology, Hong Kong.*

Cultural Issues in Traffic Sign Usability
Annie W.Y. Ng, Alan Chan, *City University of Hong Kong, Hong Kong.*

Smart Strategies for Creating Culture Friendly Products and Interfaces
Apala Lahiri Chavan, *Human Factors International, Pvt. Ltd., India.*

Performance Modeling Using Anthropometry for Minority Population
V Gnaneswaran, R. Bishu, *University of Nebraska-Lincoln, USA.*

A Comparative Study of Thai and UK Older Web Users
Prush Sa-nga-ngam, Sri Kurniawan, *The University of Manchester, UK.*

Designing "Culture" into Modern Product - A Case Study of Cultural Product Design
Rungtai Lin, Ming-Xian Sun, Ya-Ping Chang, Yu-Ching Chan, *Taiwan University of Arts, Taiwan China*; Yi-Chen Hsieh, Yuan-Ching Huang, *Chang Gung University, Taiwan China.*

Locating Culture in HCI with Information Kiosks and Social Networks
Tom Hope, Masahiro Hamasaki, Keisuke Ishida, Noriyuki Fujimura, Yoshiyuki Nakamura, Takuichi Nishimura, *National Institute of Advanced Industrial Science and Technology (AIST), Japan.*

A Remote Study on East-West Cultural Differences in Mobile User Experience
Qifeng Yan, Guanyi Gu, *NOKIA, Finland.*

User Interface Design and Global Acceptance (II) : Industrial Applications

307 Conference Room

Chair(s): Myung Hwan Yun, *Seoul National University, Korea.*

Design Guidelines to the Application of Extreme Design with Korean Anthropometry
Yongju Cho, Eui S. Jung, *Korea University, Korea*; Sungjoon Park, *Namseoul University, Korea*; Seong W. Jeong, *Korea University, Korea*; Woojin Park, *University of Cincinnati, USA.*

Fit Evaluation of 3D Virtual Garment
Joohyun Lee, Yun-Ja Nam, Ming Hai Cui, *Seoul National University, Korea*; Kueng Mi Choi, *Dong Seoul College, Korea*; Young Lim Choi, *Seoul National University, Korea.*

A Statistical Model of Relationship Between Affective Responses and Product Design Attributes for Capturing User Needs
Sangwoo Bahn, Cheol Lee, *Seoul National University, Korea*; Joo Hwan Lee, *POSDATA Co. Ltd., Korea*; Myung Hwan Yun, *Seoul National University, Korea.*

Design and Evaluation of a Handled Trackball as a Robust Interface in Motion
Chiuhsiang Lin, Chi-No Liu, Jun-Lung Hwang, *Chung Yuan Christian University, Taiwan China.*

Evaluation of Two Pointing Control Devices for a Cellular Phone
Ji Hyoun Lim, *University of Michigan, USA*; Cheol Lee, *Seoul National University, Korea*; Sun Young Park, *Korea Institute of Science & Technology Information, Korea*; Myung Hwan Yun, *Seoul National University, Korea.*

Incorporating JND into the Design of Mobile Device Display
Joo Hwan Lee, *POSDATA Co. Ltd., Korea*; Won Yong Suh, Cheol Lee, Jang Hyeon Jo, Myung Hwan Yun, *Seoul National University, Korea.*

Statistical Modeling of Affective Responses from Visual and Auditory Attributes in the Movies
In Ki Kim, Kyung Jae Lee, Woojin Chang, Myung Hwan Yun, *Seoul National University, Korea.*

Online Communities and Social Computing

OCSC

Local / Global Linkages: A Multi-Country Perspective on Civic Intelligence

Exhibition Hall 2-F

Chair(s): Doug Schuler, *The Evergreen State College, USA*.

Panel Discussion

Augmented Cognition

AC

fNIR and Related Technology and Emerging AugCog Applications

305-C Conference Room

Chair(s): Traci Downs, *Archinoetics, LLC, USA*; J. Hunter Downs, III, *Archinoetics, LLC, USA*.

A Sensor Positioning System for Functional Near-Infrared Neuroimaging
Ping He, Betty Yang, *Wright State University, USA*; Sarah Hubbard, *Wright-Patterson Air Force Base, USA*; Justin Estepp, *Wright State University, USA*; Glenn Wilson, *Wright-Patterson Air Force Base, USA*.

Physiologic System Interfaces using fNIR with Tactile Feedback for Improving Operator Effectiveness
Erin Nishimura, Evan Rapoport, *Archinoetics, LLC, USA*; Benjamin Darling, Dennis Proffitt, *University of Virginia, USA*; Traci Downs, J. Hunter Downs, III, *Archinoetics, LLC, USA*.

Exploring Calibration Techniques for Functional Near-Infrared Imaging (fNIR) Controlled Brain-Computer Interfaces
Peter Wubbels, Erin Nishimura, Evan Rapoport, *Archinoetics, LLC, USA*; Benjamin Darling, Dennis Proffitt, *University of Virginia, USA*; Traci Downs, J. Hunter Downs, III, *Archinoetics, LLC, USA*.

Reverse Engineering the Visual System via Genetic Programs
Diglio Simoni, *RTI International, USA*.

The Impact of Direct Data Entry by Sensory Devices to EMR Systems
David Pager, Dennis Streveler, Luz Quiroga, *University of Hawaii at Manoa, USA*.

Assessing the Real-Time Cognitive Capabilities of First Responders using Emerging Technologies in Manikin Simulators
Kathleen Kihmm Connolly, Lawrence Burgess, *University of Hawaii, USA*.

Parallel Sessions

Thursday 16:00 – 18:00

EHAWC

Ergonomics and Health Aspects of Work with Computers

Health and Well-being in the Human Environment

302 Conference Room

Chair(s): Chihwei Lu, *Kaohsiung Medical University, Taiwan China.*

Work Environment and Health Effects of Operators at Light-On-Test Process in TFT-LCD Plants
Chihwei Lu, Jiunn-Woei Sheen, *Kaohsiung Medical University, Taiwan China*; Shin-Bin Su, Shu-Chun Kuo, *Chimei Foundation Hospital, Taiwan China*; Yu-Ting Yang, Chein-Wen Kuo, *Kaohsiung Medical University, Taiwan China.*

Classification and Evaluation of Selective Attention Tasks for Multiple-Monitor Computer Workstations
Paris Stringfellow, Anand Gramopadhye, *Clemson University, USA.*

A Biomechanical Analysis System to Evaluate Physical Usability of Kimchi Refrigerator
Inseok Lee, Jae Hee Park, Tae-Joo Park, *Hankyong National University, Korea*; Jae Hyun Choi, *U2system co, Korea.*

Investigation and Implementation on the Advanced Wireless Medical Registration Solution in China
Yue Ouyang, Shanghong Li, Xiupeng Chen, Guixia Kang, *Beijing University of Posts and Telecommunications, China.*

Automatic Recognition and Analysis of Gait Patterns using Kernel Learning Algorithms
Jianning Wu, Jue Wang, *Xi'an Jiaotong University, China.*

Performance Improvement of Pulse Oximetry-Based Respiration Detection by Selective Mode Bandpass Filtering
Hojune Seo, Sangbae Jeong, *Information and Communications University, Korea*; Jinha Kim, Seunghun Park, *KyungHee University, Korea*; Minsoo Hahn, *Information and Communications University, Korea.*

A Kinematic Analysis of Directional Effects on Trackball Mouse Control in Novel Normal Users: An Alternating Treatments Single Subject Design
Ling-fu Meng, *Chang Gung University, Taiwan China*; Ming-Chung Chen, *Chiayi University, Taiwan China*; Chi Nung Chu, *China University of Technology, Taiwan China*; Chiu-ping Lu, *Chang Gung University, Taiwan China*; Ting-Fang Wu, *Taiwan Normal University, Taiwan China*; Ching-Ying Yang, Jing-Yeah Lo, *Chang Gung University, Taiwan China.*

HIMI

Human Interface and the Management of Information

Information Visualisation Techniques

303 Conference Room

Chair(s): Jennie Gallimore, *Wright State University, USA.*

Towards a Metrics-based Framework for Assessing Comprehension of Software Visualization Systems
Harkirat Padda, Ahmed Seffah, Sudhir Mudur, *Concordia University, Canada.*

Facilitating Visual Queries in the TreeMap Using Distortion Techniques
Kang Shi, Pourang Irani, Pak Ching Li, *University of Manitoba, Canada.*

Integrating Sensor Data with System Information Via Interactive Visualizations
Jennie Gallimore, *Wright State University, USA*; Elizabeth Matthews, Ron Cagle, *McAulay Brown, USA*; Paul Faas, Jason Seyba, Vaughan Whited, *Wright Patterson Air Force Base, USA.*

Interactive Product Visualization for an In-store Sales Support System for the Clothing Retail
Karim Khakzar, Rainer Blum, *Fulda University of Applied Sciences, Germany*; Jörn Kohlhammer, Arnulph Fuhrmann, *Fraunhofer, Germany*; Angela Maier, Axel Maier, *Reutlingen University, Germany.*

The Study of Past Working History Visualization for Supporting Trial and Error Approach in Data Mining
Kunihiro Nishimura, Michitaka Hirose, *The University of Tokyo, Japan.*

A Visualization Solution for the Analysis and Identification of Workforce Expertise
Cheryl Kieliszewski, *IBM, USA*; Jie (Jessica) Cui, *IBM, China*; Amit Behal, Ana Lelescu, *IBM, USA*; Takeisha Hubbard, *Texas A & M University, USA.*

Integrating Data Quality Data into Decision-Making Process: an Information Visualization Approach
Bin Zhu, G. Shankar, Yu Cai, *Boston University, USA.*

Designing Information Systems

Exhibition Hall 2-G

Chair(s): Hiroshi Shimoda, *Kyoto University, Japan.*

Development of an Affective Interface for Promoting Employees' Work Motivation in a Routine Work
Hidenori Fujino, Hirotake Ishii, Hiroshi Shimoda, *Kyoto University, Japan.*

Folksonomy-Based Collaborative Tagging System for Classifying Visualized Information in Design Practice
Hyun-oh Jung, Minsik Sohn, Kun-pyo Lee, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

"Seeing is not believing but interpreting", Inducing Trust Through Institutional Symbolism: A Conceptual Framework for Online Trust Building in a Web Mediated Information Environment.
Emma Nuraihan Mior Ibrahim, Md Noor Nor Laila, Shafie Mehad, *Universiti Teknologi MARA, Malaysia.*

Aporia in the Maps of the Hypermedia Systems
Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy.*

Collaborative Scenario Building: The Case of an 'Advertainment' Portal
Natalie Pang, Graeme Johanson, *Monash University, Australia*; Sanxing Cao, Jianbo Liu, Xin Zhang, *Communication University of China, China.*

Expert Systems Evaluation Proposal
Paula Miranda, *Superior School of Tecnology, Portugal*; Pedro Isaias, *Portuguese Open University, Portugal*; Manuel Crisostomo, *University of Coimbra, Portugal.*

How Participation at Different Hierarchical Levels Can Have an Impact On The Design and Implementation of Health Information Systems at the Grass Root Level - A Case Study from India
Zubeeda Quraishy, *University of Oslo, India.*

Digital Libraries

Exhibition Hall 2-H

Chair(s): Marco Lazzari, *University of Bergamo, Italy.*

Involving Users in OPAC Interface Design: Perspective from a UK Study
Elahe Kani-Zabihi, Gheorghita Ghinea, *Brunel University, UK.*

Human-mediated Visual Ontology Alignment
Monika Lanzenberger, *Vienna University of Technology, Austria*; Jennifer Sampson, *Norwegian University of Science and Technology, Norway.*

OntoGen Semi-automatic Ontology Editor
Blaz Fortuna, Marko Grobelnik, Dunja Mladenic, *Institute Jozef Stefan, Slovenia.*

Context Modeling and Inference System for Heterogeneous Context Aware Service
Seungkeun Lee, *INRIA Rhone-Aples, France.*

A Framework for Text Processing and Supporting Access to Collections of Digitized Historical Newspapers
Robert Allen, Andrea Japzon, Palakorn Achananuparp, Ki Jung Lee, *Drexel University, USA.*

Towards Guidelines on Educational Podcasting Quality: Problems Arising from a Real World Experience
Marco Lazzari, Alberto Betella, *University of Bergamo, Italy.*

HCI

Learning Environments (II)

309 Conference Room

Chair(s): Kwangsu Cho, *University of Missouri at Columbia, USA.*

Suppressing Competition in a Computer-Supported Collaborative Learning System
Kwangsu Cho, Bosung Kim, *University of Missouri at Columbia, USA.*

Creating Computer Supported Collaborative Learning Activities with IMS LD
Dan Yu, XinMeng Chen, *Wuhan University, China.*

A Study of Learners' Perceptions of the Interactivity of Web-Based Instruction
Jui-ni Sun, Yu-chen Hsu, *Tsing Hua University, Taiwan China.*

The Effect of Tangible Pedagogical Agents on Children's Interest and Learning
Jun-hee Kim, Dea-hyun Jung, Haeng-suk Chae, Ji-young Hong, Kwang-hee Han, *Yonsei University, Korea.*

Mobile Game-Based Methodology for Science Learning
Jaime Sánchez, Alvaro Salinas, Mauricio Sáenz, *University of Chile, Chile.*

Language Processing in HCI

311-A Conference Room

Chair(s): Hans Uszkoreit, *DFKI GmbH, Germany.*

Minimal Parsing Key Concept Based Question Answering System
Sunil Kumar Kopparapu, Akhlesh Srivastava, *Tata Consultancy Services Limited, India*; P. V. S. Rao, *Tata Teleservices (Maharastra) Limited, India.*

Confidence Measure Based Incremental Adaptation for Online Language Identification
Shan Zhong, *Tsinghua University, China*; Yingna Chen, *National Tsinghua University, China*; Chunyi Zhu, Jia Liu, *Tsinghua University, China.*

Speaker Segmentation for Intelligent Responsive Space
Soonil Kwon, *Korea Institute of Science and Technology (KIST), Korea.*

A Spoken Dialogue System Based On Keyword Spotting Technology
Pengyuan Zhang, Qingwei Zhao, Yonghong Yan, *Chinese Academy of Sciences, China.*

Using Recurrent Fuzzy Neural Networks for Predicting Word Boundaries in a Phoneme Sequence in Persian Language
Mohammad Reza Feizi Derakhshi, Mohammad Reza Kangavari, *University of Science and Technology of Iran, Iran.*

Positional Mapping Multi-tap for Myanmar Language
Ye Kyaw Thu, Yoshiyori Urano, *Waseda University, Japan.*

Multi-word Expression Recognition Integrated with Extended Two-Level Finite State Transducer
Keunyong Lee, Ki-Soen Park, Yong-Seok Lee, *Chonbuk National University, Korea.*

Intelligence at the Interface

311-B Conference Room

Chair(s): Tae-Hyung Kim, *Hanyang University, Korea.*

Decision Theoretic Perspective on Optimizing Intelligent Help
Chulwoo Kim, Mark Lehto, *Purdue University, USA.*

A Learning Interface Agent for User Behavior Prediction
Gabriela Serban, Adriana Tarta, Grigoreta Sofia Moldovan, *Babes-Bolyai University, Romania.*

Dynamic Association Rules Mining to Improve Intermediation between User Multi-Channel Interactions and Interactive E-Services
Vincent Chevrin, *TRIGONE/LIFL, France*; Olivier Couturier, *Centre de Recherche en Informatique de Lens (CRIL), France.*

A Semiotic-based Framework for the Development of Tailorable Web Applications
Rodrigo Bonacin, *Cenpra - Ministério de Ciência e Tecnologia, Brazil*; M. Cecilia Baranauskas, Thiago Medeiros dos Santos, *University of Campinas, Brazil.*

The Perception of Artificial Intelligence as "Human" by Computer Users
Jurek Kirakowski, Patrick O'Donnell, Anthony Yiu, *University College Cork, Ireland.*

Three Way Relationship of Human Robot Interaction
Jung-Hoon Hwang, *Korea Advanced Institute of Science and Technology (KAIST), Korea*; KangWoo Lee, *SoongSil University, Korea*; Dong-Soo Kwon, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Human-Aided Cleaning Algorithm for Low-cost Robot Architecture
Seungyong Kim, Kiduck Kim, Tae-Hyung Kim, *Hanyang University, Korea.*

Evaluation: Methods and Tools (I)

311-C Conference Room

Chair(s): Jacob Buur, *University of Southern Denmark, Denmark.*

Evaluator of User's Actions (EUA) Using the Model of Abstract Representation DGAUI
Susana Gómez-Carnero, Javier Rodeiro Iglesias, *University of Vigo, Spain.*

Human Performance Model and Evaluation of PBUI
Naoki Urano, *SHARP Corporation, Japan*; Kazunari Morimoto, *Kyoto Institute of Technology, Japan.*

Evaluating in a Healthcare Setting: A Comparison between Concurrent and Retrospective Verbalisation
Janne Jensen, *Aalborg University, Denmark.*

Serial Hanging Out: Rapid Ethnographic Needs Assessment in Rural Settings
Jaspal Sandhu, *University of California, Berkeley, USA*; P. Altankhuyag, *Asian Development Bank, Ministry of Health, Mongolia*; D. Amarsaikhan, *Postgraduate Institute, Health Sciences University of Mongolia, Mongolia.*

The Role of Cognitive Styles in Groupware Acceptance
NorolHamiza Zamzuri, WanAdilah WanAdnan, *Universiti Teknologi MARA, Malaysia.*

Towards Remote Empirical Evaluation of Web Pages' Usability
Juan Miguel López, *University of the Basque Country, Spain*; Inmaculada Fajardo, *University of Granada, Spain*; Julio Abascal, *University of the Basque Country, Spain.*

Development of AHP Model for Telematics Haptic Interface Evaluation
Yong Gu Ji, Beom Suk Jin, Jae Seung Mun, Sang Min Ko, *Yonsei University, Korea.*

Parallel Sessions

HCI

Usability and User-Oriented Design Practice

Exhibition Hall 2-C

Chair(s): Enric Mor, *Universitat Oberta de Catalunya, Spain*.

Redesigning the Rationale for Design Rationale
Michael Atwood, John Horner, *Drexel University, USA*.

The Practices of Scenario Observation Approach in Defining Medical Tablet PC Applications
Chien-Yu Peng, Wei-Shin Kao, You-Zhao Liang, Wen-Ko Chiou, *Chang Gung University, Taiwan China*.

User Oriented Design to the Chinese Industries Scenario and Experience Innovation Design Approach for the Industrializing Countries in the Digital Technology Era
You-Zhao Liang, Ding-Hau Huang, Wen-Ko Chiou, *Chang Gung University, Taiwan China*.

A Game to Promote Understanding about UCD Methods and Process
Muriel Garreta-Domingo, Magí Almirall-Hill, Enric Mor, *Universitat Oberta de Catalunya, Spain*.

How to Make Tailored User Interface Guideline for Software Designers
Ilari Jounila, *University of Oulu, Finland*.

Aspects of Integrating User Centered Design into Software Engineering Processes
Karsten Nebe, *University of Paderborn, Germany*; Dirk Zimmermann, *T-Mobile Deutschland GmbH, Germany*.

Engineering Psychology and Cognitive Ergonomics

EPCE

Cognitive Ergonomics in Aviation and Automotive

Exhibition Hall 2-D

Chair(s): Alastair Gale, *Loughborough University, UK*.

ATC CTA: Cognitive Task Analysis of Future Air Traffic Control Concepts
Brian Hilburn, *CHPR, Netherlands*.

Analyzing Constraints to Support Computational Modeling of Air Traffic Controllers
Todd Callantine, *NASA Ames Research Center, USA*.

Searching for Possible Threat Items to Safe Air Travel: Human Error and Training
Xi Liu, Alastair Gale, *Loughborough University, UK*.

Empirical Evidence for a Model of Operator Reaction to Alerting Systems
Steven Landry, Anil Divvela, *Purdue University, USA*.

Evaluation of the Effects of Visual Field on Road Sign Recognition
Bor-Shong Liu, *St. John's University, Taiwan China*; Chih-Hung Hsu, *Hsiuping Institute of Technology, China*; Hsien-Yu Tseng, *St. John's University, China*; Tung-Chung Chia, *Ling Tung University, Taiwan China*.

Universal Access in Human-Computer Interaction

UAHCI

Multi-modal Interactions for Ubiquitous Environment

201-B Conference Room

Chair(s): Yong-Guk Kim, *Sejong University, Korea*.

Continuous Recognition of Human Facial Expressions using Active Appearance Model
Kyoung-Sic Cho, Yong-Guk Kim, *Sejong University, Korea*.

3D Model Based Face Recognition by Face Representation Using PVM and Pose Approximation
Yang-Bok Lee, Taehwa Hong, Hyeon-Joon Moon, Yong-Guk Kim, *Sejong University, Korea*.

Robust Extraction of Moving Objects based on Hue and Hue Gradient
Yoo-Joo Choi, Jea-Sung Lee, *Seoul University of Venture and Information, Korea*; We-Duke Cho, *Ajou University, Korea*.

An Ambient Display for the Elderly
Yeo-Jin Yoon, Han-Sol Ryu, Ji-Man Lee, *Sejong University, Korea*; Soo-Jun Park, *Electronics and Telecommunications Research Institute, Korea*; Seong-Joon Yoo, Soo-Mi Choi, *Sejong University, Korea*.

Combining Pointing Gestures with Video Avatars for Remote Collaboration
Seon-Min Rhee, Myoung-Hee Kim, *Ewha Womans University, Korea*.

Human Interface for the Robot Control in Networked and Multi-Sensored Environment
Hyun-Gu Lee, *Korea Unviersity, Korea*; Yong-Guk Kim, *Sejong University, Korea*; Ho-Dong Lee, Joo-Hyung Kim, Gwi-Tae Park, *Korea University, Korea*.

Multi-modal Authentication for Ubiquitous Computing Environments
Taekyoung Kwon, Sang-ho Park, Sooyeon Shin, *Sejong University, Korea*.

Authentication and Access Control for Human Computer Interaction

201-C Conference Room

Chair(s): Hyeon-Joon Moon, *Sejong University, Korea*.

Biometric Digital Key Mechanisms for Telebiometric Authentication based on Biometric Certificate
Hyung-Woo Lee, *Hanshin University, Korea*; Taekyoung Kwon, *Sejong University, Korea*.

Knowledge-based User Authentication with Various Biometrics
Taekyoung Kwon, Hyeon-Joon Moon, *Sejong University, Korea*.

Fuzzy Face Vault: How to Implement Fuzzy Vault with Weighted Features
DaeHun Nyang, *InHa University, Korea*; KyungHee Lee, *The University of Suwon, Korea*.

Security Analysis on the Authentication Mechanisms of Korean Popular Messengers
DongHwi Shin, Younsung Choi, Sangjoon Park, Seungjoo Kim, Dongho Won, *SungKyunKwan University, Korea*.

A Practical Inter-Sensor Broadcast Authentication Scheme
Joon Wan Kim, *Center for Information Security Technologies(CIST), Korea*; Yong Ho Kim, Hwa-seong Lee, Dong Hoon Lee, *Korea University, Korea*.

Biometric Driver Authentication based on 3D Face Recognition for Telematics Applications
Hyeon-Joon Moon, *Sejong University, Korea*; Kisung Lee, *Korea University, Korea*.

Biometric Person Authentication for Access Control Scenario Based on Face Recognition
Hyeon-Joon Moon, Taekyoung Kwon, *Sejong University, Korea*.

Universal Access in Intelligent Environments

305-A Conference Room

Chair(s): Joëlle Coutaz, *Université Joseph Fourier, France*.

Case Study of Human Computer Interaction Based on RFID and Context-Awareness in Ubiquitous Computing Environments
Ting Zhang, Yuanxin Ouyang, Yang He, Zhang Xiong, Zhenyong Chen, *Beihang University, China*.

Usable Multi-Display Environments: Concept and Evaluation
Thomas Heider, Thomas Kirste, *University of Rostock, Germany*.

Adaptive Context Aware Attentive Interaction in Large Tiled Display
Chee-Onn Wong, Dongwuk Kyoung, Keechul Jung, *Soongsil University, Korea*.

Privacy and Interruptions in Team Awareness Systems
Carsten Roecker, *UCSD, Germany*; Carsten Magerkurth, *Fraunhofer, Germany*.

Intelligent Privacy Support for Large Public Displays
Carsten Roecker, *UCSD, Germany*; Steve Hinske, *ETH Zurich, Switzerland*; Carsten Magerkurth, *Fraunhofer, Germany*.

A Proposal for Distance Information Displaying Method of a Walking Assistive Device for the Blind
Chikamune Wada, Miki Asonuma, *Kyushu Institute of Technology, Japan*.

An Interactive Wearable Assistive Device for Individuals Who Are Blind for Color Perception
Troy McDaniel, *Arizona State University, USA*; Kanav Kahol, *SimET Center/Arizona State University, USA*; Sethuraman Panchanathan, *Arizona State University, USA*.

Deaf Users & Sign Language

305-B Conference Room

Chair(s): Eleni Efthimiou, *Institute for Language and Speech Processing, Greece*.

Impact of Sign Language Movie and Text Layout on the Readout Time
Shin-ichiro Eitoku, Shunichi Yonemura, Kenichiro Shimokura, *Nippon Telegraph and Telephone Corp., Japan*.

GSLC: Creation and Annotation of a Greek Sign Language Corpus for HCI
Eleni Efthimiou, Stavroula - Evita Fotinea, *Institute for Language and Speech Processing, Greece*.

Urgent Information Presentation Using Listed Sign Language.
Shunichi Yonemura, Shin-ichiro Eitoku, Kenichiro Shimokura, *Nippon Telegraph and Telephone Corp., Japan*.

Three Dimensional Articulator Model for Speech Acquisition by Children with Hearing Loss
Arumugam Rathinavelu, Hemalatha Thiagarajan, Anupriya Rajkumar, *College of Engineering and Technology, India*.

Integration of Caption Editing System with Presentation Software
Kohtaroh Miyamoto, Kenichi Arakawa, Masakazu Takizawa, *IBM Japan, Japan*.

I See Your Voice: The Development of Image Caption Generating Software and On-line User Community for the Auditory Disabled
Kyungho Lim, Joonsung Yoon, *Soongsil University, Korea*.

Ageing and HCI

305-C Conference Room

Chair(s): Jesus Favela, *CICESE Research Center, Mexico*.

Older People as Information Seekers: Exploratory Studies about their Needs and Strategies
Jerome Dinet, Eric Brangier, Gabriel Michel, Robin Vivian, Sophie Battisti, Remi Doller, *University Paul Verlaine at Metz, France*.

How can we make IT devices easy for older adults?: Effects of Repetitive Basic Operation Training and Help-Guidance on Learning of Electronic Program Guide system.
Noriyo Hara, Toshiya Naka, *Matsushita Electric Industrial Co., Ltd., Japan*; Etsuko Harada, *Hosei University, Japan*.

The Use of Virtual Reality to Train Older Adults in Processing of Spatial Information
Dyi-Yih Michael Lin, Po-Yuan Yang, *I-Shou University, Taiwan China*.

Ergonomic Design of Computerised Devices for Elderly Persons - The Challenge of Matching Antagonistic Requirements
Matthias Goebel, *Rhodes University, South Africa*.

Contextual Research on Elderly Users' Needs for Developing Universal Design Mobile Phone
Hyunjeong Kim, *KyunSung University, Korea*; Jeongyun Heo, *LG Electronics, Korea*; Jungwha Shim, Miyoung Kim, Soojung Park, *KyungSung University, Korea*; SangHyun Park, *LG Electronics, Korea*.

Training the Elderly in the Use of Electronic Devices
Carmen Bruder, Lucienne Blessing, *Technical University Berlin, Germany*; Hartmut Wandke, *Humboldt-University Berlin, Germany*.

Non Visual Interaction and Brain Interfaces

Exhibition Hall 2-A

Chair(s): Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

Handheld Haptic Display with Braille I/O
Tomohiro Amemiya, *Nippon Telegraph and Telephone Corp., Japan*.

Guidelines for the Development and Improvement of Universal Access Systems for Blind Students
David Arnim, Benito Piuzzi, Chang Nam, *University of Arkansas, USA*; Donghun Chung, *Kwangwoon University, Korea*.

A Haptic Based Interface to Ease Visually Impaired Pupils' Inclusion in Geometry Lessons
Cédric Gouy-Pailler, Sophie Zijp-Rouzier, Sylvie Vidal, Denis Chene, *France Télécom, France*.

Winsight: Towards Completely Automatic Backtranslation of Nemeth Code
Deepa Gopal, *Logical Software Solutions, USA*; Qian Wang, *Logical Software Solutions / University of Texas at Dallas, USA*; Gopal Gupta, *University of Texas at Dallas, USA*; Siddharth Chitnis, *Logical Software Solutions, USA*; Haifeng Guo, *University of Nebraska at Omaha, USA*; Arthur Karshmer, *University of San Francisco, CA, USA*.

Comparison between Event Related Potentials obtained by Syllable Recall Tasks and by Associative Recall Tasks
Mariko Funada, Miki Shibukawa, *Hakuoh University, Japan*; Tadashi Funada, *Nishiikebukuro University, Japan*; Satoki Ninomija, *Hakuoh University, Japan*; Yoshihide Igarashi, *Rikkyo University Nishiikebukuro, Japan*.

A Note on Brain Actuated Spelling with the Berlin Brain-Computer Interface
Benjamin Blankertz, *Fraunhofer, Germany*; Matthias Krauledat, *Technical University Berlin, Germany*; Guido Dornhege, *Fraunhofer, Germany*; John Williamson, Roderick Murray-Smith, *University of Glasgow, UK*; Klaus-Robert Müller, *Fraunhofer, Germany*.

Low-Cost Portable Text Recognition and Speech Synthesis with Generic Laptop Computer, Digital Camera and Software
Lauri Lahti, Jaakko Kurhila, *University of Helsinki, Finland*.

Parallel Sessions

UAHCI

Applications for Future Virtual Reality Workspaces

Exhibition Hall 2-B

Chair(s): Angelos Amditis, *Institute of Communication and Computer Systems, Greece*; Alexandros Mourouzis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

A Portal-Based Tool for Developing, Delivering and Working with Guidelines
Nikolaos Partarakis, Alexandros Mourouzis, Constantina Doulgeraki, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

VR, HF and Rule-Based Technologies Applied and Combined for Improving Industrial Safety
Konstantinos Loupos, *Institute of Communication and Computer Systems (ICCS), Greece*; Luca Vezzadini, *Virtual Reality & Multi-Media Park, Italy*; Wytze Hoekstra, *TNO Defense,Security and Safety, Netherlands*; Waleed Salem, *Fraunhofer, Germany*; Paul Chung, *Loughborough University, UK*; Matthaios Bimpas, *Institute of Communication and Computer Systems (ICCS), Greece.*

VRfx – A User Friendly Tool for the Creation of Photorealistic Virtual Environments
Matthias Bues, Guenter Wenzel, Manfred Dangelmaier, Roland Blach, *Fraunhofer, Germany.*

The Use of VR in Supporting Aircraft Maintenance Performance - a Perspective from the HILAS Project
Torsten Schulz, *Fraunhofer, Germany*; Marie Ward, *Trinity College, Dublin, Ireland.*

From the Stringed Haptic Workbench to the Simulation of Putty Application for the Automotive Industry
Sabine Coquillart, *INRIA, France.*

Prototype Evaluation and User-Needs Analysis in the Early Design of Emerging Technologies
Margarita Anastassova, *CREATE-NET, Italy*; Christine Mégard, *French Atomic Energy Commission, France*; Jean-Marie Burkhardt, *René Descartes University - Paris V, France.*

DEVAL – A Device Abstraction Layer for VR/AR
Jan Ohlenburg, Wolfgang Broll, Irma Lindt, *Fraunhofer, Germany.*

Virtual Reality

VR

Scene Rendering

307 Conference Room

Chair(s): Gheorghita Ghinea, *Brunel University, UK.*

Non-commercial Object-base Scene Description
Stephen Gulliver, Gheorghita Ghinea, Kulveer Kaur, *Brunel University, UK.*

Scene Depth Reconstruction on the GPU: A Post Processing Technique for Layered Fog
Tianshu Zhou, Jim Chen, Peter Smith, *George Mason University, USA.*

Registration Based on Online Estimation of Trifocal Tensors Using Point and Line Correspondences
Tao Guan, Lijun Li, Cheng Wang, *HuaZhong University of Science & Technology, China.*

Region-Based Artificial Terrain Texture Generation
Qicheng Li, *Peking University, China*; Chen Zhao, Qiang Zhang, *IBM, China*; Weining Yue, Guoping Wang, *Peking University, China.*

A Realistic Illumination Model for Stained Glass Rendering
Jung-A Kim, Shihua Ming, Dongho Kim, *Soongsil University, Korea.*

Parallel Search Algorithm for Geometric Constraints Solving
Hua Yuan, Wenhui Li, *Jilin University, China*; Kong Zhao, *Suzhou Top Institute of Information Technology, China*; Rongqin Yi, *Jilin University, China.*

Acceleration of Terrain Rendering using Cube Mesh
Dong-Soo Kang, Byeong-Seok Shin, *Inha University, Korea.*

Usability and Internationalization

UI

Customizing the User Experience for the China Market: Cross Culture Usability Methods & Practices

201-A Conference Room

Chair(s): Chen Zhao, *IBM, China.*

The Cultural Usability (CULTUSAB) Project: Studies of Cultural Models in Psychological Usability Evaluation Methods
Torkil Clemmensen, *Copenhagen Business School, Denmark*; Thomas Plocher, *Honeywell, USA.*

An Axiomatic Method for Cross Cultural Usability Analysis
Sheau-Farn Max Liang, *Taipei University of Technology, Taiwan China.*

A User Experience Study on C2C E-commerce Localization in China
Dan Guo, Zhengjie Liu, Zhiwei Guo, Kai Qian, *Dalian Maritime University, China.*

Activities for Usability in Lenovo China
Baihong Chen, Rong Yang, *Lenovo Corporate Research China, China.*

Do We Talk Differently: Cross Culture Study on Conference Call
Xingrong Xiao, Chen Zhao, Shaoke Zhang, *IBM, China.*

A Comparative Study of Mid-market IT Customers in China and the U.S.
Yi Ren Yuan, *IBM China, China*; Thomas Hogaboam, *IBM Rochester, USA.*

Online Analysis of Hierarchical Events in Meetings
Xiang Zhang, Guangyou Xu, *Tsinghua University, China*; Xiao-Ling Xiao, *Wuhan University of Technology, China*; Linmi Tao, *Tsinghua University, China.*

An Empirical Study on the Smallest Comfortable Button/ Icon Size on Touch Screen
Xianghong Sun, *Chinese Academy of Sciences, China*; Thomas Plocher, *Honeywell, USA*; Weina Qu, *Chinese Academy of Sciences, China.*

Usability and Culture (I)

308 Conference Room

Chair(s): Emilie Gould, *Acadia University, Canada.*

Investigating the Differences in Web Browsing Behaviour of Chinese and European Users Using Mouse Tracking
Lee Griffiths, Zhongming Chen, *University of Salford, UK.*

Using Webzine to Create Effective Communications Between China and the West.
Christina Li, Sean Liu, Eleanor Lisney, *uiGarden.net, UK.*

International Remote Usability Evaluation: The Bliss of Not Being There
Mika Nieminen, Petri Mannonen, Johanna Viitanen, *Helsinki University of Technology, Finland.*

Systems Development Methods and Usability in Norway: An Industrial Perspective
Bendik Bygstad, *Norwegian School of Information Technology, Norway*; Gheorghita Ghinea, *Brunel University, UK*; Eivind Brevik, *Norwegian School of Information Technology, Norway.*

Assumptions Considered Harmful - The Need to Redefine Usability
Heike Winschiers, Jens Fendler, *Polytechnic of Namibia, Namibia.*

Usability of Multilingual Communication Tools
Rieko Inaba, *National Institute of Information and Communications Technology, Japan.*

Evaluation and Usability of Back Translation for Intercultural Communication
Tomohiro Shigenobu, *National Institute of Information and Communications Technology, Japan.*

DHM

Future DHM

301 Conference Room

Chair(s): Jingzhou Yang, *The University of Iowa, USA*; Vincent Duffy, *Purdue University, USA*.

Development of the Virtual-Human SantosTM
Jingzhou Yang, Karim Abdel-Malek, Joo H. Kim, Timothy Marler, Steve Beck, Colby Swan, Laura Frey-Law, Anith Mathai, Chris Murphy, Salam Rahmatalla, Jasbir Arora, *The University of Iowa, USA*.

Role of Humans in Complexity of a System-of-Systems
Dan DeLaurentis, *Purdue University, USA*.

Digital Human Modeling for Product Lifecycle Management
H. Onan Demirel, Vincent Duffy, *Purdue University, USA*.

Validation of Predicted Posture for the Virtual Human Santos
Jingzhou Yang, Salam Rahmatalla, Timothy Marler, Karim Abdel-Malek, *The University of Iowa, USA*; Chad Harrison, *Honda R&D North Americas, USA*.

Bridging the Gap: Exploring Interactions Between Digital Human Models and Cognitive Models
Robert Feyen, *University of Minnesota-Duluth, USA*.

Shape Analysis of Human Brain with Cognitive Disorders
Tianzi Jiang, Feng Shi, Wanlin Zhu, *Chinese Academy of Sciences, China*; Shuyu Li, *Beihang University, China*; Xiaobo Li, *Chinese Academy of Sciences, China*.

Clinical Patient Safety — Achieving High Reliability in a Complex System
Kathryn Rapala, Julie Cowan Novak, *Purdue University, USA*.

Parallel Sessions

Friday 08:00 - 10:00

EHAWC

Ergonomics and Health Aspects of Work with Computers

Ecological Ergonomics in Product Design – with a Particular Emphasis on Comfort in Office Seating

305-A Conference Room

Chair(s): Marvin Dainoff, *Miami University, USA.*

Forget about Aesthetics in Chair Design: Ergonomics Should Provide the Basis for Comfort
Marvin Dainoff, Leonard Mark, Lin Ye, Milena Petrovic, *Miami University, USA.*

Guerilla Ergonomics: Perceiving the Affordances for Workplace Design
Lin Ye, Milena Petrovic, Marvin Dainoff, Leonard Mark, *Miami University, USA.*

Constraints on Demarcating Left and Right Areas in Designing of a Performance-Based Workstation
Hyeg Joo Choi, *Air Force Research Laboratory (ORISE), USA*; Leonard Mark, Marvin Dainoff, Lin Ye, *Miami University, USA.*

Performance Monitoring, Supervisory Support, and Job Characteristics and their Impact on Employee Well-Being amongst Four Samples of Call Centre Agents in South Africa
James Fisher, Karen Milner, Andrew Thatcher, *University of the Witwatersrand, South Africa.*

Work-Related Musculoskeletal Disorders (WRMSD) in Parliamentary Shorthand Typists – A Case Study on Work Organization and Health at Work
Jenny Kose, *Secretaria Municipal da Saude/PMSP, Brazil*; Ana Isabel Paraguay, *University of Sao Paulo, Brazil.*

Call Centers in the Domain of Telecommunications: Ergonomic Issues for Well-Being Improvement
Alessandra Re, Enrica Fubini, *University of Torino, Italy.*

Splint Effect on the Range of Wrist Motion and Typing Performance
Yuh-Chuan Shih, Bi-Fen Tsai, *Defense University, Taiwan China.*

HIMI

Human Interface and the Management of Information

Knowledge Sharing and Collaboration

305-C Conference Room

Chair(s): Alvaro Taveira, *University of Wisconsin-Whitewater, USA.*

User Interface for Knowledge Sharing Using Knowledge Gardening Metaphor
Afdallyna Harun, Md Noor Nor Laila, *Universiti Teknologi MARA, Malaysia.*

Effect of Providing a Web-based Collaboration Medium for Remote Customer Troubleshooting Tasks
Chulwoo Kim, Pilsung Choe, Mark Lehto, Jan Allebach, *Purdue University, USA.*

A Theoretical Framework of Co-Purposing in Systems Design
Modestos Stavrakis, Nikos Viorres, Panayiotis Koutsabasis, John Darzentas, *University of the Aegean, Greece.*

The Karst Collaborative Workspace for Analyzing and Annotating Scientific Datasets
Linn Collins, *Los Alamos National Laboratory Research Library, USA*; Diana Northup, *University of New Mexico, USA*; Mark Martinez, *Los Alamos National Laboratory Research Library, USA*; Johannes Van Reenen, *University of New Mexico, USA*; M. Alex Baker, *Los Alamos National Laboratory Research Library, USA*; Christy Crowley, *University of New Mexico, USA*; James Powell, *Los Alamos National Laboratory Research Library, USA*; Brian Freels-Stendel, *The University of New Mexico, USA*; Susan Heckethorn, *Los Alamos National Laboratory Research Library, USA*; Jong Chun Park, *University of New Mexico, USA.*

Adaptive Information Providing System for R&D Meeting Environments
Sang Keun Rhee, Jihye Lee, Myon-Woong Park, *Korea Institute of Science and Technology (KIST), Korea.*

Experimental Comparison of Multimodal Meeting Browsers
Wilfried Post, Erwin Elling, Anita Cremers, Wessel Kraaij, *TNO Human Factors, Netherlands.*

Natural Language Based Heavy Personal Assistant Architecture for Information Retrieval and Presentation
Algirdas Laukaitis, Olegas Vasilecas, *Vilnius Gediminas Technical University, Lithuania.*

Novel Devices and Techniques for Interacting with Information

Exhibition Hall 2-C

Chair(s): Tonglin Zhu, *South China Agricultural University, China.*

ActiveScrollbar: A Scrollbar with Direct Scale Ratio Control
Hongzhi Song, Yu Qi, Lei Xiao, Tonglin Zhu, *South China Agricultural University, China*; Edwin P. Curran, *University of Ulster, UK.*

A Japanese Text Input Interface using On-line Writing-box-free Handwriting Recognition and Kana-to-Kanji Conversion
Takeshi Sakurada, Yoichi Hagiwara, Hideto Oda, Masaki Nakagawa, *Tokyo University of Agriculture and Technology, Japan.*

The Use of Dynamic Display to Improve Reading Comprehension for the Small Screen of a Wrist Watch
Yu-Hung Chien, Chien-Hsiung Chen, *Taiwan University of Science and Technology, Taiwan China.*

A Study on a Stereoscopic Display System Using a Rotary Disk Type Beam Shutter
Kwang-Hyung Lee, Tae-Jeong Jang, *Kangwon National University, Korea.*

Disposition of Information Entities and Adequate Level of Information Presentation in an In-car Augmented Reality Navigation System
Kyung (Ken) Park, Il Haeng Cho, Gi Beom Hong, Tek-Jin Nam, Jinyung Park, *Korea Advanced Institute of Science and Technology (KAIST), Korea*; Seong Ik Cho, In-hak Joo, *Electronics and Telecommunication Research Institute (ETRI), Korea.*

A Pin-Type Vibrotactile Display and Its Applications
Jongwon Back, Dae-Seong Choi, Ho-joong Yong, Tae-Jeong Jang, *Kangwon National University, Korea.*

Considerations on Efficient Touch Interfaces – How Display Size Influences the Performance in an Applied Pointing Task
Michael Oehl, *University of Lueneburg, Germany*; Christine Sutter, Martina Ziefle, *RWTH Aachen University, Germany.*

HCI

Human-Computer Interaction

Usability Issues in Business Application

201-A Conference Room

Chair(s): Yong Gu Ji, *Yonsei University, Korea*; Myung Hwan Yun, *Seoul National University, Korea.*

Measuring Service Quality of Online Bookstores with WebQual
Heejun Park, *Yonsei University, Korea*; Seung Baek, *Hanyang University, Korea.*

Design and Implementation of a Personalized Business Activity Monitoring System
Hoontae Kim, *Daejin University, Korea*; Yong-Han Lee, *Dongguk University, Korea*; Hongsoon Yim, *HandySoft Corp., Korea*; Nam Wook Cho, *Seoul National University of Technology, Korea.*

Application of a Universal Design Evaluation Index to Mobile Phones
Miyeon Kim, *Samsung Electronics, Korea*; Eui S. Jung, *Korea University, Korea*; Sungjoon Park, *Namseoul University, Korea*; Jongyong Nam, *Korea University, Korea*; Jaeho Choi, *Daejin University, Korea.*

How A Human-Centered Approach Impacts Software Development
Xavier Ferre, Nelson Medinilla, *Universidad Politecnica de Madrid, Spain.*

A User-Oriented Assessment of Enterprise Information Systems
Eun Jung Yu, Youngjoon Choi, Choon Seong Leem, *Yonsei University, Korea.*

A New Framework of Measuring the Business Values of Software
In Ki Kim, *Seoul National University, Korea*; Beom Suk Jin, *Yonsei University, Korea*; Seungyup Baek, *Pennsylvania State University, Korea*; Andrew Kim, *Ubiquitous Computing Laboratory, Korea*; Yong Gu Ji, *Yonsei University, Korea*; Myung Hwan Yun, *Seoul National University, Korea.*

Design of Change-Absorbing System Architecture for the Design of Robust Products and Services
Sanghyun Oh, Beomjin Park, Shinae Park, Yoo-Suk Hong, *Seoul National University, Korea.*

HCI in MIS (III)

301 Conference Room

Chair(s): Ping Zhang, *Syracuse University, USA*; Fiona Fui-Hoon Nah, *University of Nebraska-Lincoln, USA*; Scott McCoy, *The Mason School of Business, USA*.

Skills Matter: A Tale of the Anxious Online Shopper
Yi Maggie Guo, Barbara Klein, *University of Michigan-Dearborn, USA*.

What Makes Them So Special?: Identifying Attributes of Highly Competent Information System Users
Brenda Eschenbrenner, Fiona Fui-Hoon Nah, *University of Nebraska-Lincoln, USA*.

An Examination of Online Product Comparison Service: Fit between Product Type and Disposition Style
Fiona Fui-Hoon Nah, *University of Nebraska-Lincoln, USA*; Weiyin Hong, *University of Nevada, Las Vegas, USA*; Liqiang Chen, Hong-hee Lee, *University of Nebraska-Lincoln, USA*.

Group Collaboration and Learning Though Online Assessments: Comparison of Collaborative and Participatory Online Exams
Jia Shen, *New York Institute of Technology, USA*; Starr Roxanne Hiltz, Michael Bieber, *New Jersey Institute of Technology, USA*.

Extreme Programming in Action: A Longitudinal Case Study
Peter Tingling, *Simon Fraser University, Canada*; Akbar Saeed, *The University of Western Ontario, Canada*.

Why It Is Difficult to Use a Simple Device: An Analysis of a Room Thermostat
Sami Karjalainen, *VTT Technical Research Centre of Finland, Finland*.

A Survey of Factors Influencing People's Perception of Information Security
Ding-Long Huang, Pei-Luen Patrick Rau, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

Tangible User Interfaces

309 Conference Room

Chair(s): Jiro Tanaka, *University of Tsukuba, Japan*.

VortexBath: Study of Tangible Interaction with Water in Bathroom for Accessing and Playing Media Files
Jun-ichiro Watanabe, *Hitachi Ltd., Japan*.

Evaluation of Tangible User Interfaces (TUIs) for and with Children – Methods and Challenges
Diana Yifan Xu, Janet Read, Emanuela Mazzone, *University of Central Lancashire, UK*; Stuart MacFarlane, *Independent Consultant, UK*; Martin Brown, *University of Central Lancashire, UK*.

Tangible Interaction based on Personal Objects for Collecting and Sharing Travel Experiences
Elena Mugellini, *University of Applied Sciences of Western Switzerland, Switzerland*; Elisa Rubegni, *University of Siena, Italy*; Omar Abou Khaled, *University of Applied Sciences of Western Switzerland, Switzerland*.

An Evaluation Framework for the Design Concepts of Tangible Interface on New Collaborative Work Support System
Youngbo Suh, Cheol Lee, Joobong Song, Minjoo Jung, Myung Hwan Yun, *Seoul National University, Korea*.

Coupling the Digital and the Physical in Therapeutic Environments
Patrizia Marti, Leonardo Giusti, *University of Siena, Italy*.

Display Buttons: A Marriage of GUI and PUI
Stanley Chung, Jung-Hyun Shim, Changsu Kim, *Samsung Advanced Institute of Technology, Korea*.

Stylus Enhancement to Enrich Interaction with Computers
Yu Suzuki, Kazuo Misue, Jiro Tanaka, *University of Tsukuba, Japan*.

Pen-based Interaction and Sketching

311-A Conference Room

Chair(s): Ding-Bang Luh, *Cheng Kung University, Taiwan China*.

Freehand Sketching Interfaces: Early Processing for Sketch Recognition
Shu-xia Wang, Man-tun Gao, Le-hua Qi, *Northwestern Polytechnical University, China*.

ParSketch: a Sketch-based Interface for a 2D Parametric Geometry Editor
Ferran Naya, Manuel Contero, *Polytechnic University of Valencia, Spain*; Nuria Aleixos, Pedro Company, *Universitat Jaume I, Spain*.

A 3D Sketching Interacting Tool for Physical Simulation Based on Web
Ziyi Zheng, Lingyun Sun, Shou-qian Sun, *Zhejiang University, China*.

Pen-Based User Interface Based on Handwriting Force Information
ZhongCheng Wu, *Chinese Academy of Sciences, China*; Li-ping Zhang, *Institute of Intelligent Machines, CAS, China*; Fei Shen, *Chinese Academy of Sciences, China*.

Design of a Pen-Based Electric Diagram Editor Based on Context-Driven Constraint Multiset Grammars
Sébastien Macé, Eric Anquetil, *IRISA - INSA, France*.

Online Chinese Characters Recognition Based On Force Information by HMM
Mozi Zhu, Fei Shen, ZhongCheng Wu, *Chinese Academy of Sciences, China*.

The Design of a Computer Mouse Providing Three Degrees of Freedom
Daniel Fallman, Anneli Mikaelsson, Bjorn Yttergren, *Umeå University, Sweden*.

Eye Tracking

311-B Conference Room

Chair(s): Gisela Susanne Bahr, *Florida Institute of Technology, USA*.

Robust Gaze Tracking Method for Stereoscopic Virtual Reality System
Eui Chul Lee, Kang Ryoung Park, Min Cheol Whang, *Sangmyung University, Korea*; Junseok Park, *Electronics and Telecommunication Research Institute (ETRI), Korea*.

Kalman Filtering in the Design of Eye-Gaze-Guided Computer Interfaces
Oleg Komogortsev, Javed Khan, *Kent State University, USA*.

How Do Adults Solve Digital Tangram Problems? Analyzing Cognitive Strategies through Eye Tracking Approach
Bahar Baran, Berrin Dogusoy, Kursat Cagiltay, *Middle East Technical University, Turkey*.

Tracing Users' Behaviors in a Multimodal Instructional Material: An Eye-Tracking Study
Esra Yecan, Evren Sumuer, Bahar Baran, Kursat Cagiltay, *Middle East Technical University, Turkey*.

Evaluating Eye Tracking with ISO 9241 - Part 9
Xuan Zhang, I. Scott MacKenzie, *York University, Canada*.

Visual Foraging of Highlighted Text: An Eye-Tracking Study
Ed Chi, *Palo Alto Research Center, USA*; Michelle Gumbrecht, *Stanford University, USA*; Lichan Hong, *Palo Alto Research Center, USA*.

Parallel Sessions

HCI

User Interface Development Issues

311-C Conference Room

Chair(s): Ahmed Seffah, *Concordia University, Canada.*

A Survey on Transformation Tools for Model-based User Interface Development
Robbie Schaefer, *Paderborn University, Germany.*

Capturing User Interface Events with Aspects
Yonglei Tao, *Grand Valley State University, USA.*

Model-Driven Architecture for Web Applications
Mohamed Taleb, Ahmed Seffah, *Concordia University, Canada*; Alain Abran, *École de Technologie Supérieure (ÉTS), Canada.*

Formal Validation of Java/Swing User Interfaces with the Event B Method
Alexandre Cortier, Bruno D'Ausbourg, *Centre d'Etudes et de Recherches de Toulouse - ONERA, France*; Yamine Ait Ameur, *LISI/ ENSMA, France.*

An Interactive Evolutionary Design System with Feature Extraction
Xu Jiang, *Zhejiang University, China*; Sun Shouqian, *Zhejiang University / Hubei University of Technology, China*; Tan Zhengyu, Shi Fuqian, *Zhejiang University, China.*

Out of Box Experience Issues of Free and Open Source Software
Mehmet Göktürk, *Gebze Institute of Technology, Turkey*; Görkem Çetin, *TUBITAK - UEKAE, Turkey.*

Understanding Users

Exhibition Hall 2-A

Chair(s): You-Zhao Liang, *Chang Gung University, Taiwan China.*

Studying Utility of Personal Usage-History: A Software Tool for Enabling Empirical Research
Kimmo Wideroos, Samuli Pekkola, *University of Jyväskylä, Finland.*

User Acceptance of Digital Tourist Guides. Lessons Learnt from Two Field Studies.
Bente Evjemo, Sigmund Akselsen, Anders Schürmann, *Telenor, Norway.*

The Practices of Scenario Study to Home Scenario Control
Yung-Hsing Hu, Yuan-Ching Huang, You-Zhao Liang, Wen-Ko Chiou, *Chang Gung University, Taiwan China.*

Enable the Organization for UCD through Specialist and Process Counseling
Natalie Woletz, *SirValUse Consulting GmbH, Germany*; Susanne Laumann, *Siemens, Germany.*

Reminders, Alerts and Pop-Ups: The Cost of Computer-Initiated Interruptions
Helen Hodgetts, Dylan Jones, *Cardiff University, UK.*

The Balancing Act between Computer Security and Convenience
Mayuresh Ektare, Yanxia Yang, *Trend Micro, Inc., USA.*

EPCE

Engineering Psychology and Cognitive Ergonomics

Cognitive Issues in User Interface Design (III)

Exhibition Hall 2-B

Chair(s): Didier Fass, *ICN Business school / INRIA-LORIA, France.*

Investigating the Way National Grid Controllers Visualize the Electricity Transmission Grid Using a Neuro-linguistic Programming (NLP) Approach
Panagiotis Lazanas, *University of Johannesburg, South Africa.*

A Characteristic of a Navigator's Response to Artificial Ship's Movement by Picture and Motion Platform
Koji Murai, *Kobe University, Japan*; Tadatsugi Okazaki, *National Maritime Research Institute, Japan*; Yuji Hayashi, *Kobe University, Japan.*

Experimental Thermal/Moisture Mapping of Industrial Safety Helmets
Zhongwei Guan, Rahman Dullah, Huanlin Zhou, *University of Liverpool, UK.*

The Effects of Animation Location and Timing on Visual Search Performance and Memory
Songmei Han, *State University of New York at Oswego, USA.*

Method to Select the Most Suitable Software Tool for the Development of an HMI Virtual Prototype
Luca Minin, Roberto Montanari, Stefano Marzani, Francesco Tesauri, Luca Canovi, *University of Modena and Reggio Emilia, Italy.*

Cognitive Model Data Analysis for the Evaluation of Human Computer Interaction
Jeronimo Dzaack, *Technische Universität Berlin, Germany*; Leon Urbas, *Technische Universität Dresden, Germany.*

UAHCI

Universal Access in Human-Computer Interaction

FUITEL: Future Interfaces in Technology Enhanced Learning (II)

201-C Conference Room

Chair(s): Andreas Holzinger, *Medical University Graz, Austria.*

Modeling Content and Expression of Learning Objects in Multimodal Learning Management Systems
Giorgio Brajnik, *University of Udine, Italy.*

Immersive Digital Games: The Interfaces for Next-Generation E-Learning?
Michael Kickmeier-Rust, *Graz University, Austria*; Neil Peirce, Owen Conlan, *Trinity College Dublin, Ireland*; Daniel Schwarz, *Laboratory for Mixed Reality, Cologne, Germany*; Dominique Verpoorten, *University of Liege, Belgium*; Dietrich Albert, *Graz University, Austria.*

CSCL at Home: Affordances and Challenges of Ubiquitous Computing
Lucia Terrenghi, Armin Prosch, *University of Munich, Germany.*

Ubiquitous Access to Learning Materials in Engineering
Andreas Auinger, *Upper Austria University of Applied Sciences, Austria*; Christian Stary, *University of Linz, Austria.*

Web 2.0 Technology: Future Interfaces for Technology Enhanced Learning?
Martin Ebner, *Graz University of Technology, Austria*; Andreas Holzinger, *Medical University Graz, Austria*; Hermann Maurer, *Graz University of Technology, Austria.*

Some Aspects of the Development of Low-Cost Augmented Reality Learning Environments as examples for Future Interfaces in Technology Enhanced Learning
Alexander Nischelwitzer, Franz-Josef Lenz, *University of Applied Sciences FH JOANNEUM, Austria*; Gig Searle, Andreas Holzinger, *Medical University Graz, Austria.*

Requirements and Ethical Issues for Sensor-augmented Environments in Elderly Care
Erwin Fugger, Barbara Prazak, Sten Hanke, Siegfried Wassertheurer, *Austrian Research Centers GmbH. – ARC, Austria.*

Providing Universal Accessibility using Connecting Ontologies: A Holistic Approach
Shuaib Karim, Khalid Latif, A Min Tjoa, *Vienna University of Technology, Austria.*

Applications of HCI for Service Science

305-B Conference Room

Chair(s): Haruhito Matsunami, *Osaka Gas Co.,Ltd, Japan.*

Inflection of In-Situ Ergonomics in Service Engineering
Atsushi Shinya, *Shimadzu Business Systems Corporation, Japan.*

Effectiveness of Communication Process Support for Senior Citizens with Information Machines
Yosoko Nishizawa, Yoshinori Wakizaka, *TOSHIBA Corporation, Japan*; Takayuki Yamamoto, *Toshiba HA Products Co., Ltd., Japan*; Harumi Hasebe, *Toshiba Consumer Marketing Corp., Japan.*

Improvement Approach of the Automation System in Aviation for Flight Safety
Takafumi Nakatani, Kenichiro Honda, Yukihiko Nakata, *Mitsubishi Heavy Industries, Ltd., Japan.*

A Method of Design Improvement With the Structured Product Concept
Ichiro Hirata, *Hyogo Prefectural Institute of Technology, Japan*; Toshiki Yamaoka, *Wakayama University, Japan.*

Cognitive Styles and Knowledge of Operational Procedures of Electric Appliances
Mamoru Okada, *Lenovo, Japan*; Akio Ishimoto, *Research Institute of Human Engineering for Quality Life, Japan*; Toshiki Yamaoka, *Wakayama University, Japan.*

Service Science: Applications of Observation to Real World Business
Haruhito Matsunami, *Osaka Gas Co.,Ltd, Japan.*

Factors Influencing the Usability of Icons in the LCD Touch Screens
Hsinfu Huang, *Cheng Kung University, Taiwan China*; Wang-Chin Tsai, *Yunlin University of Science and Technology, Taiwan China*; Hsinhsi Lai, *Cheng-Kung University, Taiwan China.*

Non Visual User Interfaces

307 Conference Room

Chair(s): Vidas Lauruska, *Siauliai University, Lithuania.*

Sonification System of Maps for Blind
Gintautas Daunys, *Siaulai University, Lithuania*; Vidas Lauruska, *Siauliai University, Lithuania.*

A Non-Visual Approach To Improving Collaboration Between Blind And Sighted Internet Users
Ravi Kuber, Wai Yu, Graham McAllister, *Queens University Belfast, UK.*

VoiceBlog for Blind and Weak-Eyed People
Yoshie Sagata, Masahiro Watanabe, Yoko Asano, *Nippon Telegraph and Telephone Corp., Japan.*

New Type of Auditory Progress Bar: Exploration, Design and Evaluation
Shuo Hsiu Hsu, Cécile Le Prado, Stéphane Natkin, Claude Liard, *Conservatoire National des Arts et Métiers, France.*

Survey Design for Visually Impaired and Blind People
Lars Kaczmirek, *ZUMA (Center for Survey Research and Methodology), Germany*; Klaus G. Wolff, *Badischer Blinden- und Sehbehindertenverein V.m.K., Germany.*

BloNo: a New Mobile Text-entry Interface for the Visually Impaired
Paulo Lagoá, Pedro Santana, *Technical University of Lisbon, Portugal*; Tiago Guerreiro, Daniel Gonçalves, Joaquim Jorge, *INESC-ID, Portugal.*

2D Numeric-Based Voice-Driven Browser for the Visual Impairments
Chi Nung Chu, *China University of Technology, Taiwan China*; Yu Ting Huang, *Shih Chien University, Taiwan China*; Yao-Ming Yeh, *Taiwan Normal University, Taiwan China.*

Adaptation and Personalisation

308 Conference Room

Chair(s): Woontack Woo, *Gwangju Institute of Science and Technology (GIST), Korea.*

Augmented Ambient: an Interactive Mobility Scenario
Veronica Teichrieb, Severino Gomes Neto, Thiago Farias, João Marcelo Teixeira, João Paulo Lima, Gabriel Almeida, Judith Kelner, *Federal University of Pernambuco, Brazil.*

Personal Companion: Personalized User Interface for U-Service Discovery, Selection and Interaction
Hyoseok Yoon, Hyejin Kim, Woontack Woo, *Gwangju Institute of Science and Technology (GIST), Korea.*

Ontology-based User Preference Modeling for Enhancing Interoperability in Personalized Services
Ju-Yeon Kim, Jong-Woo Kim, Chang-Soo Kim, *Pukyong National University, Korea.*

Enabling Accessibility and Enhancing Web Experience: Ordering Search Results According to User Needs
Alice Good, Jenny Jerrams-Smith, *University of Portsmouth, UK.*

An Anthropomorphic AR-based Personal Information Manager and Guide
Andreas Schmeil, Wolfgang Broll, *Fraunhofer, Germany.*

Designing Ubiquitous Shopping Support Systems Based on Human-Centered Approach
Hiroshi Tamura, *Hakuhodo Inc., Japan*; Tamami Sugasaka, *Fujitsu Laboratories Ltd., Japan*; Satoko Horikawa, Kazuhiro Ueda, *The University of Tokyo, Japan.*

Capture, Memory and Accessibility

Exhibition Hall 2-D

Chair(s): Steve Bennett, *University of Hertfordshire, UK.*

Using Speech Recognition and Intelligent Search Tools to Enhance Information Accessibility
Keith Bain, *Saint Mary's University, Canada*; Jason Hines, Pawan Lingras, *Saint Mary's University, Canada*; Yumei Qin, *IBM, China.*

Enhancing the Usability of Real-Time Speech Recognition Captioning through Personalised Displays and Real-Time Multiple Speaker Editing and Annotation
Mike Wald, *University of Southampton, UK*; Keith Bain, *Saint Mary's University, Canada.*

An Interactive Entertainment System Usable by Elderly People with Dementia
Norman Alm, *University of Dundee, UK*; Arlene Astell, *University of St. Andrews, UK*; Gary Gowans, Richard Dye, Maggie Ellis, Phillip Vaughan, Alan Newell, *University of Dundee, UK.*

Critical Success Factors for Automatic Speech Recognition in the Classroom
Steve Bennett, Jill Hewitt, *University of Hertfordshire, UK*; Barry Mellor, *SpeechSoft Limited, UK*; Caroline Lyon, *University of Hertfordshire, UK.*

Some Empirical Results on a Multimedia Work Support System
Jarmo Makkonen, Ari Visa, *Tampere University of Technology, Finland.*

Performance Evaluation of Voice Interaction as a Universal Web Interface
Yu-Ming Fei, Chiuhsiang Lin, Min-Ting Chen, Chih-Cheng Chiang, *Chung Yuan Christian University, Taiwan China.*

Parallel Sessions

UI

Usability and Internationalization

Cultural Usability: Cross Cultural Issues in Usability Evaluation Methods (UEM) (I)

201-B Conference Room

Chair(s): Torkil Clemmensen, *Copenhagen Business School, Denmark*; Xianghong Sun, *Chinese Academy of Sciences, China*.

Cultural Usability Tests – How Usability Tests Are Not The Same All Over the World
Torkil Clemmensen, Qingxin Shi, *Copenhagen Business School, Denmark*; Jyoti Kumar, *Indian Institute of Technology, India*; Huiyang Li, Xianghong Sun, *Chinese Academy of Sciences, China*; Pradeep Yammiyavar, *Indian Institute of Technology, India*.

Tracing Cognitive Processes for Usability Evaluation: A Cross Cultural Mind Tape Study
Jyoti Kumar, *Indian Institute of Technology, India*; Janni Nielsen, *Copenhagen Business School, Denmark*; Pradeep Yammiyavar, *Indian Institute of Technology, India*.

Relationship Model in Cultural Usability Testing
Qingxin Shi, Torkil Clemmensen, *Copenhagen Business School, Denmark*.

Usability Constructs: A Cross-Cultural Study of How Users and Developers Experience Their Use of Information Systems
Morten Hertzum, *Roskilde University, Denmark*; Torkil Clemmensen, *Copenhagen Business School, Denmark*; Kasper Hornbæk, *University of Copenhagen, Denmark*; Jyoti Kumar, *Indian Institute of Technology, India*; Qingxin Shi, *Copenhagen Business School, Denmark*; Pradeep Yammiyavar, *Indian Institute of Technology, India*.

Analyzing Non-verbal Cues in Usability Evaluation Tests
Pradeep Yammiyavar, *Indian Institute of Technology, India*; Torkil Clemmensen, *Copenhagen Business School, Denmark*; Jyoti Kumar, *Indian Institute of Technology, India*.

Towards Detecting Cognitive Load and Emotions in Usability Studies using the RealEYES Framework
Randolf Schultz, Christian Peter, Michael Blech, Jörg Voskamp, Bodo Urban, *Fraunhofer, Germany*.

How to Quantify User Experience: Fuzzy Comprehensive Evaluation Model Based on Summative Usability Testing
Ronggang Zhou, *Tsinghua University, China*.

AC

Augmented Cognition

Adaptive Task Allocation and Support (II)

302 Conference Room

Chair(s): Marc Grootjen, *Directorate Materiel Royal Netherlands Navy, Netherlands*; Mark Neerincx, Peter-Paul Van Maanen, *TNO Human Factors, Netherlands*.

Foundations for Creating a Distributed Adaptive User Interface
Don Kemper, Larry Davis, Cali Fidopiastis, Denise Nicholson, *University of Central Florida, USA*.

A Closed-Loop Adaptive System for Command and Control
Tjerk De Greef, *TNO Human Factors, Netherlands*; Henryk Arciszewski, *TNO Information & Operations, Netherlands*.

Unobtrusive Multimodal Emotion Detection in Adaptive Interfaces: Speech and Facial Expressions
Khiet Truong, David Van Leeuwen, Mark Neerincx, *TNO Human Factors, Netherlands*.

Closed-Loop Adaptive Decision Support Based on Automated Trust Assessment
Peter-Paul Van Maanen, *TNO Human Factors, Netherlands*; Tomas Klos, *Dutch National Research Institute for Mathematics and Computer Science (CWI), Netherlands*; Kees Van Dongen, *TNO Human Factors, Netherlands*.

Augmented Metacognition Addressing Dynamic Allocation of Tasks Requiring Visual Attention
Tibor Bosse, *Vrije Universiteit Amsterdam, Netherlands*; Willem Van Doesburg, Peter-Paul Van Maanen, *TNO Human Factors, Netherlands*; Jan Treur, *Vrije Universiteit Amsterdam, Netherlands*.

Attuning In-car User Interfaces to the Momentary Cognitive Load
Marika Hoedemaeker, Mark Neerincx, *TNO Human Factors, Netherlands*.

DHM

Digital Human Modeling

Motion Prediction and Motion Capture (II)

303 Conference Room

Chair(s): Xiugan Yuan, *Beihang University, China*.

Modeling of Human's Pointing Movement on the Effect of Target Position
Junmin Du, Hai-wen Shi, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, *Beihang University, China*.

The Application of Kane Equation in the Impact Prediction of Human Motion
Mu Qiao, Chunxin Yang, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, *Beihang University, China*.

Experimental Research on Human Body Motion Simulation based on the Motion Capture Technology
Dayong Dong, Lijing Wang, *Beijing University of Aeronautics and Astronautics, China*; Xiugan Yuan, *Beihang University, China*.

Hand Grasping Motion Simulation for Astronauts Training
Qiang Guo, Yuqing Liu, *China Astronaut Research and Training Center, China*.

AIPlayer: A Platform of Intelligent Simulation of Virtual Human in Virtual Environment
JianGuo Liu, YanSheng Lu, *Huazhong University of Science and Technology, China*; JiuYun Chen, *Wuhan University of Technology, China*.

Motion Retrieval based on Temporal-spatial Features by Decision Tree
Jian Xiang, *Zhejiang University, China*; HongLi Zhu, *City College of Zhejiang University, China*.

Human Motion Simulation and Action Corpus
Gang Zheng, Wanqing Li, Philip Ogunbona, Liju Dong, Igor Kharitonenko, *University of Wollongong, Australia*.


HCI2007
INTERNATIONAL

Parallel Sessions

Friday 10:30 – 12:30

HIMI

Human Interface and the Management of Information

Mobile in Everyday Interactions

305-A Conference Room

Chair(s): Motoyuki Akamatsu, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*; Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*.

Multilingual Disaster Information for Mobile Phones in Japan
Masaru Miyao, Kumi Sato, *Nagoya University, Japan*; Satoshi Hasegawa, *Nagoya Bunri University, Japan*; Kazuhiro Fujikake, Shozo Tanaka, Kohei Okamoto, *Nagoya University, Japan*.

A New Method for Teachers and Students to Record Daily Progress in a Class
Akinobu Ando, *Miyagi University of Education, Japan*; Kazunari Morimoto, *Kyoto Institute of Technology, Japan*.

Exchanging Graphical Emails among Elderly People and Kindergarten Children
Megumi Mitsumoto, *Kobe University, Japan*; Sanae Wake, *Doshisha University, Japan*.

Society of Mobile Interactions
Hiroshi Tamura, *Tamura Institute for Human Interface, Japan*; Motoyuki Akamatsu, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

MOCET: a MObile Collaborative Examination Tool
Sergio Ochoa, Andrés Neyem, Gabriel Bravo, *Universidad de Chile, Chile*; Emilio Ormeño, *Universidad Nacional de San Juan, Argentina*.

Interaction Design and Implementation for Multimodal Mobile Semantic Web Interfaces
Daniel Sonntag, *DFKI, Germany*.

Do Beliefs About Hospital Technologies Predict Nurses' Perceptions of their Ability to Provide Quality Care? A Study in Two Pediatric Hospitals
Ben-Tzion Karsh, *University of Wisconsin-Madison, USA*; Kamisha Escoto, *University of Minnesota, USA*; Samuel Alper, Richard Holden, *University of Wisconsin-Madison, USA*; Matthew Scanlon, *Medical College of Wisconsin, USA*; Kathleen Murkowski, *Children's Hospital of Wisconsin, USA*; Neal Patel, Theresa Shalaby, Judi Arnold, *Vanderbilt Children's Hospital, USA*; Rainu Kaushal, *Weill Medical College, USA*; Kathleen Skibinski, Roger Brown, *University of Wisconsin-Madison, USA*.

Industrial and Other Advanced Applications

Exhibition Hall 2-B

Chair(s): Tobias Komischke, *Siemens AG, USA*.

Coping with Information Input Overload: User Interface Concepts for Industrial Process Control
Tobias Komischke, *Siemens AG, USA*; Luis Herrera, *Georgia Institute of Technology, USA*.

Development of an Augmented Vision Video Panorama Human - Machine Interface for Remote Airport Tower Operation
Markus Schmidt, Michael Rudolph, Bernd Werther, Christoph Moehlenbrink, Norbert Fürstenau, *German Aerospace Center (DLR), Germany*.

Validation of Critical Parameters for Predictive Evaluation of Notification System in Avionics Interfaces
Miguel Sánchez-Puebla, Ignacio Aedo, Paloma Díaz, *Universidad Carlos III de Madrid, Spain*.

TDARS, a Fusion Based AR System for Machine Readable Travel Documents
Yu Wu, Ling Xue, Chao Li, Zhang Xiong, *Beihang University, China*.

Ecological Interface to Enhance User Performance in Adjusting Computer-Controlled Multihead Weigher
Yukio Horiguchi, Ryoji Asakura, Tetsuo Sawaragi, *Kyoto University, Japan*; Yutaka Tamai, Kazufumi Naito, Nobuki Hashiguchi, Hiroe Konishi, *ISHIDA Co., Ltd., Japan*.

A Cognitive Approach to Enhancing Human-Robot Interaction for Service Robots
Yo Chan Kim, Wan Chul Yoon, Hyuk Tae Kwon, Young Sik Yoon, Hyun Joong Kim, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Hierarchical Image Gathering Technique for Browsing Surveillance Camera Images.
Wataru Akutsu, Tadasuke Furuya, Hiroko Miyamura, Takafumi Saito, *Tokyo University of Agriculture and Technology, Japan*.

HCI

Human-Computer Interaction

HCI Design (II)

309 Conference Room

Chair(s): Kristiina Jokinen, *University of Helsinki, Finland*.

Effect of Physical Consistency of Web Interface Design on Users' Performance and Satisfaction
Ahamed AlTaboli, Mohammad Raafat Abou-Zeid, *Garyounis University, Libya*.

Context-Centered Design: Bridging the Gap between Understanding and Designing
Yunan Chen, Michael Atwood, *Drexel University, USA*.

Development of Quantitative Metrics to Support UI Designer Decision-Making in the Design Process
Young Sik Yoon, Wan Chul Yoon, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Designing Transparent Interaction for Ubiquitous Computing: Theory and Application
Weining Yue, Heng Wang, Guoping Wang, *Peking University, China*.

The Use of Improvisational Role-Play in User Centered Design Processes
Ioanna Vogiazou, Jonathan Freeman, Jane Lessiter, *Goldsmiths College, University of London, UK*.

Axiomatic Design Approach for E-commercial Web Sites
Mehmet Yenisey, *Istanbul Technical University, Turkey*.

Comprehensive Task and Dialog Modelling
Víctor López-Jaquero, Francico Montero, *University of Castilla-La Mancha, Spain*.

Visualisation Techniques and Metaphors

311-A Conference Room

Chair(s): Kazuo Misue, *University of Tsukuba, Japan*.

Interface and Visualization Metaphors
Vladimir Averbukh, Mikhail Bakhterev, Aleksandr Baydalin, *Russian Academy of Sciences, Russia*; Damir Ismagilov, Polina Trushenkova, *Urals State University, Russia*.

An Experimental Evaluation of Information Visualization Techniques and Decision Style
WanAdilah WanAdnan, Md Noor Nor Laila, Rasimah Aripin, *Universiti Teknologi MARA, Malaysia*.

Bilingual Mapping Visualizations as Tools for Chinese Language Acquisition
Jens Wissmann, *City University London, UK*; Gisela Susanne Bahr, *Florida Institute of Technology, USA*.

Anchored Maps: Visualization Techniques for Drawing Bipartite Graphs
Kazuo Misue, *University of Tsukuba, Japan*.

The Perceptual Eye View: A User-defined Method for Information Visualization
Liang-Hong Wu, Ping-Yu Hsu, *Central University, Taiwan China*.

Facilitating Conditional Probability Problems with Visuals
Vince Kellen, Susy Chan, Xiaowen Fang, *DePaul University, USA*.

A Study on Interactive Artwork as an Aesthetic Object Using Computer Vision System
Joonsung Yoon, Jaehwa Kim, *Soongsil University, Korea*.

Ambient and Table-top Displays

311-B Conference Room

Chair(s): Hannes Vilhjálmsson, *Reykjavík University, Iceland.*

Interactive Browsing of Large Images on Multi-Projector Display Wall System
Zhongding Jiang, Xuan Luo, Yandong Mao, Binyu Zang, *Fudan University, China*; Hai Lin, Hujun Bao, *Zhejiang University, China.*

Implementation of Multi-touch Tabletop Display for HCI (Human Computer Interaction)
Song Gook Kim, Jang-Woon Kim, Chil-Woo Lee, *Chonnam National University, Korea.*

Evaluation of Content Handling Methods for Tabletop Interface
Ryoko Ishido, Keigo Kitahara, *Keio University, Japan*; Tomoo Inoue, *Tsukuba University, Japan*; Ken-ichi Okada, *Keio University, Japan.*

A Huge Screen Interactive Public Media System: Mirai-Tube
Akio Shinohara, *Nippon Telegraph and Telephone Corp., Japan*; Junji Tomita, *NTT Resonant Inc., Japan*; Tamio Kihara, Shinya Nakajima, Katsuhiko Ogawa, *Nippon Telegraph and Telephone Corp., Japan.*

Getting Lost? Touch and you will Find! The User-centered Design Process of a Touch Screen
Bieke Zaman, Rogier Vermaut, *Katholieke Universiteit Leuven, Belgium.*

Paper Metaphor for Tabletop Interaction Design
Guillaume Besacier, *LIMSI-CNRS, France*; Gaétan Rey, *Université Paris Sud (LIMSI), France*; Marianne Najm, Stéphanie Buisine, *ENSAM, France*; Frédéric Vernier, *LIMSI, France.*

Theoretical Issues in HCI

311-C Conference Room

Chair(s): Lars-Erik Janlert, *Umeå University, Sweden.*

HCI and the Face: Towards an Art of the Soluble
Christoph Bartneck, *Technische Universiteit Eindhoven, Netherlands*; Michael Lyons, *Ritsumeikan University, Japan.*

Aspiring for a Virtual Life
Hee-Cheol Kim, *Inje University, Korea.*

Interface between Two Disciplines - The Development of Theatre as a Research Tool
Maggie Morgan, Alan Newell, *University of Dundee, UK.*

The Evasive Interface — The Changing Concept of Interface and the Varying Role of Symbols in Human–Computer Interaction
Lars-Erik Janlert, *Umeå University, Sweden.*

Holistic Interaction Between the Computer and the Active Human Being
Hannu Vanharanta, *Tampere University of Technology at Pori, Finland*; Tapio Salminen, *Tampere University of Technology, Finland.*

Task Analysis, Usability and Engagement
David Cox, *Southampton Solent University, UK.*

Interacting with Mobile Phones

Exhibition Hall 2-A

Chair(s): Pei-Luen Patrick Rau, *Tsinghua University, China.*

Pulling Digital Data from a Smart Object: Implementing the PullMe-paradigm with a Mobile Phone
Steve Hinske, *ETH Zurich, Switzerland.*

An Improved Model to Evaluate Menu Hierarchies for Mobile Phones
Jeesu Lee, Doowon Paik, *Soongsil University, Korea.*

Development of Interactive Logger for Understanding User's Interaction with Mobile Phone
Daeeop Kim, Kun-pyo Lee, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

Understanding Camera Phone Imaging: Motivations, Behaviors and Meanings
Grace Kim, Wilson Chan, *Adobe Systems Incorporated, USA.*

The Effects of Gender Culture on Mobile Phone Icon Recognition
Shunan Chung, Chiyi Chau, Xufan Hsu, Jim Jiunde Lee, *Chiao-Tung University, Taiwan China.*

Model-Based Approaches to Quantifying the Usability of Mobile Phones
Dong-Han Ham, *Middlesex University, UK*; Jeongyun Heo, *LG Electronics, Korea*; Peter Fossick, William Wong, *Middlesex University, UK*; SangHyun Park, Chiwon Song, *LG Electronics, Korea*; Mike Bradley, *Middlesex University, UK.*

The Design and Evaluation of a Diagonally Splitted Column to Improve Text Readability on a Small Screen
Yeon-Ji Kim, *LG Electronics, Korea*; Woohun Lee, *Korea Advanced Institute of Science and Technology (KAIST), Korea.*

EPCE

Engineering Psychology and Cognitive Ergonomics

Human Modeling in Design

302 Conference Room

Chair(s): Guy Boy, *EURISCO International, France.*

Modelling Cognitive and Affective Load for the Design of Human-Machine Collaboration
Mark Neerincx, *TNO Human Factors, Netherlands.*

Integrative Physiological Design: A Theoretical and Experimental Approach of Human Systems Integration
Didier Fass, *ICN Business school / INRIA-LORIA, France.*

Human Activity Modeling for Systems Design: a Trans-disciplinary and Empirical Approach
Saadi Lahlou, *EDF R&D, France.*

Cognitive and Emotional Human models within a Multi-Agent framework
Lucas Stephane, *EURISCO International, France.*

Perceived Complexity and Cognitive Stability in Human-Centered Design
Guy Boy, *EURISCO International, France.*

Common Work Space or How to Support Cooperative Activities Between Human Operators: Application to Fighter Aircraft
Marie-Pierre Pacaux-Lemoine, *Université de Valenciennes et du Hainaut Cambrésis, France*; Serge Debernard, *LAMIH-SHM, France.*

Common Work Space or How to Support Cooperative Activities Between Human Operators and Machine: Application to Air Traffic Control
Benoît Guiost, Serge Debernard, *LAMIH-SHM, France.*

Parallel Sessions

UAHCI

Universal Access in Human-Computer Interaction

Interaction Design for Intelligent Transportation Systems

201-A Conference Room

Chair(s): Ing-Marie Jonsson, *Ansima Inc., USA*; Fang Chen, *Chalmers University of Technology, Sweden*.

A Multi-modal Architecture for Intelligent Decision Making in Cars
Qamir Hussain, *QHC consulting, Ireland*; Ing-Marie Jonsson, *Ansima Inc., USA*.

Performance Analysis of Acoustic Emotion Recognition for In-Car Conversational Interfaces
Christian Martyn Jones, *University of the Sunshine Coast, Australia*; Ing-Marie Jonsson, *Ansima Inc., USA*.

Listen! There Are Other Road Users Close to You - Improving the Traffic Awareness of Truck Drivers
Fang Chen, Georg Qvint, *Chalmers University of Technology, Sweden*; Johan Jarlengrip, *Volvo Technology Corporation, Sweden*.

Using Personas and Scenarios as an Interface Design Tool for Advanced Driver Assistance Systems
Anders Lindgren, Fang Chen, *Chalmers University of Technology, Sweden*; Per Amdahl, Per Chaikiat, *Linköping University, Sweden*.

Handling Uni- and Multimodal Threat Cueing with Simultaneous Radio Calls in a Combat Vehicle Setting
Otto Carlander, *MOTOROLA, Sweden*; Lars Eriksson, Per-Anders Oskarsson, *Swedish Defence Research Agency, Sweden*.

In-Vehicle Information Systems Used in Complex and Low Traffic Situations: Impact on Driving Performance and Attitude
Ing-Marie Jonsson, *Ansima Inc., USA*; Fang Chen, *Chalmers University of Technology, Sweden*.

Mobile Interaction and Universal Access

305-B Conference Room

Chair(s): Jaime Sánchez, *University of Chile, Chile*.

Universal Design and Mobile Devices
Riitta Hellman, *Karde AS, Norway*.

Mobile Application Model for the Blind
Jaime Sánchez, Mauricio Sáenz, Nelson Baloian, *University of Chile, Chile*.

Changing Interfaces Using Natural Arm Posture - A New Interaction Paradigm for Pedestrian Navigation Systems on Mobile Devices
Ceren Kayalar, Selim Balcisoy, *Sabanci University, Turkey*.

Secure Authentication & Accounting Mechanism on WLAN with Interaction of Mobile Message Service
Hyung-Woo Lee, *Hanshin University, Korea*.

Smart SoftPhone Device for the Network Quality Parameters Discovery and Measurement
Jinsul Kim, Minsoo Hahn, *Information and Communications University, Korea*; Hyun-Woo Lee, *Electronics and Telecommunications Research Institute (ETRI), Korea*.

A Graphics Adaptation Framework and Video Streaming Technique for 3D Scene Representation and Interaction on Mobile Devices
Cong Du Nguyen, Minh Tuan Len, Dae-Il Yoon, Hae-Kwang Kim, *Sejong University, Korea*.

Privacy Issues for the Disclosure of Emotions to Remote Acquaintances Without Simultaneous Communication
Sebastien Duval, *National Institute of Informatics, Japan*; Christian Becker, *University of Bielefeld, Germany*; Hiromichi Hashizume, *National Institute of Informatics, Japan*.

VR

Virtual Reality

Virtual Reality Studies in China

201-C Conference Room

Chair(s): Wei Zhang, *Tsinghua University, China*.

An Efficient Navigation Algorithm of Large Scale Distributed VRML/X3D Environments
Jinyuan Jia, Guanghua LU, Yuan Pan, *Jilin University, China*.

A Virtual Reality-based Experiment Environment for Engine Assembly Line Workplace Planning and Ergonomics Evaluation
RunDang Yang, XiuMin Fan, DianLiang Wu, JuanQi Yan, *Shanghai Jiaotong University, China*.

Facial Expression Recognition based on Hybrid Features and Fusing Discrete HMMS
Yongzhao Zhan, Gengtao Zhou, *Jiangsu University, China*.

QEM-based Mesh Simplification with Effective Feature-Preserving
Wei Lu, Dinghao Zeng, *Nanjing University, China*; Jingui Pan, *Nanjing Fujitsu Nanda Software Technology Co., Ltd, China*.

A Virtual Space Environment Simulation System
Chaozhen Lan, Qing Xu, Jiansheng Li, Yang Zhou, *Institute of Surveying & Mapping, China*.

Simulators for Driving Safety Study - A Literature Review
Ying Wang, Wei Zhang, Su Wu, *Tsinghua University, China*; Yang Guo, *University of Missouri - Rolla, USA*.

A Wavelet-based Image Enhancement Algorithm For Real Time Multi-resolution Texture Mapping
Hai-feng Cui, Xin Zheng, *Beijing Normal University, China*.

Mixed Reality, Interaction, and Simulation

301 Conference Room

Chair(s): Lawrence Rosenblum, *National Science Foundation, USA*.

Evaluating the Need for Display-Specific and Device-Specific 3D Interaction Techniques
Doug Bowman, Brian Badillo, Dhruv Manek, *Virginia Tech, USA*.

Human Computer Intelligent Interaction Using Augmented Cognition and Emotional Intelligence
Jim Chen, Harry Wechsler, *George Mason University, USA*.

A Distributed Framework for Scalable Large-Scale Crowd Simulation
Miguel Lozano, *Universidad de Valencia, Spain*; Pedro Morillo, Daniel Lewis, Dirk Reiners, *University of Louisiana at Lafayette, USA*; Carolina Cruz-Neira, *Infiscape, USA*.

Interactive Haptic Rendering of High-Resolution Deformable Objects
Nico Galoppo, Serhat Tekin, *The University of North Carolina at Chapel Hill, USA*; Miguel A. Otaduy, Markus Gross, *ETH Zürich, Switzerland*; Ming Lin, *The University of North Carolina at Chapel Hill, USA*.

Lower Cost Modular Spatially Immersive Visualization
Frederic Parke, *Texas A&M University, College Station, USA*.

Design of Water Transportation Story for Grand Canal Museum Based on Multi-Projection Screens
Linqiang Chen, *Hangzhou Dianzi University, China*; Gengdai Liu, Zhigeng Pan, Zhi Li, *Zhejiang University, China*.

Content Adaptive Embedding of Complementary Patterns for Nonintrusive Direct-Projected Augmented Reality
Hanhoon Park, Moon-Hyun Lee, Byung-Kuk Seo, Yoonjong Jin, Jong-Il Park, *Hanyang University, Korea*.

UI

Usability and Internationalization

Cultural Usability: Cross Cultural Issues in Usability Evaluation Methods (UEM) (II)

201-B Conference Room

Chair(s): Torkil Clemmensen, *Copenhagen Business School, Denmark*; Xianghong Sun, *Chinese Academy of Sciences, China*.

Differences in Task Descriptions in the Think Aloud Test
Lene Nielsen, *Copenhagen Business School, Denmark*; Sameer Chavan, *Oracle India Hydarabad, India*.

Language Issues in Cross Cultural Usability Testing: A Pilot Study in China
Xianghong Sun, *Chinese Academy of Sciences, China*; Qingxin Shi, *Copenhagen Business School, Denmark*.

Comparing User and Software Information Structures for Compatibility
Thomas Plocher, *Honeywell, USA*; Torkil Clemmensen, *Copenhagen Business School, Denmark*.

HCI and SE – The Cultures of the Professions
Anirudha Joshi, *Indian Institute of Technology, India*.

Color your Website: Use of Colors on the Web
Irina Kondratova, Ilia Goldfarb, *National Research Council of Canada, Canada*.

A Cross Culture Study on Phone Carrying and Physical Personalization
Yanqing Cui, *Nokia Research Center Helsinki, Finland*; Jan Chipchase, Fumiko Ichikawa, *Nokia Design Tokyo, Japan*.

Usability Evaluation of Children Edutainment Software
Danli Wang, Jie Li, Guozhong Dai, *Chinese Academy of Sciences, China*.

Cross-cultural and Global Communication

305-C Conference Room

Chair(s): Marko Nieminen, *Helsinki University of Technology, Finland*.

Impact of Culture on International User Research - A Case Study: Integration Pre-study in Paper Mills
Anna Oikarinen, Marko Nieminen, *Helsinki University of Technology, Finland*.

Tools to Increase the Strategic Value of User Experience Design
James Nieters, David Grabel, Vijay Agrawal, *Cisco, USA*.

Cross-cultural Understanding of Content and Interface in the Context of E-learning Systems
Abdalghani Mushtaha, *Free University of Brussels, Belgium*; Olga De Troyer, *Vrije Universiteit Brussel (VUB), Belgium*.

Overcoming the Language Barrier: The Potential of the Visual Language LoCoS in International Human-Computer Communication
Marleen Vanhauer, *Fraunhofer / University of Applied Sciences Offenburg, Germany*; Karina Oertel, Jörg Voskamp, *Fraunhofer, Germany*.

The Digital and the Divine: Taking a Ritual View of Communication and ICT Interaction
Brooke Foucault, *Northwestern University, USA*; Jay Melican, *Intel Corporation, USA*.

Cultural Difference and Its Effects on User Research Methodologies
Jungjoo Lee, Thu-Trang Tran, Kun-pyo Lee, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

OCSC

Online Communities and Social Computing

Knowledge Communities

307 Conference Room

Chair(s): Eduardo González Mendívil, *ITESM, Mexico*.

Fostering Knowledge Mode Conversion in New Product Development Environment
Eduardo González Mendívil, David Guerra-Zubiaga, *ITESM, Mexico*; Manuel Contero, *Polytechnic University of Valencia, Spain*.

Tracing Conceptual and Geospatial Diffusion of Knowledge
Chaomei Chen, Weizhong Zhu, *Drexel University, USA*; Brian Tomaszewski, Alan MacEachren, *Penn State University, USA*.

A Framework for Inter-Organizational Collaboration Using Communication and Knowledge Management Tools
Paul Nuschke, Xiaochun (Steven) Jiang, *North Carolina A&T State University, USA*.

Cultural Institutions, Co-creativity and Communities of Interest.
Jerry Watkins, Angelina Russo, *Queensland University of Technology, Australia*.

Social Rewarding in Wiki Systems – Motivating the Community
Bernhard Hoisl, *Vienna University of Technology, Austria*; Wolfgang Aigner, Silvia Miksch, *Danube University Krems, Austria*.

WikiTable: A New Tool for Collaborative Authoring and Data Management
Xianjun Sam Zheng, Ilian Sapundshiev, Robert Rauschenberger, *Siemens Corporate Research, USA*.

Open Source Communities in China (Mainland): An Overview
Yi Wang, *Shanghai Jiaotong University, China*; Fan Li, *Zhejiang University, China*; Jiguang Song, *Beihang University, China*.

Developing On-line Communities

308 Conference Room

Chair(s): Luciano Gamberini, *University of Padova, Italy*.

An Analysis of Involvement of HCI Experts in Distributed Software Development: Practical Issues
Görkem Çetin, *TUBITAK - UEKAE, Turkey*; Damiano Verzulli, *CINECA, Italy*; Sandra Frings, *Fraunhofer, Germany*.

Major HCI Challenges for Open Source Software Adoption and Development
Nikos Viorres, Xenofon Papadopoulos, Modestos Stavrakis, Evangelos Vlachogiannis, Panayiotis Koutsabasis, John Darzentas, *University of the Aegean, Greece*.

Computing Social Networks for Information Sharing: A Case-based Approach
Rushed Kanawati, *Université Paris-Nord, France*; Maria Malek, *EISTI, France*.

SISN: A Toolkit for Augmenting Expertise Sharing via Social Networks
Jun Zhang, Yang Ye, Mark Ackerman, *University of Michigan, USA*; Yan Qu, *The University of Maryland, USA*.

ConnectDots: Visualizing Social Network Interaction for Improved Social Decision Making
Deidra Morrison, Bruce Gooch, *Northwestern University, USA*.

Aggregation of Consumer Ratings of Online Products: Applying Social Choice Theory to Investigate the Cordorcet Efficiency of Mean Rule
Xianjun Sam Zheng, *Siemens Corporate Research, USA*; James Lin, *Siemens AG, USA*.

A Study on Content and Management Style of Corporate Blogs
Shanshan Ma, *Drexel University, USA*; Qiping Zhang, *Long Island University, USA*.

Parallel Sessions

AC

Augmented Cognition

AugCog-Enabled Simulation and Training

303 Conference Room

Chair(s): Cali Fidopiastis, *University of Central Florida, USA*; Diglio Simoni, *RTI International, USA*; Ray Adams, *Middlesex University, UK*.

Automated SAF Adaptation Tool (ASAT)
Roy Stripling, Joseph Coyne, *US Naval Research Laboratory, USA*; Anna Cole, Daniel Afergan, Raymond Barnes, Kelly Rossi, *Strategic Analysis, Inc., USA*; Leah Reeves, *Potomac Institute for Policy Studies, USA*; Dylan Schmorrow, *Office of Naval Research, USA*.

Towards a Closed-Loop Training System: Using a Physiological-Based Diagnosis of the Trainee's State to Drive Feedback Delivery Choices
Amy Bolton, *Strategic Analysis, Inc., USA*; Gwendolyn Campbell, *NAVAIR, USA*; Dylan Schmorrow, *Office of Naval Research, USA*.

An Adaptive Instructional Architecture for Training and Education
Denise Nicholson, Cali Fidopiastis, Larry Davis, *University of Central Florida, USA*; Dylan Schmorrow, *Office of Naval Research, USA*; Kay Stanney, *University of Central Florida, USA*.

Aiding Tomorrow's Augmented Cognition Researchers through Modeling and Simulation Curricula
Julie Drexler, Randall Shumaker, Denise Nicholson, Cali Fidopiastis, *University of Central Florida, USA*.

Performance Compared to Experience Level in a Virtual Reality Surgical Skills Trainer
Christoph Aschwanden, Lawrence Burgess, *University of Hawaii, USA*; Kevin Montgomery, *Stanford University, USA*.

The Future of Augmented Cognition Systems in Education and Training
Erica Palmer, David Kobus, *Pacific Science & Engineering Group (PS&E), USA*.

DHM

Digital Human Modeling

Functional Modeling and Rehabilitation (III)

Exhibition Hall 2-C

Chair(s): Jichuan Zhang, *Tsinghua University, China*; Pheng Ann Heng, *Chinese University of Hong Kong, Hong Kong*.

A Robust Algorithm for a System Identification Approach to Digital Human Modeling: An Application to Multi-fingered Hand Movement
Kang Li, Sang-Wook Lee, Xudong Zhang, *University of Illinois at Urbana, Champaign, USA*.

The Influence of Shoe-heel Height on Knee Muscle Activity of Transtibial Amputees during Standing
Xiaohong Jia, Jichuan Zhang, Rencheng Wang, Lidan Fang, Dewen Jin, *Tsinghua University, China*; Ming Zhang, *The Hong Kong Polytechnic University, Hong Kong*.

The Design and Exploitation of Visual Feedback System for Rowing
Chunmei Cao, Chuncai Wang, Linhong Ji, Zixi Wang, Xiaoping Chen, *Tsinghua University, China*.

Estimating Mental Fatigue Based on Multichannel Linear Descriptors Analysis
Chong Zhang, Chongxun Zheng, Xiaomei Pei, Xiaolin Yu, *Xi'an Jiaotong University, China*.

Chinese Visible Human Data Sets and their Applications
Shao-Xiang Zhang, *Third Military Medical University, China*; Pheng Ann Heng, *Chinese University of Hong Kong, Hong Kong*; Zheng-Jin Liu, Li-Wen Tan, Ming-Guo Qiu, Qi-Yu Li, Rong-Xia Liao, Kai Li, Gao-Yu Cui, Yan-Li Guo, *Third Military Medical University, China*; Yong-Ming Xie, *Chinese University of Hong Kong, China*.

Latest Development of an Interventional Radiology Training Simulation System: NeuroCath
Xin Ma, *Shenzhen Institute of Advanced Technology (SIAT), China*.

A Composite Measure for the Evaluation of Mental Workload
Lee-Ming Wang, Vincent Duffy, *Purdue University, USA*; Yingzi Du, *Indiana University / Purdue University, USA*.

Advances in Digital Human Modeling

Exhibition Hall 2-D

Chair(s): Giuseppe Andreoni, *Politecnico di Milano, Italy*.

Low Cost 3D Shape Acquisition System Using Strip Shifting Pattern
Li Yao, Lizhuang Ma, Di Wu, *Shanghai Jiao Tong University, China*.

A Data-based Modeling Approach of Reach Capacity and Discomfort for Digital Human Models
Xuguang Wang, Elodie Chateauroux, Nicolas Chevalot, *French National Research Institute of Transports and Safety (INRETS), France*.

Simulation of Digital Human Hand Postures of Car Controls Using a Data Based Approach
Georges Beurier, Nicolas Chevalot, *French National Research Institute of Transports and Safety (INRETS), France*; Gilles Monnier, *ALTRAN Technologies, France*; Jules Trasbot, *Renault, France*; Xuguang Wang, *French National Research Institute of Transports and Safety (INRETS), France*.

Integrating Perception, Cognition and Action for Digital Human Modeling
Daniel Carruth, Mark Thomas, Bryan Robbins, Alex Morais, *Mississippi State University, USA*.

Ergonomic Task Analysis in an Earth-moving Machine Cab
Jinyan(Christy) Du, Gregory Kopp, Timothy Silvers, *Caterpillar Inc., USA*.

Simulation of Complex Human Movement through the Modulation of Observed Motor Tasks
Giuseppe Andreoni, *Politecnico di Milano, Italy*; Marco Rabuffetti, *Fond. Do C. Gnocchi IRCCS, Italy*; Antonio Pedotti, *Politecnico di Milano, Italy*.


HCI2007
INTERNATIONAL

Parallel Sessions

Friday 13:30 – 15:30

HIMI

Human Interface and the Management of Information

Cognitive and Psychological Issues of Interacting with Information

Exhibition Hall 2-C

Chair(s): Ito Akira, *Gifu University, Japan*.

Does Information Content Influence Perceived Informativeness? An Experiment in the Hypermedia
Yuan Gao, *Ramapo College of New Jersey, USA*.

Suggestion of Methods for Understanding User's Emotional Changes while Using a Product
Sang-Hoon Jeong, *Mokwon University, Korea*.

Basic Experimental Verification of Grasping Information Interface Concept, Grasping Force Increases in Precise Periods
Sigeru Sato, Muneo Kitajima, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*; Yukio Fukui, *University of Tsukuba, Japan*.

Understanding a Sense of Place in Collaborative Environments
Simon Foley, *Royal Holloway, University of London, UK*.

Harder to Access, Better Performance? The Effects of Information Access Cost on Strategy and Performance
Phillip Morgan, Samuel Waldron, Sophia King, John Patrick, *Cardiff University, UK*.

Economic Assessment of Industrial Accidents Caused by Abnormal Behaviors
Hunszu Liu, *Ming Hsin University of Science & Technology, China*.

Evaluating Measurement Models for Web Purchasing Intention
Bing-Yi Lin, *Kai-Nan University, Taiwan China*; Ping-Ju Wu, *Yuan Ze University, Taiwan China*; Chi-I Hsu, *Kai-Nan University, Taiwan China*.

Supporting Development

Exhibition Hall 2-D

Chair(s): Ji-Hyun Lee, *Yunlin University of Science & Technology, Taiwan China*.

The Activation Mechanism for Dynamically Generated Procedures in Hyperlogo
Nobuhito Yamamoto, *University of Tsukuba, Japan*; Tomoyuki Nishioka, *Tsukuba University of Technology, Japan*.

A Method for Rule Extraction by Discernible Vector
E. Xu, *Liaoning Institute of Technology, China*; Shao Liangshan, *Liaoning Technical University, China*; Shaocheng Tong, *Liaoning Institute of Technology, China*; Baiqing Ye, *Liaoning Technical University, China*.

Knowledge Management in the Development of Optimization Algorithms
Broderick Crawford, Carlos Castro, Eric Monfroy, *Universidad Tecnica Federico Santa Maria, Chile*.

Visual Agent Programming (VAP): An Interactive System to Program Animated Agents
Kamran Khowaja, *Isra University, Pakistan*; Sumanta Guha, *Asian Institute of Technology, Thailand*.

Model Based HMI Specification in an Automotive Context
Thomas Fleischmann, *Elektrobit, Germany*.

Integrated Physically Based Manipulation and Decision-making Tree for Navigation to Support Design Rationale
Ji-Hyun Lee, *Yunlin University of Science & Technology, Taiwan China*; Tian-Chiu Li, *Yunlin University of Science and Technology, Taiwan China*.

HCI

Human-Computer Interaction

Mobile Devices (II)

305-C Conference Room

Chair(s): Karim Khakzar, *Fulda University of Applied Sciences, Germany*.

Interacting with a Tabletop Display Using a Camera Equipped Mobile Phone
Seokhee Jeon, *Pohang University of Science and Technology, Korea*; Gerard Kim, *Korea University, Korea*; Mark Billinghurst, *Human Interface Technology New Zealand, New Zealand*.

Automatic Word Detection System for Document Image Using Mobile Devices
Anjin Park, Keechul Jung, *Soongsil University, Korea*.

Designing for Mobile Devices: Requirements, Low-Fi Prototyping and Evaluation
Marco De Sá, Luís Carriço, *University of Lisbon, Portugal*.

Mobile Video Editor: Design and Evaluation
Tero Jokela, *Nokia Research Center, Finland*; Minna Karukka, *Nokia Corporation, Finland*; Kaj Mäkelä, *Nokia Research Center, Finland*.

Measuring Presence in Mobile 3D
HyunJong Ryu, Rohae Myung, Byongjun Lee, *Korea University, Korea*.

Design Guidelines for PDA User Interfaces in the Context of Retail Sales Support
Rainer Blum, Karim Khakzar, *Fulda University of Applied Sciences, Germany*.

Electronic and Mobile Games

307 Conference Room

Chair(s): Teng-Wen Chang, *Yunlin University of Science and Technology, Taiwan China*.

Construction of online game addiction based on player experience among Chinese college students
Hua Qin, Pei-Luen Patrick Rau, *Tsinghua University, China*.

A Study of Acteme on Users Unexpert of Videogames
Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy*.

Virtual Reality Bubble Popping Game Using Stereoscopic Display and Vibrotactile Stimulation
Ho-joong Yong, Jongwon Back, Tae-Jeong Jang, *Kangwon National University, Korea*.

A Tangible Game Interface Using Projector-Camera System
Peng Song, Stefan Winkler, Jefry Tedjokusumo, *National University of Singapore, Singapore*.

A Natural Language Interface for a 2D Networked Game
Andrea Corradini, *University of Potsdam, Germany*; Adrian Bak, *TV2 | Interaktiv, Denmark*; Thomas Hanneforth, *University of Potsdam, Germany*.

A New Framework of Usability Evaluation for Massively Multi-player Online Game: Case Study of "World of Warcraft" Game.
Seungkeun Song, *Game Rating Board, Korea*; Joohyeon Lee, *Yonsei University, Korea*; Insun Hwang, *Game Rating Board, Korea*.

HCI Patterns

308 Conference Room

Chair(s): Wen-Ko Chiou, *Chang Gung University, Taiwan China*.

Application of Visual Programming to Web Mash Up Development
Seung Chan Lim, Sandi Lowe, Jeremy Koempel, *MAYA Design, USA*.

User- Oriented Design (UOD) Pattern for Innovation Design at Digital Products
Wen-Ko Chiou, *Chang Gung University, Taiwan China*; Bi-Hui Chen, *Chih Lee Istitute of Technology, Taiwan China*; Ming-Hsu Wang, You-Zhao Liang, *Chang Gung University, Taiwan China*.

Structurally Supported Design of HCI Pattern Languages
Christian Maertin, Alexander Roski, *Augsburg University of Applied Sciences, Germany*.

HCI Design Patterns for PDA Running Space Structured Applications
Ricardo Tesoriero, Francico Montero, María Lozano, José Antonio Gallud, *University of Castilla-La Mancha, Spain*.

A Pattern-Based Framework for the Exploration of Design Alternatives
Tibor Kunert, *Siemens AG, Germany*; Heidi Krömker, *Technische Universität Ilmenau, Germany*.

A Pattern Decomposition and Interaction Design Approach
Cunhao Fang, Pengwei Tian, Ming Zhong, *Tsinghua University, China*.

Interacting with Images

309 Conference Room

Chair(s): Janos Schanda, *University of Pannonia, Hungary*.

Knowledge Transfer in Semi-automatic Image Interpretation
Jun Zhou, *University of Alberta, Canada*; Li Cheng, Terry Caelli, *National ICT Australia, Australia*; Walter Bischof, *University of Alberta, Canada*.

Evaluation of VISTO: a New Vector Image Search Tool
Tania Di Mascio, *University of L'Aquila, Italy*; Danile Frigioni, Laura Tarantino, *University of L'Aquila, Italy*.

Evaluating the Effectiveness of Digital Storytelling with Panoramic Images to Facilitate Experience Sharing
Zuraidah Sulaiman, *Universiti Teknologi PETRONAS, Malaysia*; Md Noor Nor Laila, *Universiti Teknologi MARA, Malaysia*; Narinderjit Singh Sawaran Singh, Suet Peng Yong, *Universiti Teknologi PETRONAS, Malaysia*.

Usability Evaluation of Designed Image Code Interface for Mobile Computing Environment
Cheolho Cheong, Dong-Chul Kim, Tack-Don Han, *Yonsei University, Korea*.

A Color Adjustment Method for Automatic Seamless Image Blending
Xianji Li, Dongho Kim, *Soongsil University, Korea*.

A Discriminative Color Quantization Depending on the Degree of Focus
Hong-Taek Yang, *Soong-sil University, Korea*; Doowon Paik, *Soongsil University, Korea*.

Experimental Comparison of Adaptive vs. Static Thumbnail Displays
Pilsung Choe, Chulwoo Kim, Mark Lehto, Jan Allebach, *Purdue University, USA*.

Evaluation: Methods and Tools (II)

311-A Conference Room

Chair(s): Pieter Blignaut, *University of the Free State, South Africa*.

What Makes Evaluators to Find More Usability Problems?: A Meta-analysis for Individual Detection Rates
Wonil Hwang, *Soongsil University, Korea*; Gavriel Salvendy, *Purdue University, USA*.

Mixing Evaluation Methods for Assessing the Utility of an Interactive InfoVis Technique
Markus Rester, Margit Pohl, Sylvia Wiltner, Klaus Hinum, *Vienna University of Technology, Austria*; Silvia Miksch, *Danube University Krems, Austria*; Christian Popow, Susanne Ohmann, *Medical University of Vienna, Austria*.

Applying Saliency-based Visual Attention Model for UI Evaluation
Xianjun Sam Zheng, *Siemens Corporate Research, USA*; James Lin, *Siemens AG, USA*.

A Multifunctional VR-Simulator Platform for the Evaluation of Automotive User Interfaces
Tony Poitschke, Markus Ablaßmeier, Stefan Reifinger, Gerhard Rigoll, *Technische Universität München, Germany*.

Usability Testing and the Context-in-use
Aydin Oztoprak, Çiğdem Erbuğ, *Middle East Technical University, Turkey*.

General Interaction Expertise: An Approach for Sampling in Usability Testing of Consumer Products
Ali Berkman, *Middle East Technical University, Turkey*.

Web Applications for Everyday Life

311-B Conference Room

Chair(s): Hannu Vanharanta, *Tampere University of Technology at Pori, Finland*.

Everyday Storytelling: Supporting the Mediated Expression of Online Personal Testimony
Aisling Kelliher, *Arizona State University, USA*; Glorianna Davenport, *Massachusetts Institute of Technology, USA*.

Website stickiness, virtual agents and innovation adoption and diffusion
Pablo Brice De Diesbach, *ESSEC Asian Center, Singapore*; David Midgley, *INSEAD, France*.

The Antecedents of Online Consumers' Perceived Usefulness of Website: A Protocol Analysis Approach
Cheng Yi, Zhenhui Jiang, *National University of Singapore, Singapore*.

A Three-Level Approach for Analyzing User Behavior in Ongoing Relationships
Enric Mor, Muriel Garreta-Domingo, Julià Minguillón, *Universitat Oberta de Catalunya, Spain*; Sheena Lewis, *Georgia Institute of Technology, USA*.

Love Dimensions On the Web
Hannu Vanharanta, Jussi Kantola, *Tampere University of Technology at Pori, Finland*; Waldemar Karwowski, *University of Louisville, USA*.

Persuasive Interaction Strategy for Self Diet System: Exploring the Relation of User Attitude and Intervention by Computerized Systematic Methods
Youngho Jeen, Jiyoun Han, Hyodong Kim, Kyunwon Lee, Peom Park, *Ajou University, Korea*.

Parallel Sessions

EPCE

Engineering Psychology and Cognitive Ergonomics

Human Performance and Error

311-C Conference Room

Chair(s): Kenneth Boff, *Georgia Institute of Technology, USA*.

Cognitive, Perceptual, Sensory Abilities and Verbal Intelligence as Predictors of PDA Text Entry Error Types across the Lifespan
Hiroe Li, Peter Graf, *University of British Columbia, Canada*.

Sequential Analyses of Error Rates: A Theoretical View
Ronald Miller, Richard Sauque, *Brigham Young University – Hawaii, USA*.

Risk-Based Information Integration for Ship Navigation
Boris Gauss, Matthias Rötting, *Berlin University of Technology, Germany*.

Event-Related Potential as a Measure of Effects of Report Order and Compatibility on Identification of Multidimensional Stimulus
I-hsuan Shen, *Chang Gung University, Taiwan China*; Kong-King Shieh, *Taiwan University of Science and Technology, Taiwan China*; Shin-Yuan Tsai, *Chang Gung University, Taiwan China*.

Automatic Detection of Interaction Vulnerabilities in an Executable Specification
Michael Feary, *NASA Ames Research Center, USA*.

Human Performance Model for Combined Steering-Targeting Tasks
Seung-Kweon Hong, *Chungju National University, Korea*; Seungwan Ryu, *Chung-Ang University, Korea*.

Effects of Cognitive Training on Individual Differences in Attention
Jing Feng, Ian Spence, *University of Toronto, Canada*.

UAHCI

Universal Access in Human-Computer Interaction

Research and Development Methods in Universal Access (II)

201-C Conference Room

Chair(s): Ray Adams, *Middlesex University, UK*; Simeon Keates, *ITA Software, USA*.

Towards a Walkthrough Method for Universal Access Evaluation
Margherita Antona, Alexandros Mourouzis, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

Augmented Cognition Foundations and Future Directions— Enabling "Anyone, Anytime, Anywhere" Applications
Leah Reeves, *Potomac Institute for Policy Studies, USA*; Dylan Schmorrow, *Office of Naval Research, USA*.

Designing for Inclusivity
Satinder Gill, *Cambridge University, UK*.

Development of a Multiple Heuristics Evaluation Table (MHET) to Support Software Development and Usability Analysis
Beth F. Wheeler Atkinson, Troy O. Bennett, *Naval Air Warfare Center Training Systems Division, USA*; Gisela Susanne Bahr, *Florida Institute of Technology, USA*; Melissa Walwanis Nelson, *Naval Air Warfare Center Training Systems Division, UK*.

Usability Design of a Scanning Interface for a Robot Used by Disabled Users
Anthony White, Stephen Prior, *Middlesex University, UK*.

Determining Accessibility Needs Through User Goals
Kevin Carey, Rosaria Gracia, *humanITy, UK*; Christopher Power, Helen Petrie, *University of York, UK*; Stefan Carmien, *Fraunhofer, Germany*.

Accessibility, Usability, Safety, and Ergonomics - Concepts, Models, Differences
Klaus Peter Wegge, *Siemens Business Services, Germany*; Dirk Zimmermann, *T-Mobile Deutschland GmbH, Germany*.

Design for All and e-Inclusion

301 Conference Room

Chair(s): Pier Luigi Emiliani, *National Research Council (CNR), Italy*.

Fundamentals of Inclusive HCI Design
Julio Abascal, *University of the Basque Country, Spain*; Luis Azevedo, *Technical University of Lisbon, Portugal*.

From Handicap to Diversity
Sebastiano Bagnara, *University of Siena, Italy*; Angelo Failla, *Fondazione IBM Italia, Italy*.

Ensuring Access to the Information Society for People with Disabilities through Effective Use of Design for All Methodologies
Bob Allen, Bryan Boyle, *Central Remedial Clinic, Ireland*.

DfA Products and Services from a User Perspective to Facilitate Life at Home for People with Cognitive Impairments
Claes Tjäder, *Swedish Handicap Institute (SHI), Sweden*.

Entertainment and Ambient: a New OLDES' View
Massimo Busuoli, *Ente per le Nuove tecnologie, l'Energia e l'Ambiente-ENEA, Belgium*; Teresa Gallelli, *Cup 2000 SpA, Italy*; Martin Haluzík, *Charles University, Czech Republic*; Vratislav Fabián, Daniel Novák, Olga Štěpánková, *Czech Technical University in Prague, Czech Republic*.

DfA Implementations for People with Vision and Hearing Disabilities: Application and Development for Information Society
Algirdas Juozėnas, *State Institute of Information Technology, Lithuania*; Pijus Kasparaitis, *Vilnius University, Lithuania*; Kastytis Ratkevicius, *Kaunas University of Technology, Lithuania*; Dalius Rudinskas, *State Institute of Information Technology, Lithuania*; Algimantas Rudzionis, *Kaunas University of Technology, Lithuania*; Vytautas Rudzionis, *Vilnius University, Lithuania*; Saulius Sidaras, *State Institute of Information Technology, Lithuania*.

Technology and Regional Social Structures: Evaluation of Remote Sign Language Interpretation in Finland
Jouko Kokko, Erkki Kemppainen, Aulikki Rautavaara, *STAKES, Finland*.

On Developing Validator Software XValid for Testing Home Pages of Universal Design
Cecilia Sik Lanyi, Sándor Forrai, *University of Pannonia, Hungary*; Nóra Czank, Ágnes Hajgató, *Padányi Bíró Márton Catholic High School, Hungary*.

Universal Accessibility of Documents (II)

303 Conference Room

Chair(s): Georgios Kouroupetroglou, *University of Athens, Greece*.

Usability in Location-Based Services: Context and Mobile Map Navigation
Kristiina Jokinen, *University of Helsinki, Finland*.

Sensor-driven Adaptation of Web Document Presentation
Spyros Nathanail, Vassileios Tsetsos, Stathes Hadjiefthymiades, *University of Athens, Greece*.

Discrimination and Perception of the Acoustic Rendition of Texts by Blind People
Vassilis Argyropoulos, *University of Thessaly, Greece*; Konstantinos Papadopoulos, *University of Macedonia, Greece*; Georgios Kouroupetroglou, Gerasimos Xydas, Philippos Katsoulis, *University of Athens, Greece*.

Technology Advances and Standardization toward Accessible Business Graphics
Hironobu Takagi, Tatsuya Ishihara, *IBM Research, Japan*.

Authoring Tools for Structuring Text-Based Activities
Maria Grigoriadou, Grammatiki Tsaganou, *University of Athens, Greece*.

VoxBoox: A System for Automatic Generation of Interactive Talking Books
Aanchal Jain, Gopal Gupta, *University of Texas at Dallas, USA*.

Virtual Reality

VR

Designing and Developing Virtual Environments

305-A Conference Room

Chair(s): Doug Bowman, *Virginia Tech, USA.*

IMPROVE: Collaborative Design Review in Mobile Mixed Reality
Pedro Santos, André Stork, *Fraunhofer, Germany*; Thomas Gierlinger, Alain Pagani, *TU-Darmstadt, Germany*; Bruno Araújo, Ricardo Jota, Luis Bruno, Joaquim Jorge, Joao Madeiras Pereira, *INESC-ID, Portugal*; Martin Witzel, Giuseppe Conti, Raffaele De Amicis, *GraphiTech, Italy*; Iñigo Barandarian, Céline Paloc, *VicomTech, Spain*; Oliver Machui, *Trivisio GmbH, Germany*; Jose Manuel Jiménez, *STT, Spain*; Georg Bodammer, *MicroEmissive Displays (MED), UK*; Don McIntyre, *The Lighthouse, UK.*

A Framework for VR Application Based on Spatial, Temporal and Semantic Relationship
Changhoon Park, *Hoseo University, Korea*; TaeSeok Jin, *DongSeo University, Korea*; Michitaka Hirose, *The University of Tokyo, Japan*; Heedong Ko, *Korea Institute of Science and Technology (KIST), Korea.*

Development of a Handheld User Interface Framework for Virtual Environments
Seokhwan Kim, Yongjoo Cho, *Sangmyung University, Korea*; Kyoung Park, *Dankook University, Korea*; Joa Sang Lim, *Sangmyung University, Korea.*

The Storage Independent Polygonal Mesh Simplification System
Hung-Kuang Chen, *Chin-Yi University of Technology, Taiwan China*; Chin-Shyurng Fahn, Ming-Bo Lin, *Taiwan University of Science and Technology, Taiwan China.*

Design and Evaluation of a Hybrid Display System for Motion-Following Tasks
Sangyoon Lee, *Korea University, Korea*; Sunghoon Yim, *Pohang University of Science and Technology, Korea*; Gerard Kim, *Korea University, Korea*; Ungyeon Yang, *Electronics and Telecommunication Research Institute (ETRI), Korea*; Chan-Hun Kim, *Korea University, Korea.*

Integration of Virtual Acoustics in Augmented Reality Systems
Stefan Reifinger, Stefan Kerber, Florian Völk, Hugo Fastl, Gerhard Rigoll, *Technische Universität München, Germany.*

A Real-Time Color Quantization Scheme for Virtual Environments Navigation System
Hun-gyu Lim, Doowon Paik, *Soongsil University, Korea.*

Usability and Internationalization

UI

User Experience Research and Design in Multinational Corporate Environment

201-A Conference Room

Chair(s): Paul Fu, *eBay Inc, USA.*

Extending the User Experience to Localized Products
Yanxia Yang, *Trend Micro, Inc., USA.*

Getting Most Out of Persona for Product Usability Enhancements
Jianming Dong, Kuldeep Kelkar, Kelly Braun, *PayPal Inc., USA.*

Measuring the Emotional Drivers of Visual Preference in China
Hsun Tang, *eBay Inc., China*; Jiaming Lang, Jinyu Lou, *eBay Inc. / Eachnet Network Information Services Shanghai Co., Ltd., China*; Kenneth Farmer, *eBay Inc., USA.*

How Should You Ask Questions to Measure Attitudes Accurately? An Experimental Design Study
Seema Swamy, *eBay Inc., USA.*

Design for Facilitating eBay Transactions Using Skype
Frank Guo, Sulekha Nair, *eBay Inc., USA.*

The Use of Cognitive and Social Psychological Principles in Field Research: How it Furthers our Understanding of User Behaviors, Needs and Motivations, and Informs the Product Design Process
Krisela Rivera, Elissa Darnell, *eBay Inc., USA.*

European Localization Research and Activities with Focus on the Asian Market

201-B Conference Room

Chair(s): Kerstin Röse, *University of Kaiserslautern, Germany.*

Localization Issues: A glimpse at the Korean user (from the Western perspective)
Björn-M. Braun, Kerstin Röse, *University of Kaiserslautern, Germany.*

Structural User Preferences of Interfaces and Time Orientation
Nancy Thiels, Theresa Maxeiner, Kerstin Röse, *University of Kaiserslautern, Germany.*

A Tool for Cross-Cultural Human Computer Interaction Analysis
Rüdiger Heimgärtner, *Siemens AG, Germany.*

A Qualitative Oriented Study about IT Procurement Processes: Comparison of 4 European Countries
Michael Schiessl, Sabrina Duda, *eye square GmbH, Germany.*

Mobile use in Germany and China: a cross-cultural study
Kerstin Röse, *University of Kaiserslautern, Germany*; Weifang Yang, *China.*

Increasing the Usability of Text Entry in Mobile Devices for European Languages and Languages Used in Europe
Martin Böcker, *Böcker, Schneider-Hufschmidt & Groh GbR, Germany*; Karl Ivar Larsson, *LWP Consulting, Sweden*; Bruno Von Niman, *Vonniman Consulting, Sweden.*

Online Communities and Social Computing

OCSC

Social Behavior in On-line Communities

305-B Conference Room

Chair(s): Ed Chi, *Palo Alto Research Center, USA.*

First Design of a Ubiquitous System for Affective Bonding and Support with Family and Friends
Sebastien Duval, Hiromichi Hashizume, *National Institute of Informatics, Japan.*

The Need for Technology to Support Creative Information Sharing Whilst Mobile: Identified Activities and Relationship Groups
Yan Chen, Tracy Ross, Val Mitchell, *Loughborough University, UK.*

Modelling and Matching: A Methodology for ePlanning System Development to Address the Requirements of Multiple User Groups
Yun Chen, Maria Kutar, Andy Hamilton, *University of Salford, UK.*

Aspects of Augmented Social Cognition: Social Information Foraging and Social Search
Ed Chi, Peter Pirolli, *Palo Alto Research Center, USA*; Shyong K. Lam, *University of Minnesota, USA.*

A Study of Emotional and Rational Purchasing Behaviors for Online Shopping
Lifen Yeh, Eric Wang, Sheue-Ling Hwang, *Tsing Hua University, Taiwan China.*

Sociability Design Guidelines for the Online Gaming Community: Role Play and Reciprocity
Yu Chieh Pan, Liangwen Kuo, *Chiao Tung University, Taiwan China*; Jim Jiunde Lee, *Chiao-Tung University, Taiwan China.*

Mobile Social Software for the Developing World
Beth Kolko, Erica Johnson, Emma Rose, *University of Washington, USA.*

Parallel Sessions

AC

Augmented Cognition

AugCog Lessons Learned and Future Directions for Enabling "Anyone, Anytime, Anywhere" Applications

302 Conference Room

Chair(s): Chris Forsythe, *Sandia National Laboratories, USA*; Neil Scott, *University of Hawaii at Manoa, USA*.

Intent Driven Interfaces to Ubiquitous Computers
Neil Scott, Martha Crosby, *University of Hawaii at Manoa, USA*.

Augmented Cognition, Universal Access and Social Intelligence in the Information Society
Ray Adams, *Middlesex University, UK*; Satinder Gill, *Cambridge University, UK*.

Making the Giant Leap with Augmented Cognition Technologies: What Will Be the First "Killer App?"
Chris Forsythe, *Sandia National Laboratories, USA*; Chris Berka, *Advanced Brain Monitoring, Inc., USA*; Robert Matthews, *Quantum Applied Science and Research, Inc., USA*; John Wagner, *Sandia National Laboratories, USA*.

DHM

Digital Human Modeling

Anthropometry and Visible Human-based Virtual Medicine

Exhibition Hall 2-A

Chair(s): Vincent Duffy, *Purdue University, USA*.

Predefined Manikins to Support Consideration of Anthropometric Diversity by Product Designers
Dan Hogberg, *University of Skovde, Sweden*; Keith Case, *Loughborough University, UK*.

Mathematical Methods for Shape Analysis and Form Comparison in 3D Anthropometry: A Literature Review
Jianwei Niu, Zhizhong Li, *Tsinghua University, China*; Gavriel Salvendy, *Purdue University, USA*.

Automatic, Body Measurements Based Generation of Individual Avatars using Highly Adjustable Linear Transformation
Andreas Volz, Rainer Blum, Sascha Häberling, Karim Khakzar, *Fulda University of Applied Sciences, Germany*.

The Effects of Human Interaction on Biometric System Performance
Eric Kukula, Stephen Elliott, Vincent Duffy, *Purdue University, USA*.

Applications of the Visible Korean Human
Min Suk Chung, Jin Seo Park, *Ajou University School of Medicine, Korea*.

Advances in Visible Human Based Virtual Medicine
Pheng Ann Heng, *Chinese University of Hong Kong, Hong Kong*.

Ergonomic Applications of Digital Human Modeling

Exhibition Hall 2-B

Chair(s): Timo Määttä, *VTT Technical Research Centre of Finland, Finland*.

Evaluation of Navy Shipboard Habitability for a Warship Design using Human Model
Hongtae Kim, Jin Park, Hojin Hwang, Chang-Min Lee, *Maritime & Ocean Engineering Research Institute / KORDI, Korea*.

Foot Digitalization for Last Design and Individual Awareness of Personal Foot Characteristics
Paolo Olivato, Manuela Morricone, Enrica Fubini, Alessandra Re, *University of Torino, Italy*.

Construction of Driver model to analyze control action of aged Drivers
Ichiro Kageyama, Yukiyo Kuriyagawa, *Nihon University, Japan*.

Strategy to Operate Cylindrical Interface -Operation Difference According to the Dimension of the Cylinder and that of the Hand-
Ohki Kanezashi, *The University of Tokyo, Japan*; Natsuki Miyata, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*; Jun Ota, *The University of Tokyo, Japan*.

A Novel Method for Cloth-body Collision Detection
Xiaolong Zhu, Shihong Xia, Yong Yu, Tianlu Mao, *Chinese Academy of Sciences, China*.

Modeling of Human Head for Custom Wig Production
Youngjun Kim, Jungbum Cho, Bohyun Kim, Kunwoo Lee, *Seoul National University, Korea*.

A Method for Garment Pattern Generation by Flattening 3D Body Scan Data
Young Lim Choi, Yun-Ja Nam, *Seoul National University, Korea*; Kueng Mi Choi, *Dong Seoul College, Korea*; Ming Hai Cui, *Seoul National University, Korea*.


HCI2007
INTERNATIONAL

Parallel Sessions

Friday 16:00 – 18:00

HIMI

Human Interface and the Management of Information

Visual Information

Exhibition Hall 2-A

Chair(s): Margherita Antona, *Foundation for Research and Technology - Hellas (FORTH), Greece.*

An Interactive Approach to Display Large Sets of Association Rules
Olivier Couturier, *Centre de Recherche en Informatique de Lens (CRIL), France*; José Rouillard, *Université des Sciences et Technologies de Lille, France*; Vincent Chevrin, *TRIGONE/ LIFL, France.*

Analysis and Evaluation of Recommendation Systems
Emiko Orimo, Hideki Koike, *University of Electro-Communications, Japan*; Toshiyuki Masui, *Apple Computer Incorporation, USA*; Akikazu Takeuchi, *So-net Entertainment Corporation, Japan.*

Communication Analysis of Visual Support System that Uses Line Drawing Expression
Shunichi Yonemura, *Nippon Telegraph and Telephone Corp., Japan*; Tohru Yoshida, Yukio Tokunaga, *Shibaura Institute of Technology, Japan*; Jun Ohya, *Waseda University, Japan.*

Moving Object Contour Detection based on S-T Characteristics in Surveillance
Yuan-yuan Cao, Guangyou Xu, *Tsinghua University, China*; Thomas Riegel, *Siemens AG, Germany.*

Visual Feedback to Reduce the Negative Effects of Message Transfer Delay on Voice Chatting
Kazuyoshi Murata, *Tokyo University of Agriculture and Technology, Japan*; Megumi Nakamura, Yu Shibuya, Itaru Kuramoto, Yoshihiro Tsujino, *Kyoto Institute of Technology, Japan.*

e-Sports Live: e-Sports Relay Broadcasting On Demand
Woonhyuk Baek, Anjin Park, Jongin Kim, Keechul Jung, *Soongsil University, Korea.*

LensList: Browsing and Navigating Long Linear Information Structures
Hongzhi Song, Yu Qi, Yun Liang, Hongxing Peng, Liang Zhang, *South China Agricultural University, China.*

Supporting Design and Usability

Exhibition Hall 2-B

Chair(s): Kevin Tseng, *Chang Gung University, Taiwan China.*

A Framework for Enterprise Information Systems
Xi-Min Yang, *South-Central University for Nationalities, China*; Chang-Sheng Xie, *Huazhong University of Science & Technology, China.*

A Case Study on Effective Application of Inquiry Methods to Find out Mobile Phone's New Function
SangHyun Park, Yeon-Ji Kim, *LG Electronics, Korea.*

Implementing the HCD Method into the Developing Process of a CPD System
Kevin Tseng, *Chang Gung University, Taiwan China*; Tsai-hsuan Tsai, *Chihlee Institute of Technology, Taiwan China*; Kun-chieh Wang, *Ling Tung University, Taiwan China.*

Information Behaviors of HCI Professionals: Design of Intuitive Reference System for Technologies
Eunkyung Yoo, *Samsung Electronics, Korea*; Myunghyun Yoo, Yongbeom Lee, *Samsung Advanced Institute of Technology, Korea.*

Exporting Usability Knowledge into a Small-Sized Software Development Organization – A Pattern Approach
Kari-Pekka Aikio, *University of Oulu, Finland.*

An Experimental Examination of Customer Preferences on User Interface Design of Mobile Services
Heejun Park, *Yonsei University, Korea*; Seung Baek, *Hanyang University, Korea.*

Achieving Usability within E-Government Web Sites Illustrated by a Case Study Evaluation
Basil Soufi, *Abu Dhabi University, United Arab Emirates*; Martin Maguire, *Loughborough University, UK.*

HCI

Human-Computer Interaction

HMI Theory and Practice in Industries

201-C Conference Room

Chair(s): Wei Zhou, *Siemens Ltd., China.*

A Study on the Form of Representation of the User's Mental Model-Oriented Ancient Map of China
Rui Yang, *Siemens Ltd., China*; Dan Li, *Tongji University, China*; Wei Zhou, *Siemens Ltd., China.*

Flexible Multi-modal Interaction Technologies and User Interface Specially Designed for Chinese Car Infotainment System
Chen Yang, Nan Chen, Peng-fei Zhang, Zhen Jiao, *Siemens Ltd., China.*

A Case Study of New Way to Apply Card Sort in Panel Design
Yifei Xu, Xiangang Qin, Shan Shan Cao, *Siemens Ltd., China.*

Multimodal Interfaces for In-Vehicle Applications
Roman Vilimek, Thomas Hempel, Birgit Otto, *Siemens AG, Germany.*

When Does a Difference Make a Difference? A Snapshot on Global Icon Comprehensibility
Sonja Auer, Ester Dick, *Siemens AG, Germany.*

Mental Models of Chinese and German Users and their Implications for MMI: Experiences from the Case Study Navigation System
Barbara Knapp, *Siemens AG, Germany.*

With User Interface Design from Socio-cultural Trend to a Innovative Office Phone Generation
Claude Toussaint, *Designafairs GmbH, Germany.*

Enhancing Visual Interaction

305-C Conference Room

Chair(s): Hong-jin Sun, *McMaster University, Canada.*

Interactive Visual Decision Tree Classification
Yan Liu, *Wright State University, USA*; Gavriel Salvendy, *Purdue University, USA.*

The Effects of Various Visual Enhancements during Continuous Pursuit Tracking Tasks
Jaekyu Park, *Korea Atomic Energy Research Institute (KAERI), Korea*; Sung Ha Park, *Hannam University, Korea.*

Assessment of Perception of Visual Warning Signals Generated using an Augmented Reality System
Marek Dzwiarek, Anna Luczak, Andrzej Najmiec, Cezary Rzymkowski, Tomasz Strawinski, *Central Institute for Labour Protection - National Research Institute, Poland.*

Visual and Auditory Information Specifying an Impending Collision of an Approaching Object
Liu Zhou, Jingjiang Yan, Qiang Liu, Hong Li, Chaoxiang Xie, *Southwest University, China*; Yinghua Wang, *Zhongzhou University, China*; Jennifer Campos, Hong-jin Sun, *McMaster University, Canada.*

Visual Feedback: its Effect on Teleconferencing
Atsunobu Kimura, Masayuki Ihara, Minoru Kobayashi, *Nippon Telegraph and Telephone Corp., Japan*; Yoshitsugu Manabe, Kunihiro Chihara, *Nara Institute of Science and Technology, Japan.*

Interface Design Technique Considering Visual Cohesion-Rate by Object Unit
Chang-Mog Lee, Ok-Bae Chang, *Chonbuk National University, Korea.*

Displays Attentive to Unattended Regions: Presenting Information in a Peripheral-Vision-Friendly Way
Mon-Chu Chen, Roberta Klatzky, *Carnegie Mellon University, USA.*

Interacting in Virtual and Augmented Environments

307 Conference Room

Chair(s): Cecilia Sik Lanyi, *University of Pannonia, Hungary*.

Evaluation of Wayfinding Aids Interface in Virtual Environment
Anna Wu, Wei Zhang, Bo Hu, *Tsinghua University, China*; Xiaolong Zhang, *Pennsylvania State University, USA*.

Resolving Occlusion between Virtual and Real Scenes for Augmented Reality Applications
Lijun Li, Tao Guan, Bo Ren, *HuaZhong University of Science & Technology, China*.

Augmented Desk System: The Information Table of Collaborative and Cooperative (infoTable)
Cheng Wei Shih, Shu-Feng Pan, Ming-Xian Lee, *Yunlin University of Science and Technology, Taiwan China*; Hong-Sheng Chen, *Ling Tung University, Taiwan China*.

RealSound Interaction: A Novel Interaction Method with Mixed Reality Space by Localizing Sound Events in Real World
Mai Otsuki, Asako Kimura, Takanobu Nishiura, Fumihisa Shibata, Hideyuki Tamura, *Ritsumeikan University, Japan*.

Motivation in Home Fitnessing: Effects of Immersion and Movement
Joyce Westerink, *Philips Research, Netherlands*; Marko De Jager, *Philips, USA*; Ronald Bonants, Marijn Bruinink, Jan Van Herk, *Philips Research, Netherlands*; Yvonne De Kort, Wijnand Ijsselsteijn, *Technische Universiteit Eindhoven, Netherlands*; Fren Smulders, *Maastricht University, Netherlands*.

A Replicated CSCW Framework for Multi-user Interaction in 3D Collaborative Design
Fazhi He, Huajun Liu, Xiantao Cai, Shuxu Jing, *Wuhan University, China*.

Evaluating the Usability of an Auto-stereoscopic Display
Zhao Xia Janet Jin, Ya Jun Edwin Zhang, Xin Wang, *Honeywell, China*; Thomas Plocher, *Honeywell, USA*.

Information Search

308 Conference Room

Chair(s): Sebastiano Bagnara, *University of Siena, Italy*.

Multiple Viewed Search Engine for e-Journal --- a Case Study on Zoological Science
Takahiro Seki, Taiki Wada, Yasuhiro Yamada, *Kyushu University, Japan*; Nozomi Ytow, *University of Tsukuba, Japan*; Sachio Hirokawa, *Kyushu University, Japan*.

Relevance Measurement on Chinese Search Results
Hua Qin, Pei-Luen Patrick Rau, *Tsinghua University, China*.

Evaluating the Chinese Web Search Results -- A User-center Methodology Study
Wang Huadong, Pei-Luen Patrick Rau, *Tsinghua University, China*.

Analysis of User Interaction with Service Oriented Chatbot Systems
Marie-Claire Jenkins, Richard Churchill, Stephen Cox, Dan Smith, *University of East-Anglia, UK*.

History Based User Interest Modeling in WWW Access
Shuang Han, Wenguang Chen, Heng Wang, *Peking University, China*.

Pictogram Retrieval Based on Collective Semantics
Heeryon Cho, Toru Ishida, *Kyoto University, Japan*; Rieko Inaba, *National Institute of Information and Communications Technology, Japan*; Toshiyuki Takasaki, Yumiko Mori, *NPO Pangaea, Japan*.

Improving Document Icon to Re-find Efficiently What You Need
Changzhi Deng, Mingjun Zhou, Feng Tian, Guozhong Dai, Hong'an Wang, *Chinese Academy of Sciences, China*.

Advanced Displays

309 Conference Room

Chair(s): Eric Kuo-Hao Tang, *Feng Chia University, Taiwan China*.

Designing a Direct Manipulation HUD Interface for In-Vehicle Infotainment
Vassilis Charissis, Martin Naef, Stylianos Papanastasiou, Marianne Patera, *University of Glasgow, UK*.

Comparative Characteristics of Head-Up Display for Computer-Assisted Instruction
Kikuo Asai, *National Institute of Multimedia Education, Japan*; Hideaki Kobayashi, *The Graduate University for Advanced Studies, Japan*.

Comparing Two Head-Mounted Displays in Ultrasound Scanning
Juha Havukumpu, *Helsinki Polytechnic Stadia, Finland*; Jukka Häkkinen, *University of Helsinki / Nokia Research Center, Finland*; Eija Grönroos, Pia Vähäkangas, *Helsinki Polytechnic Stadia, Finland*; Göte Nyman, *University of Helsinki, Finland*.

Center or Corner? The Implications of Mura Locations on LCD Displays
Eric Kuo-Hao Tang, Alva Yueh-Hua Lee, Kuo Hsun Ku, *Feng Chia University, Taiwan China*.

A Study of Human Vision Inspection for Mura
Pei-Chia Wang, *TSMC Hsin-Chu, Taiwan China*; Sheue-Ling Hwang, *Tsing Hua University, Taiwan China*; CHao-Hua Wen, *Taiwan TJT LCD Association, Taiwan China*.

Information Display of Wearable Devices through Sound Feedback of Wearable Computing
Young-hyun Park, Kwang-hee Han, *Yonsei University, Korea*.

The Research of Using Image-Transformation to the Conceptual Design of Wearable Product with Flexible Display
Yung-Chin Tsao, Li-Chieh Chen, Shaio-Chung Chan, *Tatung University, Taiwan China*.

Teamwork Support and Collaboration

311-A Conference Room

Chair(s): Gunilla Bradley, *Royal Institute of Technology, Sweden*.

The Project Browser: Supporting Information Access for a Project Team
Anita Cremers, *TNO Human Factors, Netherlands*; Inge Kuijper, *Informaat, Netherlands*; Peter Groenewegen, Wilfried Post, *TNO Human Factors, Netherlands*.

CoConceptMap: A System for Collaborative Concept Mapping
Mingjun Zhou, Xiang Ao, LiShuang Xu, Feng Tian, Guozhong Dai, *Chinese Academy of Sciences, China*.

Focus+Roles: Socio-Organizational Conflict Resolution in Collaborative User Interfaces.
Davy Vanacken, Chris Raymaekers, Kris Luyten, Karin Coninx, *Hasselt University, Belgium*.

A Role-based Multiple View Approach to Distributed Geo-Collaboration
Gregorio Convertino, Dejin Zhao, Craig Ganoe, John Carroll, Mary Beth Rosson, *The Pennsylvania State University, USA*.

Process-oriented User Support for Workflow Applications
Dian Tan, *DaimlerChrysler AG, Germany*; Hartmut Wandke, *Humboldt-University Berlin, Germany*.

Complexity in Enterprise Applications vs. Simplicity in User Experience
Matthias Uflacker, *Hasso Plattner Institute, Germany*; Daniela Busse, *SAP Labs, USA*.

Excellence in Ease of Use with Rich Functionality How Enterprise Software Applications with Rich Functionality Can Be Built to Excel in Ease of Use
Abbas Moallem, *Tumbleweed Communication, USA*.

Parallel Sessions

HCI

Mobile Interaction

311-B Conference Room

Chair(s): Philippe Truillet, *IRIT, France*.

Usability Improvements for WLAN Access
Kristiina Karvonen, *Helsinki University of Technology, Finland*; Janne Lindqvist, *Helsinki University of Technology (visiting ICSI), USA*.

G-tunes – Physical Interaction Design of Playing Music
Jia Du, Ying Li, *Technische Universiteit Eindhoven, Netherlands*.

WAP Access Methods on Mobile Phones
Zhang Hua, Yoon Ping Cui, *Nanyang Technological University, Singapore*.

Fisheye Keyboard: Whole Keyboard Displayed on PDA
Mathieu Raynal, Philippe Truillet, *IRIT, France*.

Drawing Type Tactile Presentation for Tactile Letter Recognition
Ju-Hui Cho, Minsoo Hahn, *Information and Communications University, Korea*.

Menu Selection Using Auditory Interface
Koichi Hirota, Yosuke Watanabe, *The University of Tokyo, Japan*; Yasushi Ikei, *Tokyo Metropolitan University, Japan*.

Using Mobile Devices to Improve the Interactive Experience of Visitors in Art Museums
José Antonio Gallud, María Lozano, Ricardo Tesoriero, Victor M. R. Penichet, *University of Castilla-La Mancha, Spain*.

EPCE

Engineering Psychology and Cognitive Ergonomics

Cognitive Design

Exhibition Hall 2-D

Chair(s): Xianghong Sun, *Chinese Academy of Sciences, China*.

Confucian in Western Cockpit: The Investigation of Long-Term Versus Short-Term Orientation Culture and Aviation Accidents
Wen-Chin Li, Don Harris, *Cranfield University, UK*.

A Study on the Vertical Navigation of High Rise Buildings
Xianghong Sun, *Chinese Academy of Sciences, China*; Thomas Plocher, *Honeywell, USA*; Weina Qu, *Chinese Academy of Sciences, China*.

Voice Alarm System in Emergency Evacuation
Huiyang Li, Xianghong Sun, Kan Zhang, *Chinese Academy of Sciences, China*.

Chinese Color Preference in Software Design
Yan Ge, *Chinese Academy of Sciences, China*; Ronggang Zhou, *Tsinghua University, China*; Xi Liu, Kan Zhang, *Chinese Academy of Sciences, China*.

A Research of Speech Signal of Fire Information Display Interface
Liang Zhang, Xianghong Sun, *Chinese Academy of Sciences, China*; Thomas Plocher, *Honeywell, USA*.

Interactive Style of 3D Display of Buildings on Touch Screen
Weina Qu, Xianghong Sun, *Chinese Academy of Sciences, China*.

What Stories Inform Us About the Users?
Yong Ming Kow, *In-Situ Research, Singapore*; Angela Tan, Martin Helander, *Nanyang Technological University, Singapore*.

UAHCI

Universal Access in Human-Computer Interaction

Advanced Environments and Technologies

201-A Conference Room

Chair(s): Matina Halkia, *European Commission Joint Research Center, Italy*; Massimo Tistarelli, *University of Sassari, Italy*.

Crisis Rooms are Ambient Intelligence Digital Territories
Irene Mavrommati, *University of the Aegean / Computer Technology Institute, Greece*; Achilles Kameas, *Computer Technology Institute, Greece*.

Advanced Identification Technologies for Human - Computer Interaction in Crisis Rooms
Massimo Tistarelli, *University of Sassari, Italy*; Rob Kranenburg, *Virtual Platform / Utrecht University, Belgium*; Enrico Grosso, *University of Sassari, Italy*.

A New Method for Multi-Finger Detection Using a Regular Diffuser
Li-wei Chan, Yi-fan Chuang, Yi-wei Chia, Yi-ping Hung, Jane Hsu, *Taiwan University, Taiwan China*.

An Adaptive Vision System toward Implicit Human Computer Interaction
Peng Dai, Linmi Tao, Xiang Zhang, Ligeng Dong, Guangyou Xu, *Tsinghua University, China*.

Lip Contour Extraction using Level Set Curve Evolution with Shape Constraint
Jae Sik Chang, *University of California, Santa Barbara, USA*; Eun Yi Kim, *Konkuk University, Korea*; Se Hyun Park, *Daegu University, Korea*.

Effects of Virtual Reality Display Types on the Brain Computer Interface System
Hyun Sang Cho, *Information and Communications University, Korea*; Kyoung Park, *Dankook University, Korea*; Yongkag Kim, *Information and Communications University, Korea*; Chang S. Kim, *Korea Ocean Research & Development Institute, Korea*; Minsoo Hahn, *Information and Communications University, Korea*.

EOG Pattern Recognition Trial for a Human Computer Interface
Sara Brunner, *University of Applied Sciences, Austria*; Sten Hanke, Siegfried Wassertheurer, *Austrian Research Centers GmbH. – ARC, Austria*; Andreas Hochgatterer, *Austrian Research Centers GmbH, Austria*.

Web Accessibility

301 Conference Room

Chair(s): Julio Abascal, *University of the Basque Country, Spain*.

Accessibility Guidelines Management Framework
Myriam Arrue, Markel Vigo, Amaia Aizpurua, Julio Abascal, *University of the Basque Country, Spain*.

Improving Accessibility Through the Visual Structure of Web Contents
Masahiro Watanabe, Daisuke Asai, Yoko Asano, *Nippon Telegraph and Telephone Corp., Japan*.

Improving Accessibility for Existing Websites Spanning Multiple Domains
Takashi Sakairi, Takuya Ohko, Hidemasa Muta, *IBM Japan, Japan*.

DHTML Accessibility Checking based on Static JavaScript Analysis
Takaaki Tateishi, Hisashi Miyashita, Tabuchi Naoshi, Shin Saito, Kouichi Ono, *IBM Research, Japan*.

accessibilityWorks: Enhancing Web Accessibility in Firefox
John Richards, Vicki Hanson, Jonathan Brezin, Calvin Swart, Susan Crayne, Mark Laff, *IBM, USA*.

Remote Navigability Testing using Data Gathering Agents
Martin Gonzalez Rodriguez, Fidel Diez Diaz, Agueda Vidau, *University of Oviedo, Spain*.

Detection of Layout-purpose TABLE Tags Based on Machine Learning
Hidehiko Okada, Taiki Miura, *Kyoto Sangyo University, Japan*.

Virtual Reality

VR

Interacting in Virtual Environments

302 Conference Room

Chair(s): Gary Bente, *University of Cologne, Germany*.

Towards an Interaction model in Collaborative Virtual Environments
Diego Martínez, José P. Molina, Arturo S. García, Pascual González, *University of Castilla-La Mancha, Spain*.

Psychophysical Approach to the Measurement of Depth Perception in Stereo Vision
Humberto Rosas, Watson Vargas, Alexander Cerón, Dario Dominguez, Adriana Cardenas, *Universidad Militar Nueva Granada, Colombia*.

Orientation Specific and Geometric Determinant of the Mental Representation of the Virtual Room
Zhiqiang Luo, Henry Been-Lirn Duh, *Nanyang Technological University, Singapore*.

How Much Information Do You Remember? - The Effects of Short-term Memory on Scientific Visualization Tasks
Wen Qi, *Technische Universiteit Eindhoven, Netherlands*.

Virtual gaze. A pilot Study on the Effects of Computer Simulated Gaze in Avatar-based Conversations
Gary Bente, Felix Eschenburg, Nicole Krämer, *University of Cologne, Germany*.

Ergonomic Interactive Testing in a Mixed-reality Environment
Monica Bordegoni, Umberto Giraudo, Giandomenico Caruso, Francesco Ferrise, *Politecnico di Milano, Italy*.

Usability and Internationalization

UI

Global Development for Global Users

201-B Conference Room

Chair(s): Allen Milewski, *Monmouth University, USA*.

Creating an International Design Team
Becky Sundling, *Microsoft, China*.

Testing Object Management (TOM): a Prototype for Usability Knowledge Management in Global Software Development
Ian Douglas, *Florida State University, USA*.

The Globalization of User Research: Emerging Trends and Complexities
Robert Schumacher, *User Centric, Inc., USA*; Yiner Ya, *User Experience, LLC, China*.

Contextual User Research for International Software Design
David Siegel, Susan Dray, *Dray & Associates, Inc., USA*.

A Tale of Two Teams: Success and Failure in Virtual Team Meetings
Marilyn Tremaine, *New Jersey Institute of Technology, USA*; Allen Milewski, *Monmouth University, USA*; Richard Egan, Suling Zhang, *New Jersey Institute of Technology, USA*.

Lessons from Applying Usability Engineering to Fast-paced Product Development Organizations
Dong-Seok Lee, *LG Electronics, Korea*; Younghwan Pan, *Kookmin University, Korea*.

Usability and Culture (II)

303 Conference Room

Chair(s): Sri Kurniawan, *The University of Manchester, UK*.

The Impact of Different Icon Sets on the Usability of a Word Processor
Tanya Beelders, Pieter Blignaut, Theo McDonald, Engela Dednam, *University of the Free State, South Africa*.

Cross-Use: Cross-Cultural Usability User Evaluation-In-Context
Jasem Alostath, Abdulwahed Moh Khalfan, *Public Authority for Applied Education & Training (PAAET), Kuwait*.

Incorporating the Cultural Dimensions into the Theoretical Framework of Website Information Architecture
Wan Abdul Rahim Wan Mohd Isa, Md Noor Nor Laila, Shafie Mehad, *Universiti Teknologi MARA, Malaysia*.

Mobile Personalization at Large Sports Events - User Experience and Mobile Device Personalization
Xu Sun, Andrew May, *Loughborough University, UK*.

Towards Cultural Adaptability in Driver Information and -Assistance Systems
Rüdiger Heimgärtner, *Siemens AG, Germany*.

Development of Integrated Analysis System and Tool of Perception, Recognition, and Behavior for Web Usability Test: with Emphasis on Eye-Tracking, Mouse-Tracking, and Retrospective Think Aloud
Byungjoo Kim, Ying Dong, Sungjin Kim, Kun-pyo Lee, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Correlation between Cognitive Style and Structure & Flow in Mobile Phone Interface: Comparing Performance and Preference of Korean and Dutch Users
Ji Hye Kim, Kun-pyo Lee, Im Kyeong You, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

Usability and Accessibility of e-Government

Exhibition Hall 2-C

Chair(s): Seongil Lee, *Sungkyunkwan University, Korea*.

Web Accessibility Compliance of Government Web Sites in Korea
Joonho Hyun, Doojin Choi, Sukil Kim, *Korea Agency of Digital Opportunity and Promotion, Korea*.

Usability Evaluation of Korean e-Government Portal
Seongil Lee, *Sungkyunkwan University, Korea*; Joo Eun Cho, *Kyungbook National University, Korea*.

Accessibility Evaluation of Korean e-Government
Seongil Lee, Byun Geun Kim, Jong Gon Kim, *Sungkyunkwan University, Korea*.

Australian Initiatives in Accessibility to e-government Services
Gunela Astbrink, *GSA Information Consultants, Australia*.

The Potential of Web Accessibility in China: A Hypothesis on Its Impact on the Global Web Interface
Eleanor Lisney, Christina Li, Sean Liu, *uiGarden.net, UK*.

Search String Analysis from a Socio-economic Perspective
Theo McDonald, Pieter Blignaut, *University of the Free State, South Africa*.

Parallel Sessions

UI

Designing for Culture

305-A Conference Room

Chair(s): Anirudha Joshi, *Indian Institute of Technology, India.*

Chinese Web Browser Design Utilising Cultural Icons
Siu-Tsen Shen, *Formosa University, Taiwan China*; Stephen Prior, *Middlesex University, UK*; Kuen-Meau Chen, *Center for High-Performance Computing, Taiwan China*; Man-Lai You, *Yunlin University of Sciences and Technology, Taiwan China.*

Culturally Adaptive Software: Moving Beyond Internationalization
Katharina Reinecke, Abraham Bernstein, *University of Zurich, Switzerland.*

Approaches to Create a Universal User Experience in Handheld Electronic Product
Joonhwan Kim, Wanje Park, Scott Song, Boeun Park, Hyunkook Jang, *Samsung Electronics, Korea.*

Enabling User Centered Design Processes in Open Source Communities
Mads Bødker, Lene Nielsen, Rikke Orngreen, *Copenhagen Business School, Denmark.*

Introducing New Methodologies for Identifying Design Patterns for Internationalization and Localization
Nicole Schadewitz, Timothy Jachna, *The Hong Kong Polytechnic University, Hong Kong.*

Usability Challenges in Designing Foreign Language Keypads for Handheld Devices
Parul Nanda, Kem-Laurin Kramer, *Research In Motion, Canada.*

OCSC

Online Communities and Social Computing

Interaction Design for On-line Communities

305-B Conference Room

Chair(s): Elsa Marziali, *University of Toronto, Canada.*

User-centred Design Approach for a Community Website With Social Software
Ilse Bakx, *K.U.Leuven Research & Development, Netherlands.*

Physical Representation Social Presence with Interactive Grass
Jui hang Shih, Teng-Wen Chang, Hui-Mei Hong, Tian-Chiu Li, *Yunlin University of Science and Technology, Taiwan China.*

Using Design Critique as Research to link Sustainability and Interactive Technologies
Eli Blevis, Youn-kyung Lim, David Roedl, Erik Stolterman, *Indiana University, USA.*

Grand Challenges in Design Research for Human-Centered Design Informatics
Youn-kyung Lim, Eli Blevis, Erik Stolterman, *Indiana University, USA.*

How to See the Beauty that Is Not There: The Aesthetic Element of Programming in the Computer-based Media Art
Hyunkyoung Cho, Joonsung Yoon, *Soongsil University, Korea.*

CNA2 – Communications and Community; Neighbourhoods and Networks; Action and Analysis: Concepts and Methods for Community Technology Research
Peter Day, Clair Farenden, *University of Brighton, UK.*

Habitat Computing: Towards the Creation of Tech-Enabled Mexican Neighborhoods
Victor Gonzalez, Luis Castro, *University of Manchester, UK*; Kenneth Kraemer, *University of California at Irvine, USA.*

DHM

Digital Human Modeling

Modeling, Animation and Simulation

311-C Conference Room

Chair(s): Shaun Lawson, *University of Lincoln, UK.*

Research on Modeling of Complicate Traffic Simulation System
Jiankun Wu, Linpeng Huang, Jian Cao, Minglu Li, Dejun Wang, *Shanghai Jiaotong University, China*; Mingwen Wang, *Jiangxi Normal University, China.*

Finding Origin Points for New Coordinate System Suitable for Sign Animation
Tomohiro Kuroda, *Kyoto University Hospital, Japan*; Kazuya Okamoto, *Kyoto University, Japan*; Ryo Kitauchi, *Kinki University, Japan*; Tadamasa Takemura, *Kyoto University Hospital, Japan*; Naoki Ohboshi, *Kinki University, Japan*; Hiroyuki Yoshihara, *Kyoto University Hospital, Japan.*

Computer Graphic Modeling and Simulation of Human Musculoskeletal System for Biomechanical Research
Yoon Hyuk Kim, *Kyung Hee University, Korea.*

Coloured Petri Net based Formal Airport Control Model for Simulation and Analysis of Airport Control Processes
Bernd Werther, Christoph Moehlenbrink, Michael Rudolph, *German Aerospace Center (DLR), Germany.*

A New Decoding Algorithm in MIMO-ZP-OFDM Systems
Rui Kang, ChaoXiong Xu, Hao Chen, HongBo Xu, *HuaZhong Normal University, China.*

The Strength Factor in Digital Human Modeling and Simulation: A Case for a New Framework
Kang Li, Xudong Zhang, *University of Illinois at Urbana, Champaign, USA.*


HCI2007
INTERNATIONAL

Posters

Note: The number of the poster board is indicated on the left.

1. Comparison of Screen Interface of Automated Teller Machine (ATM) from the Viewpoint of Semiotics
Azniyati Abdul Wahab, Toshiki Yamaoka, *Wakayama University, Japan*.

2. Pictogram Generator: Design Support System Enables Everybody to Produce Illustrations Easily
Mariko Adachi, Takashi Ishihara, Kunio Sakamoto, *Shimane University, Japan*.

3. Presentation of Government Statistics on the Web: Usability and Information Architecture
Luiz Agner, Anamaria De Moraes, *Pontificia Universidade Católica do Rio de Janeiro, Brazil*.

4. Implementation of the Multi-View 3d Image Communication System Using Intermediate View Reconstruction Scheme
Sungsoo Ahn, *Myongji College, Korea*; Junghwan Ko, Jungsuk Lee, *Inha Technical College, Korea*.

5. Envisioning Concept of Communication Tool for Elderly People
Naoto Aizawa, *Otaru University of Commerce, Japan*; Hideaki Kasai, *NEC Software Hokkaido, Ltd., Japan*; Naoki Hirasawa, *Otaru University of Commerce, Japan*.

6. Appropriate Complexity of Image Displayed on Head-Mounted Displays in Augmented Reality
Toshiya Akasaka, *Keio University, Japan*; Miwa Nakanishi, *Tokyo University of Science, Japan*; Yusaku Okada, *Keio University, Japan*.

7. Brain-Machine Interfaces through Control of Electroencephalographic Signals and Vibrotactile Feedback
Fabio Aloise, Nicholas Caporusso, Donatella Mattia, *Fondazione Santa Lucia, Italy*; Fabio Babiloni, *Università di Roma La Sapienza, Italy*; Laura Kauhanen, *Helsinki University of Technology, Finland*; José Millan, *IDIAP Research Institute, Switzerland*; Marnix Nuttin, *Katholieke Universiteit Leuven, Belgium*; Maria Grazia Marciani, *Università di Roma Tor Vergata, Italy*; Febo Cincotti, *Fondazione Santa Lucia, Italy*.

8. Experience Usability Life Cycle: A Framework for Knowledge Reuse
Osama Alshara, Mohamed Ibrahim, *Higher Colleges of Technology, United Arab Emirates*.

9. Remote TA Testing – Geographical, Cultural and Technological Challenges
Steen Andersen, *Snitker & Co., Denmark*.

10. Difference in Product Satisfaction between Existing and Inexperienced Users: The Case of an HDD Camcorder
Masaya Ando, *The Graduate University for Advanced Studies (SOKENDAI), Japan*; Yutaka Kuramochi, Ryota Niizeki, Masato Horiuchi, *Victor Company of Japan, Limited, Japan*; Masaaki Kurosu, *National Institute of Multimedia Education, Japan*.

11. The Social Aspect of Computer Games: An Activity Theoretical Model
Chee Siang Ang, Panayiotis Zaphiris, Stephanie Wilson, *City University London, United Kingdom*.

12. Engineering Kansei in E-Commerce Web Design
Mohd Lokman Anitawati, Md Noor Nor Laila, *Universiti Teknologi MARA, Malaysia*; Nagamachi Mitsuo, *Kyushu University, Japan*.

13. Reconfigurability of a Flexible Manufacturing Cell through a Desktop Virtual System
Haslina Arshad, *Universiti Kebangsaan Malaysia, Malaysia*; Magid Hamouda, Napsiah Ismail, *Universiti Pertanian Malaysia, Malaysia*; Riza Sulaiman, *Universiti Kebangsaan Malaysia, Malaysia*.

14. User Study of Augmented Reality Display Interfaces for a Lunar Surface Navigation System
Kikuo Asai, *National Institute of Multimedia Education, Japan*; Hideaki Kobayashi, *The Graduate University for Advanced Studies, Japan*; Tomotsugu Kondo, *National Institute of Multimedia Education, Japan*; Akira Mizuki, *TransferOrbit Corporation, Japan*.

15. An Evaluation of Internal Quality of Pineapple by the Impulse Excitation Technology
Chyung Ay, *Chiayi University, Taiwan China*.

16. Applying Mutual Relative Composition and Life Cycle on Tag Cloud
Donghoon Bae, *Motorola, Korea*.

17. Journalism Branding: A Comparative Study of EEG While Reading Chosunilbo and Hankoyre
Soyoung Bae, *Indiana University- Bloomington, United States*; Mahn-Woo Kwon, *Kyungsung University, Korea*.

18. Kelembai Walk: A Cooperative Evaluation of Interactive Artwork that Enforces Collaboration
Hanif Baharin, Romiza Md. Nor, *Universiti Teknologi MARA, Malaysia*.

19. Navigation Styles in QuickTime VR Scenes
Christoph Bartneck, *Eindhoven University of Technology, Netherlands*.

20. Emotional Multimodal Interfaces for Digital Media: The CALLAS Challenge
Massimo Bertoncini, *Engineering Ingegneria Informatica, Italy*; Marc Cavazza, *University of Teeside, United Kingdom*.

21. E-learning for all? Facing accessibility issues
Stefania Bocconi, Michela Ott, Mauro Tavella, *Italian National Research Council (CNR), Italy*.

22. Design and Evaluation of Tailorable Interfaces
Rodrigo Bonacin, *Cenpra - Ministério de Ciência e Tecnologia, Brazil*; M. Cecilia Baranauskas, Julius Cesar Lôbo Trindade, *University of Campinas, Brazil*.

23. Haptic Control System of a Tractor Cabin
Monica Bordegoni, Giandomenico Caruso, Umberto Giraudo, Francesco Ferrise, *Politecnico di Milano, Italy*.

24. Augmented Visualization System for a Haptic Interface
Monica Bordegoni, Mario Covarrubias, *Politecnico di Milano, Italy*.

25. Checking Usability Guidelines for Source Code in Collaborative Environments
Federico Botella-Beviá, Victor Iborra, *University Miguel Hernández of Elche, Spain*.

26. Selecting the Best Tailored Algorithm for Personalizing a Web Site
Federico Botella-Beviá, *University Miguel Hernández of Elche, Spain*; Enrique Lazcorreta, *Operations Research Center University Institute, Spain*; Antonio Fernandez-Caballero, *Computer Science Research Institute of Albacete, Spain*; Pascual González, José Antonio Gallud, *University of Castilla-La Mancha, Spain*; Alejandro Bia, *University Miguel Hernández of Elche, Spain*.

27. Funland: a Playful Software for the on-line Assessment of Facial Emotion Recognition Skills in Children
Alexandra Branzan Albu, *University of Victoria, Canada*; Naznin Virji-Babul, *Down Syndrome Research Foundation, Canada*; David Kerr, Robyn Hovorka, *University of Victoria, Canada*.

28. A Benchmark Analysis of Mobile Browsing Systems: Towards Adaptive Solutions
Caterina Calefato, *University of Torino, Italy*; Enrica Deregibus, *Centro Ricerche Fiat, Italy*; Stefano Marzani, Roberto Montanari, Francesco Tesauri, *University of Modena and Reggio Emilia, Italy*.

29. Preliminary Requirements and Approach for Tools that Configure Pervasive Awareness Applications: The ASTRA Case
Iannis Calemis, *Research Academic Computer Technology Institute, Greece*; Irene Mavrommati, *University of the Aegean / Computer Technology Institute, Greece*.

30. Exploring Difficulties and Problems in Communication Between Users in Auto-Stereoscopic 3D Interfaces
David Casado-Neira, Javier Rodeiro Iglesias, *University of Vigo, Spain*.

31. ePresence Interactive Media: An Open Source eLearning Infrastructure and Web Portal for Interactive Webcasting, Videoconferencing, & Rich Media Archiving
Rhys Causey, Ronald Baecker, Kelly Rankin, Peter Wolf, *University of Toronto, Canada*.

32. Design of a Human Computer Interface for Teleoperated Robots
Alexander Cerón, *Universidad Militar Nueva Granada, Colombia*.

33. Visual Comfort Appreciation of Product Form
Chien-Cheng Chang, *Huafan University, Taiwan China*.

34. Investigating the Mapping from Support System Usability to Customer Service Quality
An-Che Chen, Chih-Wen Hsu, Teng-Yung Chen, *Mingchi University of Technology, Taiwan China*.

35. The Influence of Procedural Information to the Website Uses for Internet Shopping
An-Che Chen, Lung-Jung Tsai, *Mingchi University of Technology, Taiwan China*.

36. Design and Implementation of a Wireless EEG Biofeedback System
Haifeng Chen, Donghee Ye, Jungtae Lee, *Pusan National University, Korea*.

37. A Preliminary Study of Characters' Gender in Computer Games
Hua-juin Chen, Yu-chen Hsu, *Tsing Hua University, Taiwan China*.

38. Visual Fatigue for Using Electronic Paper Displays
Mei-Hsiang Chen, *Chung-Shan Medical University, Taiwan China*.

39. CAT Plus: An Assessment and Training Tool of Mouse Operating for people with Disabilities
Ming-Chung Chen, *National Chai-Yi University, Taiwan China*; Chi Nung Chu, *China University of Technology, Taiwan China*; Ting-Fang Wu, Chih-Ching Yeh, *Taiwan Normal University, Taiwan China*.

40. Simulate Human Learning of Using a Product Interface: An Example of Digital Camera Use
PoYu Chen, Jen Yen, Ji-Hyun Lee, *Yunlin University of Science & Technology, Taiwan China*.

41. Improve the Menu Selections through Menu-Function-Keys of On-Screen Keyboard
Yun-Chen Chen, Hwa-Pey Wang, Yao-Ming Yeh, *Taiwan Normal University, Taiwan China*.

42. Integrating Digital Library Resources to a Thematic Curriculum Website for In-service Kindergarten Teachers
Ching-Ching Cheng, *Providence University, Taiwan China*; Kuo-Hung Huang, *Chiayi University, Taiwan China*.

43. Analyzing User Preferences Regarding Health-Monitoring Services for Teenagers and Young Adults with Insulin-Dependent Diabetes
Jieyin Cheng, Serena Magdalena, Ying Li, Pavan Dadlani, Pinar Erik Paker, Maurits Kaptein, Panos Markopoulos, *Technische Universiteit Eindhoven, Netherlands*.

44. A Study on Usability and Customers' Sensation of Dishwasher
Kyeyoun Choi, Jinhee Chae, Jae Seung Mun, Gilsoo Cho, Yong Gu Ji, *Yonsei University, Korea*.

45. Rule-based Information Retrieval System Based on Semantic Web Technology
Okkyung Choi, *Yonsei Graduate School of Information, Korea*; Sangyong Han, *Chungang University, Korea*.

46. Comprehension Differences between Print and Screen Reading for Middle-Aged Computer Novices
Jyh-Rong Chou, *Fortune Institute of Technology, Taiwan China*.

47. An Interactive Telephone to Enhance the Richness of Human Communication from an Emotional Approach
Kai-Han Chung, Cheng Wei Shih, *Yunlin University of Science and Technology, Taiwan China*; Ju-Hung Lan, *Computational Design, Taiwan China*.

48. Evaluation and Communication Techniques in Hypermedia Design for Cultural Heritage
Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy*.

49. MEDIE: Method for an Evaluation of the Design in Industrial E-commerce
Francisco Cipolla-Ficarra, *F&F Multimedia Communic@tions Corp., Italy*; Miguel Cipolla-Ficarra, *Asociacion Internacional de Comunicacion Interactiva (AINCI), Italy*.

50. Hand Gesture Recognition for Haptic Interaction
Salvador Cobos, Manuel Ferre, Rafael Aracil, Miguel A. Sánchez Urán, Javier Ortego, *Universidad Politécnica de Madrid, Spain*.

51. How to Improve Video Game Menus Usability? A Specific Methodology
Teresa Colombi, *LudoTIC, France*; Franck Louis-Fernand, Aline Chevalier, *University of Paris 10, France*; Leonid Synyukov, *LudoTIC, France*.

52. Board-Based Cross-Cultural Pairs: process and products
Gregorio Convertino, Brian P. Asti, Yang Zhang, Mary Beth Rosson, Susan Mohammed, *The Pennsylvania State University, United States*.

53. Computer-Mediated Intergenerational Collaboration: A Multi-Case Study On Consultation Interactions
Gregorio Convertino, *The Pennsylvania State University, United States*; Fengfeng Ke, *University of New Mexico, United States*; Yu-Chu Lin, John Carroll, Bonnie Meyer, William J. Swain, John T. Harwood, *The Pennsylvania State University, United States*.

54. Measuring Common Ground in Geo-Collaboration
Gregorio Convertino, Helena Mentis, Alex Ting, Caitlin Ferro, John Carroll, *The Pennsylvania State University, United States*.

55. A Promotion Paradigm and Practice through Web 2.0 Community
Jie (Jessica) Cui, Haiqi Liang, Xiaoxi Liu, Jingmin Xu, *IBM, China*.

56. Ten Heuristics to Evaluate the Emotional Dimension in a User Test
Eva De Lera, Muriel Garreta-Domingo, *Open University of Catalonia, Spain*.

57. Is it Necessary to Create New Icons for African Users of Office Packages?
Engela Dednam, Pieter Blignaut, Erna Dippenaar, *University of the Free State, South Africa*.

58. A User-centered Design for the Rescue Robot with Fluid Power
Ritson Delpish, Xiaochun (Steven) Jiang, Silvanus Udoka, Eui Park, *North Carolina A&T State University, United States*.

59. A Multiagent Architecture for Reporting Activities in E-Learning Platforms
Pierpaolo Di Bitonto, Antonella Grasso, Teresa Roselli, *Università degli Studi di Bari, Italy*.

60. Investigation of Appropriateness of the VE for Training Purposes Using Fork-Lift VR Simulator
Marek Dzwiarek, Antoni Saulewicz, Dariusz Kalwasiński, *Central Institute for Labour Protection - National Research Institute, Poland*.

Posters

61. Testing the User Comprehension of Controls on a Graphical Search Engine Interface
Kemal Efe, Alp Asutay, *University of Louisiana, United States*.

62. Wind Rose Reflection to ICT-based Faculty Professional Development
Alev Elçi, *Eastern Mediterranean University, Turkey*.

63. Input System with Online Pattern Recognition in Three-Dimensional I/O Environments
Nobuyuki Esaki, Tetsuo Takeshita, Naoya Oda, Akira Sugiura, Naoki Okabe, *Toyota College of Technology, Japan*.

64. One Simple Human Computer Interaction Way to Virtual Instrument Software Design
Yongkai Fan, Tianze Sun, *Tsinghua University, China*; Jun Lin, *Jilin University, China*; Xiaolong Fu, *Tsinghua University, China*; Yangyi Sui, *Jilin University, China*.

65. An Improved SOA Framework for Computing-on-demand and Personalized Services
Cunhao Fang, Yaoxue Zhang, Pengwei Tian, Ming Zhong, *Tsinghua University, China*.

66. The Effects of Beauty and Personality of Interface Characters on Users' Perception of Social Presence
Yung-An Fang, Yu-chen Hsu, *Tsing Hua University, Taiwan China*.

67. An Interdisciplinary Approach to Design Patterns in HCI based on Gestalt Theory
Karl Flieder, *FH CAMPUS 02, Austria*.

68. Does the Modern World's Design Pattern Concept have its Roots in Ancient China?
Karl Flieder, *FH CAMPUS 02, Austria*.

69. Influence of Prescribed Constraints on the Conformity Effect and the Ergonomic Quality of Designs: A Study with Website Designers
Nicolas Fouquereau, Aline Chevalier, *University of Paris 10, France*.

70. Selecting Appropriate Evaluation Methods for Different User Centered Design Outcomes
Maximiliane Freymann, *University of Paderborn, Germany*; Lennart Grötzbach, *Siemens Business Services, Germany*; Karsten Nebe, *University of Paderborn, Germany*.

71. Properties of Color Vision Characteristic to Cataract for Liquid Crystal Displays
Tetsuya Fujita, Yoshio Nakashima, Mamoru Takamatsu, *University of Toyama, Japan*.

72. Air Touch: Theremin-Like Interface System Enables to Recognize User's Operation in the Air
Hiroyuki Fukuda, Hiroyuki Morimoto, Kunio Sakamoto, *Shimane University, Japan*.

73. Using discriminant analysis for speech recognition
Felix Furtuna, Marian Dardala, Adriana Reveiu, *Academy of Economic Studies, Romania*.

74. Simulation of Spontaneous Perception Switching with a Nonlinear Dynamics Model Using Perception – Attention – Memory Coupling
Norbert Fürstenau, Monika Mittendorf, *German Aerospace Center, Germany*.

75. A Model for Personal Activity Management: Towards Technological Support for Planning Activities
Leonardo Galicia, *CICESE Research Center, Mexico*; Victor Gonzalez, *University of Manchester, United Kingdom*; Jesus Favela, *CICESE Research Center, Mexico*.

76. Mnemonical Gesture-based Mobile Interaction
Ricardo Gamboa, Tiago Guerreiro, Joaquim Jorge, *INESC-ID, Portugal*.

77. DotNet Application International Integrated Develop Solution
Wayne Gao, Vicky Hu, *Intel Corporation, China*.

78. Personalize Spell Checking using Neural Networks
Tyler Garaas, Mei Xiao, Marc Pomplun, *University of Massachusetts Boston, United States*.

79. Theories for Educational Multimedia Application Development: A Case Study
Jennifer George, *SAE Institute, United Kingdom*.

80. Research Methodology for Phonological Development
Jennifer George, *SAE Institute, United Kingdom*; Paul Gnanayutham, *University of Portsmouth, United Kingdom*.

81. Rebuilding Telemedicine Devices through User Requirements: A Psychosocial Analysis
Eva Patrícia Gil-Rodríguez, Albert Farré-Cobos, *Universitat Oberta de Catalunya, Spain*; Daniel López-Gómez, *Universitat Autònoma de Barcelona, Spain*; Israel Rodríguez-Giralt, Yann Bona-Beauvois, *Universitat Oberta de Catalunya, Spain*.

82. Context-Sensitive Awareness Services for Communities of Practice
Denis Gillet, Sandy El helou, Yassin Rekik, Christophe Salzmann, *Swiss Federal Institute of Technology in Lausanne (EPFL), Switzerland*.

83. Impact of Visual Distraction on Driving Performance
Matthias Goebel, Frederik Treugut, *Rhodes University, South Africa*.

84. DGAUI Development Environment
Susana Gómez-Carnero, Javier Rodeiro Iglesias, *University of Vigo, Spain*.

85. Team communication in naval high-speed ship navigation
Kristian Gould, *University of Bergen, Norway*; Bjarte Roed, *Human Factors Solutions ANS, Norway*; Cato Bjorkli, *Norwegian University of Science and Technology, Norway*.

86. Designing the Digital Augmentation of the Natural History Museum of Crete
Dimitris Grammenos, Anthony Savidis, George Paparoulis, Maria Bouhli, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

87. Assessing the Reliability of Road Networks Using Bayesian Networks and Agent-based Simulation
Andreas Gregoriades, Constantinos Pattichis, *University of Cyprus, Cyprus*.

88. EMF: Extensible Multimodal Framework
Tiago Guerreiro, Vitor Fernandes, Bruno Araújo, Joaquim Jorge, Joao Madeiras Pereira, *INESC-ID, Portugal*.

89. Controlling Virtual Environments by Thoughts
Christoph Guger, *g.tec medical engineering GmbH, Austria*; Robert Leeb, *Graz University of Technology, Austria*; Doron Friedman, Vinoba Vinayagamoorthy, Angus Antely, *University College London, United Kingdom*; Günter Edlinger, *g.tec medical engineering GmbH/Guger Technologies OEG, Austria*; Mel Slater, *University College London, United Kingdom*.

90. Evacuation Coordination Support System
Lucy Gunawan, Augustinus Oomes, *Delft University of Technology, Netherlands*.

91. A Generative Design Supporting System and Knowledge Base Technology in Sport Shoes Design
Jhong-Jyun Guo, *Yunlin University of Science & Technology, Taiwan China*; Hong-Sheng Chen, *Ling Tung University, Taiwan China*.

92. Real Time Sensory Substitution for the Blind
Mehmet Göktürk, Nihat Erim İnceoğlu, *Gebze Institute of Technology, Turkey*.

93. Where Do Web Visitors Look and at What? – An Eye-Tracking Study
Yoshiko Habuchi, Haruhiko Takeuchi, Muneo Kitajima, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

94. The Personalized Emotional Engine Applying to Game for efficient Emotionalize of Contents
Jun-seok Ham, Il-Ju Ko, *Soongsil University, Korea*.

95. Human-Robot Interaction by Means of Hand-Clapping Language (A Feasibility Study)
Kazuyuki Hanahara, Yukio Tada, *Kobe University, Japan*.

96. Air-filled Type Immersive Projection Display
Wataru Hashimoto, *Osaka Institute of Technology, Japan*.

97. Minato : Visualization based e-Learning System for Embedded Systems
Eiichi Hayakawa, Yosuke Nishino, Yuki Tanaka, Takahiro Kawaguchi, Shin Kousaka, Seiichi Aoyama, *Takushoku University, Japan*.

98. Polka: An Educational Drawing Tool with the Playback Function for Student's Drawing Process
Toshihiro Hayashi, *Kagawa University, China*; Hayashi Nakayama, *Miyazaki University, Japan*.

99. A Review of Possibilistic Approaches to Reliability Analysis and Optimization in Engineering Design
Li-Ping He, *Dalian University of Technology, China*; Hong-Zhong Huang, Li Du, Xu-Dong Zhang, Qiang Miao, *University of Electronic Science and Technology of China, China*.

100. Redesigning a CD Player for Intuitive Rich Interaction
Bram Hendriks, Jun Hu, *Technische Universiteit Eindhoven, Netherlands*.

101. Incorporating HCI Principles in Web Design Through Modeling Techniques
Lawrence Henschen, Julia Lee, *Northwestern University, United States*.

102. Interface Design of Wide-view Electronic Working Space Using Gesture Operations for Collaborative Work
Shingo Hiranuma, Asako Kimura, Fumihisa Shibata, Hideyuki Tamura, *Ritsumeikan University, Japan*.

103. Studying Multimodal Interfaces - Triggering Eye Movement Responses with Multimodal Cues
Kati Hirvonen, Anu Holm, Jussi Korpela, Riitta Lees, Kristian Lukander, Mari Marjamäki, Kiti Müller, *Finnish Institute of Occupational Health, Finland*.

104. The Effects of Embodied Agents' Displayed Emotions on Users: Emotional Contagion and Gender Differences
Chiu-hui Ho, Yu-chen Hsu, *Tsing Hua University, Taiwan China*.

105. Eye-Hand Interactions Dependent on Mobile Phone Text Entry Speed
Seung-Kweon Hong, Young-Ju Bae, *Chungju National University, Korea*; Jung Hwan Kim, Rohae Myung, *Korea University, Korea*.

106. What are the Benefits and Drawbacks of Having Usability Evaluators Combine their Evaluation Results?
Kasper Hornbæk, Erik Froekjaer, *University of Copenhagen, Denmark*; Mikael Skov, *Aalborg University, Denmark*.

107. Analyze of Latency of Data Transmission in Communication Channels by Neuro Fuzzy Network
Seyed Mohammad Amir Hosseinipanah, *Bu-Ali Sina University, Iran*.

108. Does Instant Messaging Form a New Online Culture? Key Similarities and Differences in the Everyday Experience of Chinese and North American Users
Weimin Hou, Anita Komlodi, Wayne G. Lutters, *UMBC, United States*; Jennifer Preece, *University of Maryland, United States*.

109. A Pilot Study of Supporting Children's Online Identity Representation in International Communities
Weimin Hou, Anita Komlodi, *UMBC, United States*; Jennifer Preece, Allison Druin, Evan Golub, *University of Maryland, United States*.

110. Searching Image Data in Daily Life
Yumi Houmura, Naoto Aizawa, Naoki Hirasawa, *Otaru University of Commerce, Japan*; Shinya Ogata, *U'eyes Design Inc., Japan*.

111. The Optimum Design of Motion Icon for Mobile Phone Based on the Human Comfort Affection
Cheng-Hsun Hsieh, Shing-Sheng Guan, Ting-Chun Tung, *Yunlin University of Science and Technology, Taiwan China*.

112. A Study on the Generation for Chinese Ink Painting
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113. Designing Standing VDT Workstation Based on Preferred Settings with Tilted Desk
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114. The Relationships between New Product Development Strategy and Design Strategy
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115. A Study on the Relationships between Corporate Identity Image and Product Image Using IF Award Product Design as an Example
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116. Lower Extremity Muscle Force Calculation during Human Level Walking
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117. Designment and Analysis of a Six-component Force Sensor for the Detection of Mechanical Property of the Lower Limb Prosthesis
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118. A Free-head Gaze Tracking System with Single Camera for Human-Computer Interaction
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119. Integrating Audio and Haptic Feedback in a Collaborative Virtual Environment
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120. Talking Music Browser with Pitch Recognition for the Learning Disabilities
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121. A Screen Reader Interface Dynamically Hastens Speech while Giving Emphasized Text to the Tactile Sense
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122. Scadule: Bridging Individual and Collaborative Work through Contextual Use of Paper Documents
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123. Adaptive Viewpoint Control Interface for Virtual Colonoscopy
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124. Applying Video-conference System to Marketing Practice
Atsuo Inoue, *Otaru University of Commerce, Japan*; Syotaro Hosokawa, *Matsushita Electric Works, Ltd., Japan*; Naoki Hirasawa, *Otaru University of Commerce, Japan*.

125. Web Site with Recorded Speech for Visually Impaired
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126. Video Viewer Enables to Playback Based on XML-like Scene Scenario
Takashi Ishihara, Koji Uchida, Kunio Sakamoto, *Shimane University, Japan*.

127. An interaction between those engaged in cooking and foodservice equipment in reproduction of a digital recipe
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128. Passport to Accessibility
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129. Light Path: Light Guide for Route Indication in the Office Building with RFID Technology
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130. Verification of Necessity to Support Cooperative Building Work in Distributed Environment
Yuya Izawa, Sakae Yamamoto, *Tokyo University of Science, Japan*.

131. MagicHand: A Vision-based Hand Gesture Interface
Hyoyoung Jang, Zeungnam Bien, *Korea Advanced Institute of Science and Technology (KAIST), Korea*.

132. Computer Vision-Based Interface for the Control of Meta-Instruments
Frederic Jean, *Laval University, Canada*; Alexandra Branzan Albu, Wolfgang Schloss, Peter Driessen, *University of Victoria, Canada*.

133. Comparison of two methods for load application in finite element model to predict interface stresses in transtibial prosthesis
Xiaohong Jia, Lidan Fang, Rencheng Wang, Dewen Jin, *Tsinghua University, China*.

134. A Multi-Projector Display Wall System Driven by Chromium Framework on PC Cluster
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135. Adaptive Ontology-Based Contents Generation System for R&D Meetings
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136. Markers of Credibility on Citizen Journalism Web Sites
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137. HCI and SE: Towards a 'Truly' Unified Waterfall Process
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138. Improving Aircraft Cockpit Environment Using Multimodal User Interfaces
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139. Comparisons of Biometric Expressions of Video Game Players Under Different Roles via Unsupervised Cluster Analysis
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140. Renewal Model of Mobile Data Service Considering User Analysis
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141. The Measurement of Individual Differences in Working Memory Capacity
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142. Usability Evaluation of an R&D Information System
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143. Applicability of Think Aloud to On-Line AutoCAD Learning
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144. A Generation Method of Representative Human Models at the Boundary Zone of a Designated Accommodation Percentage
Kihyo Jung, *POSTECH, Korea*; Ochae Kwon, *Samsung Electronics, Korea*; Heecheon You, *POSTECH, Korea*.

145. Performance Analysis of Pulse Shaping Technique for OFDM PAPR Reduction
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146. Rotation Invariant Face Detection Using Wavelet, PCA and Radial Basis Function Networks
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147. A community aware web search engine
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148. A Study of Haptic Interface for Korean Cultural Heritage
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149. The Notion of Sharedness Based on Mutual Belief
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150. Computer-Assisted Music Composition Tool for Novice Users
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151. Autonomous Pop-up Interface for Sketch-based 3D Modeling
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152. Zoomable User Interface for Navigating the WWW
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153. AR-Table System for Communication
ByungChul Kim, JinGuk Kim, Jong Weon Lee, *Sejong University, Korea*.

154. Physiological Workload Evaluation of Night Work for Monitoring and Operating Tasks
DaeHo Kim, YongHee Lee, *Korea Atomic Energy Research Institute (KAERI), Korea*.

155. Identification and Measurement of Quantifiable Visual and Auditory Design Attributes for the Affective Expressions from Movie viewing
In Ki Kim, Kyung Jae Lee, Woojin Chang, Myung Hwan Yun, *Seoul National University, Korea*.

156. Intelligent Tabletop Interface System for HCI (Human Computer Interaction)
Jangwoon Kim, Jae-Wan Park, Chil-Woo Lee, *Chonnam National University, Korea*.

157. The Classification of Internal States by Head Movement Pattern
Ji-young Kim, Youngho Jeen, Peom Park, *Ajou University, Korea*.

158. Design of Speech Recognition System Based Ubiquitous Environment
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159. Design of Home Network System based on RFID & Speech recognition system
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160. A Proposal for Standardization of Button Layout in Mobile Phone User Interface
Mi-Young Kim, *KyunSung University, Korea*; Hyun Jeong Kim, Ho-Soong Lee, Hong-In Cheng, *Kyungsung University, Korea*.

161. A Study on Concept Definition of Universal User Interface Design for Computer Operating System: Focusing on Analysis of Elderly User's Need
Mi-Young Kim, Hyunjeong Kim, *KyunSung University, Korea*.

162. A Case Study on Usability of Asynchronous Voice Communication Systems
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163. EUI (Environmental User Interface): The Initiative of Environmental Data Coupled Human Computer Interaction (HCI)
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164. The Process Development of New Applications for Mobile Phones Through User Observations
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165. Usability of Mobile User Interface for a Unified-and-Ubiquitous Web Service
Yung Bok Kim, *Sejong University, Korea*.

166. Improvement of Comprehensive Web Accessibility for Unified-and-Ubiquitous Web Information Services
Yung Bok Kim, *Sejong University, Korea*.

167. Inspiring Cross-functional Collaboration
Laurel King, *University of Hawaii, United States*.

168. Polar Touch Detection
Rick Kjeldsen, *IBM, United States*.

169. Facial Expression Recognition with Instance-Based Learning Based on Regional-Variation Characteristics using Models-Based Feature Extraction
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170. Stereo Camera-Based Video Surveillance System Using Pan/Tilt Controller
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171. Vidi Windows – A Step towards the Plurality on the Desktop
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172. Estimation Method for Relative Position and Attitude between Two Haptic Devices
Masanao Koeda, Yasuyuki Ninomiya, Munetaka Sugihashi, Tsuneo Yoshikawa, *Ritsumeikan University, Japan*.

173. Monitoring of Facial Characteristic Movement for the Control of Mobile Devices: Issues and Recommendations
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174. Immersive ColorBlind Simulator for Color Universal Design
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175. e-Valet: An Online Personal Assistant for Conference Participants
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176. An XML Based Framework for the Creation of SCORM 2004 Compliant Online Tests
Anja Kronawitter, Jan-Torsten Milde, *Fulda University of Applied Science, Germany*.

177. Thermal Sensation Sensitivity Analysis for Sustaining Comfort under Saved Energy
Shingo Kubo, Hiroshi Tsuji, *Osaka Prefecture University, Japan*.

178. Study on Analysis of Visual Characteristics of LED - In Dense Fog -
Bobsy Arief Kurniawan, Mamoru Takamatsu, Yoshio Nakashima, Kenkichi Fukurotani, *University of Toyama, Japan*; Jun-ichi Tachimori, Kanji Katoh, *Toyama CHUO Driving School, Japan*.

179. E-Lares: A Multi Agent Infrastructure for Testing Smart Homes Services
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180. Designing to Bridge the "Digital Divide" in Emerging Markets: Insights from Icafes in Rural China
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181. Jump is on the Skin Deep: Predicting User Behavior from Skin Conductance Level
Laszlo Laufer, *Budapest University of Technology and Economics, Hungary*.

182. Authentic User Tests in Industrial Wearable Computing Applications
Michael Lawo, Otthein Herzog, Hendrik Witt, *Universität Bremen, Germany*.

183. Development of the Accessibility Guidelines for the Mobility Handicapped Persons in Passenger Ship
Bong-Wang Lee, Hongtae Kim, Jong-Kap Lee, *Maritime & Ocean Engineering Research Institute / KORDI, Korea*.

184. Generic Interaction Method and its Implementation to Control Home Electronics and Appliances
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185. Proposal for an Information Retrieval Environment Using Dynamic Indication
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186. Usability Evaluation Checklist for Managing Usability in a Large-scale Corporation
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187. Kansei Evaluation of Applying Fundamental-Shapes to Product Shapes
Miyong Lee, Seunghee Lee, *University of Tsukuba, Japan*.

188. The Efficiency of the Wearable Input Interface
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189. Future Forms of Necropolises
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190. Robot-assisted Fiberscope Surgery System
Chang Li, Weidong Guo, Yuru Zhang, *Beihang University, China*.

191. Creating Better Interactivity with Customers by Mobile Ads
Christina Li, *uiGarden.net, United Kingdom*.

192. Improving User's Satisfaction based on User's Associated Behavior
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193. Automation and Integrated Working Flow Management
Hao Li, Yi Wang, Vicky Liu, *Intel Corporation, China*.

194. Timely Auto-Link Checking and Fixing in Web Localization
Hao Li, *Intel Corporation, China*; Nilton Furukawa, Michael Cox, Julie Chang, *Intel Corporation, United States*; Yi Wang, Vicky Liu, Wayne Gao, Qingqing Tao, *Intel Corporation, China*.

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Hao Li, *Intel Corporation, China*; Julie Chang, *Intel Corporation, United States*.

196. Using Videoconferencing to Support Learning of Mathematics and Science: A Canadian Study
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197. A Test of Useful Field of View Using a Driving Simulator
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198. A 3D VR for Learning CMC Taichi Chuan
Huan-Chang Lin, Yi-Wei Chen, Che Chuan Li, Hsin-Yi Wang, Tsung-Yen Wang, *I-SHOU University, Taiwan China*.

199. A Pen- based Classroom Management System
Chuanyi Liu, Paul Daniels, Xiangshi Ren, Yoshimasa Kimura, *Kochi University of Technology, Japan*.

200. Context-aware In-flight Entertainment System
Hao Liu, Matthias Rauterberg, *Technische Universiteit Eindhoven, Netherlands*.

201. Energy-Efficient Perimeter Intrusion Detection System Using Dual-Mode Wireless Sensor Networks
Yuheng Liu, Chao Li, Jing Wu, Zhang Xiong, *BeiHang University, China*.

202. Research Use of a Novel and Affordable Gaming Controller
Kristian Lukander, Jussi Virkkala, *Finnish Institute of Occupational Health, Finland*.

203. An Intelligent Agent-Oriented System for Integrating Network Security Devices and Handling Large Amount of Security Events
Yangming Ma, *Huazhong University of Science & Technology, China*.

204. Universal Design for HCI in a Developmental Context: Myth or Reality? The South African Example
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205. From Individual to Collaborative Work and Vice Versa: Seamless Transition Support between Individual and Collaborative Work in a Learning Environment
Jorge H. Macfarland, Alberto Moran, *Autonomous University of Baja California (UABC), Mexico*; Victor Gonzalez, *University of Manchester, United Kingdom*; Marcela Rodriguez, *Autonomous University of Baja California (UABC), Mexico*.

206. Diagnoses of the Semantic Interface of Top Cosmetic Brands on the Web by SVD (Singular Value Decomposition)
Akiko Machida, Kei Mizuno, Noriyuki Matsuda, *University of Tsukuba, Japan*.

207. Machine Awareness of Attention for Non-disruptive Services
Jerome Maisonnasse, Nicolas Gourier, Patrick Reignier, James Crowley, *INRIA Rhones Alpes, France*.

208. A User-friendly Medical Lexicon with Multimodal Access to Medical Information for Non-expert Users
Ioanna Malagardi, *University of Athens, Greece*; Christina Alexandris, *Institute for Language and Speech Processing (ILSP), Greece*.

209. User Centred Design Approach in the Development of a Medical Embedded Display System
Stefano Marzani, Linnea Etzler, Roberto Montanari, Francesco Tesauri, *University of Modena and Reggio Emilia, Italy*; Cesare Tanassi, *SIFI (www.sifi.it), Italy*; Marco Foracchia, *M2 scientific - www.m2scientific.it), Italy*; Luca Canovi, *University of Modena and Reggio Emilia, Italy*.

210. User Interface for AV Remote Controllers Based on Routing Information
Morimasa Matsuda, *Mitsubishi Electric Microcomputer Application Software Co., Ltd., Japan*; Tomoya Nakata, Takako Nonaka, Tomohiro Hase, *Ryukoku University, Japan*.

211. User Interface with Palm Motion Detection for Consumer Use
Morimasa Matsuda, *Mitsubishi Electric Microcomputer Application Software Co., Ltd., Japan*; Takako Nonaka, Tomohiro Hase, *Ryukoku University, Japan*.

212. User Interface for AV System Control Based on Natural Language Understanding
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213. A Basic Study of Grasping Motion for Advanced Interface
Shunichi Matsuzawa, *Tokyo University of Science, Suwa, Japan*; Shunji Shimizu, *Tokyo University of Science, Suwa / Jichi Medical University, Japan*; Senichiro Kikuchi, Eiju Watanabe, *Jichi Medical University, Japan*; Hironobu Kina, Hiroshi Murata, *Tokyo University of Science, Suwa, Japan*; Noboru Takahashi, *Tokyo Institute of Technology, Japan*; Terumasa Ehara, *Tokyo University of Science, Suwa, Japan*.

214. A Man-in-the-loop Virtual Prototyping Tools' Chain for In-Vehicle Devices
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215. Web-Based Medical Information Systems for Hospital Cooperation
Kosta Mitreski, *University "Sts. Cyril and Methodius", Former Yugoslav Republic of Macedonia*; Elena Mitreska, Maja Micevska, *KOM SOFT, Former Yugoslav Republic of Macedonia*; Andreja Naumovski, *University "Sts Cyril and Methodius", Former Yugoslav Republic of Macedonia*.

216. A Study on Human Interface for Control in Using AR Manual
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217. Using Human Expert Knowledge for Adaptive Enumeration Strategies in Constraint Solving
Eric Monfroy, Carlos Castro, Broderick Crawford, *Universidad Tecnica Federico Santa Maria, Chile*.

218. Development of Human Error Management Assessment System
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219. Virtual Touch: Touch-Panel Interface Using Fingertip Position and Eye-Gaze Detection
Hiroyuki Morimoto, Hiroyuki Fukuda, Kunio Sakamoto, *Shimane University, Japan*.

220. WebLection: An Accessible Media Player for Browsing and Working with the Web
Alexandros Mourouzis, Nikolaos Partarakis, Constantina Doulgeraki, Constantine Stephanidis, *Foundation for Research and Technology - Hellas (FORTH), Greece*.

221. Introducing Continuous Interactions to Business Organization Simulator with Parameters of Non-rational Human Factors
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222. Development of Fashion Design Recommender System Based on the Consumer's Sensibility
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223. Evaluation Factors of Ecological Lighting for Traditional Landscape
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224. Research on Visual Characteristics of Dichromatism for LED Light
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225. 'Pictlogue' Suggestion of the Communication System Using Touch Panel Display in Exhibition Space
Takayuki Nakamura, Makoto Tomita, Sungwook Seo, Ikuro Choh, *Graduate School of Global Information and Telecommunication Studies, Choh Study, Japan*.

226. Networked Indication Display System for Route Guidance in the Public Facilities
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227. Improving Usability of Web Pages for Hard-of-Hearing Persons: An Investigation of the Utility of Pictograms
Miki Namatame, *Tsukuba University of Technology, Japan*; Yukiko Nishizaki, Muneo Kitajima, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

228. TourGuide Agents and Context Information Services in Supporting a Virtual Tourist System
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229. Handwriting Recognition Technology - The Next Human Machine Interaction Paradigm for Automotive Applications
Nhu Nguyen-Thien, *Siemens AG, Germany*.

230. A Framework for Quality Assurance for Data from Large Scale Accessibility Evaluations
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231. Users' Evaluation Changed by Tips: Experiment of Usability Evaluation based on a User's Image for Product Function
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232. Remote Assistance System with Head Mounted Display for Hearing Impaired Students
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233. User Interface of Display Screen Output According to Device Motion
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234. A Self-video Immediate Feedback System for a University Table Tennis Training Class
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235. A Hybrid Approach to Dialog Input in the CitizenShield Dialog System for Consumer Complaints
Marios Nottas, Christina Alexandris, *Institute for Language and Speech Processing (ILSP), Greece*; Anastasios Tsopanoglou, *SingularLogic S.A., Greece*; Stelios Bakamidis, *Institute for Language and Speech Processing (ILSP), Greece*.

236. Distance-based Zoom Interface in Cellular Phone
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237. Effect of Specifications Review by User Aspect
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238. Evaluation of Comfortable Spaces for Women using a Virtual Environment
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239. Development of a Virtual Group Walking Support System
Masashi Okubo, Kumi Ozaki, Tatsuki Fujiwara, *Doshisha University, Japan*.

240. An Experimental Study of Technical Education and Job Training on Human Error Prevention Strategies
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241. Communication Service for Experiencing Natural Environments by Sensed Environmental Information
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242. Construction of an Infant Behavior Corpus as a Basis of Fundamental Commonsense Computing Research
Naofumi Otani, Saki Kawaguchi, Goh Yamamoto, Yutaka Sakane, Shinya Kiriyama, Yoichi Takebayashi, *Shizuoka University, Japan*.

243. Driving User Experience Through Platform Planning and Development at Intel Corporation
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244. Inclusive Design of Public Websites – An Ongoing Battle
Ana Isabel Paraguay, *University of Sao Paulo, Brazil*; Miriam Simofusa, Augusto dos Anjos Almeida, *SERPRO, Brazil*.

245. An automatic method for Motor Imagery training dataset optimization for an efficient mutual-adaptive BCI solution.
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246. A Study on Method for Displaying Web Contents in Mobile Device
DaeHyuck Park, Euisun Kang, JongKeun Kim, Kunho Sim, YoungHwan Lim, *Soongsil University, Korea*.

247. A Design and Implementation of Transcoder for Displaying Diagram Data of Multimedia Title on Web Browser
DaeHyuck Park, Euisun Kang, YoungHwan Lim, *Soongsil University, Korea*.

248. The AVATAR Converter: Transform into Resource & Logic of Mobile Game
DaeHyuck Park, Euisun Kang, Kunjung Sim, Meehwa Cho, YoungWhan Lim, *Soongsil University, Korea*.

249. A Case Study on Control Panel Design of Kimchi Refrigerator for the Old People
Jae Hee Park, Inseok Lee, Tae-Joo Park, *Hankyong National University, Korea*; Eun Ha Kim, *Korea Certificated Professional Ergonomist Association, Korea*.

250. A Workload Assessment Based on DGOMS in NPPs
Jaekyu Park, YongHee Lee, DaeHo Kim, Tong-Il Jang, *Korea Atomic Energy Research Institute (KAERI), Korea*.

251. HIcon: Haptic Informative Pattern with Semantic Context, the Generation Method and the Application
Jieun Park, *Information and Communication University, Korea*; Ki-Uk Kyung, *Electronics and Telecommunication Research Institute (ETRI), Korea*; Minsoo Hahn, *Information and Communications University, Korea*; Junseok Park, *Electronics and Telecommunication Research Institute (ETRI), Korea*.

252. Antecedent Decision Rules for Anaphora Resolution of Natural Language Requirements Document in Korean
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253. Usability Test & Redesign Information Architecture for Menu Personalization and Bookmark in Wireless Internet
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254. A Development of Multi-Functional Body Skin using 3D Body Scan Data
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255. Effect of Unrelated Visual Object in Spatial Decision of Sound Source: Cross Modal Attentional Research in a Driving Situation
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256. Two Similar Systems for the Treatment of Acrophobia - An Augmented Reality System and a Virtual Reality System
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257. Two-Way Preference-Based Information Service in Ubiquitous Environment
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258. Touching Newton: A Round Multi-touch Table for Collaborative Learning Among Children
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259. UniGlyph: Only One Keystroke per Character on a 4-Button Minimal Keypad for Key-Based Text Entry
Franck Poirier, Mohammed Belatar, *Université de Bretagne-Sud, France*.

260. Making Reading Easier: The Influence of Vowelization in a Deep Language Orthography on Online Text Comprehension
Karen Precel, *The Open University of Israel, Israel*; Ronit Webman, *City University of New York, United States*; Yoram Eshet, Batsheva Engelberg-Behr, *The Open University of Israel, Israel*.

261. Comparing the Personality Type of Design Students in the UK and Taiwan
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262. Tangibility - Using our Natural Skills for Understanding Scientific Data in a Virtual Environment
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265. Low Cost Cave Simplified System
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266. Multi-Person Videoconferencing in Collaborative Augmented Reality
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267. Grasp of Senior People's Mental Model Construction Process when Using Calculator
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268. Identification of Unattainable Visual Interface States using the Model of Abstract Representation DGAUI
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290. Welfare Interface using Facial Feature Tracking and Facial Expression Recognition
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291. What Kinds of Colors are Used in the Virtual Games?
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333. Recognition Threshold Character Size of Chinese Characters in Electronic Map
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336. Scenario Workshop as an Approach in Concept Building for Elderly Care System and Interface
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337. Long Query Suggestion List: Prioritized or Organized?
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338. Design and Application of a Virtual Reality Simulation System for Testing Pedestrian's Road Crossing Behavior
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340. Scribblr- Supporting Remote Sketching to Create a More Complete Communications System
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342. A User-Centred Design Approach of a Community Website using Social Software: a Case Study
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344. Icon-based Communication for Global Interactions
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354. Proposal of A Neuro-Fuzzy TSK-OWA Network Model for Multimodality Information Fusion
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358. Study on Psychophysical Evaluation of Color Rendering Effect For Landscape Lighting
Qiuye Yang, Yoshio Nakashima, Mamoru Takamatsu, Yasuaki Kidoh, Shinichi Nagayama, *University of Toyama, Japan*.

359. Designing a Physically Conscious Work Environment
Masasuke Yasumoto, Rie Sakai, Takashi Kiriyama, *Tokyo National University of Fine Arts and Music, Japan*.

360. Proposal of GUI Design Principle According to the Concept of Service
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361. Development of a Collaborative E-learning System for Supporting Students from Conductance of Debate to Brainstorming for the Emergence of New Ideas
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362. The Relationship between Characteristic Behaviors in Walking with Way-finding and the Functions of the Central and the Peripheral Visual Field
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364. Summarization of Spontaneous Conversations: Issues and Approaches
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365. Assessment of Psychosocial Work Factors and Musculoskeletal Disorders Experienced by Computer Users in a Public University in Malaysia
Seyed Zakerian, R.N. Sen, Paul H.P. Yeow, *Multimedia University, Malaysia*.

366. Design and Development Virtual Reality Applications for Spatial Cognition
Mohammed Zaoui, *College de France/CNRS, France*.

367. UFuRT: A Work-Centered Framework and Process for Design and Evaluation of Information Systems
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368. Evaluation of the Mouse as a Medium for Controlling Stereoscopic User Interface (I): a Target Selection Experiment by Changing Separation and Hover-Effect
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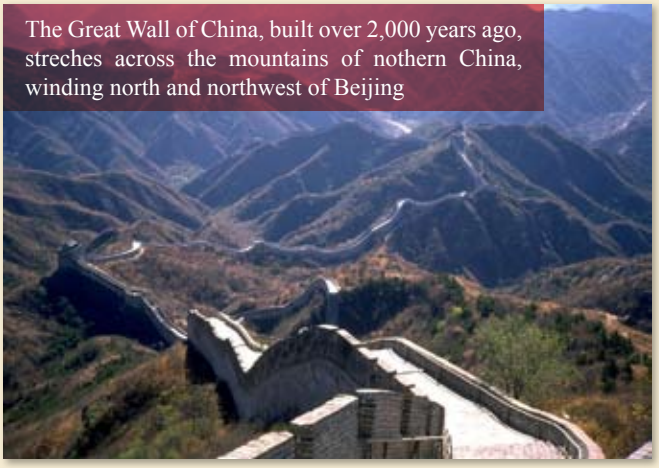
370. What You Write Is What You Get – A Novel Mixed Reality Interface
ZhiYing Zhou, Omer Gilani, Stefan Winkler, *National University of Singapore, Singapore*.

Excursions

Ming Tombs and Great Wall

The Ming Tombs are a group of mausoleums of 13 Ming Emperors. Each tomb is located at the foot of a separate hill and is linked with the other tombs by a road called the Sacred Way. The stone archway at the southern end of the Sacred Way, built in 1540, is 14 meters high and 19 meters wide, and is decorated with designs of clouds, waves and divine animals. The underground burial chamber of Ming Emperor Wanli is open to the public since excavation in 1956.

The Great Wall was originally built in 221 BC. The section of Juyongguan we are going to visit was built in the 15th century during the Ming Dynasty and repaired recently. In 1961, the State Council decided that Badaling was a national key protected culture relic unit. In 1987, Badaling became "World Cultural Heritage" by the United Nations.



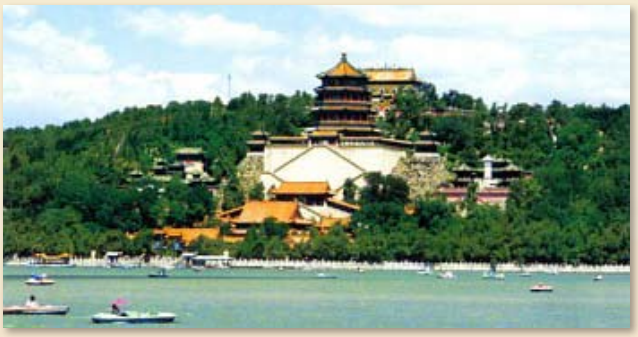
The Great Wall of China, built over 2,000 years ago, streches across the mountains of nothern China, winding north and northwest of Beijing

Forbidden City

The Forbidden City was the political center of China for nearly 500 years. It was built between 1406 and 1420 during the Ming Dynasty. It had been the imperial home of 24 emperors of the Ming (1368-1644) and Qing (1644-1911) dynasties. From their throne in the Forbidden City, they governed the country by holding court sessions with their ministers, issuing imperial edicts and initiating military expeditions. Today, it remains as the most complete and best- preserved collection of ancient buildings in China.

Summer Palace

Built in 1888, the Summer Palace was a resort for the Imperial Court. There are palaces, pavilions, terraces and covered walks strung out along the northern shore of Kunming Lake.



Timetable & Rates

Date	Tour	Departure	Return	Price per person, in USD
21/07	Great Wall – Ming Tombs	08:00	17:30	$45
26/07	Forbidden City	13:00	17:30	$25
27/07	Summer Palace	13:00	17:30	$20
28/07	Great Wall – Ming Tombs	08:00	17:30	$45

Notes:

- All tours include an English–speaking tour guide, air–conditioned bus and entrance fees.
- Full day tours also include Chinese lunch.
- If less than 10 people sign up, the tour will be canceled.
- Reservations for local tours are handled at the Conference Secretariat.

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General Information

HCI International 2007

Conference Location

The Conference is hosted at the Beijing International Convention Center (BICC), which is located 20 kilometers from Capital Airport to the east, 9 kilometers from Tiananmen Square to the south, 10 kilometers from the Summer Palace to the west and 80 kilometers from the Great Wall at Badaling to the north. Beijing is an ancient city with a long cultural history. The four feudal dynasties--Jin, Yuan, Ming, and Qing had all set up their capital here. For this reason, most of the country's historical and scenic sites are concentrated here. Among them, the best known are the Palace Museum, the Summer Palace, the Great Wall and the Temple of Heaven.

Gala Dinner

The Gala Dinner will take place right after the Opening Plenary Session, on Tuesday, 24 July 2007.

All Conference participants and accompanying persons, who carry an HCI International 2007 badge and their ticket for the dinner, will be permitted entrance.

Extra gala dinner tickets will be available from the Conference Secretariat by Tuesday, 24 July, 17:00 hrs.

Internet Park

PCs with Internet connectivity are provided in the Internet Park located at *BICC Level 3*.

Participants carrying their own portable equipment can use the available slots provided to connect their equipment.

The Internet Park is open during Conference working hours.

BICC Business Center

The BICC's Business Center (*BICC Level 1*) provides facilities such as fax, national and international direct dialing, wireless connection, photocopying, telegram and telex service and typing service in both English and Chinese.

Coffee Breaks

Day/Time	Sunday 22 July	Monday 23 July	Tuesday 24 July	Wednesday 25 July	Thursday 26 July	Friday 27 July
10:00 - 10:30			Lounge, BICC Level 3	Convention Hall No. 2, BICC Level 2	Convention Hall No. 2, BICC Level 2	Convention Hall No. 2, BICC Level 2
10:30 - 11:00	Lounge, BICC Level 3	Lounge, BICC Level 3				
15:00 - 15:30			Lounge, BICC Level 3			
15:30 - 16:00	Lounge, BICC Level 3	Lounge, BICC Level 3		Convention Hall No. 2, BICC Level 2	Convention Hall No. 2, BICC Level 2	Convention Hall No. 2, BICC Level 2

Lunch

Participants are kindly asked to make their own arrangements for lunch, during the following lunch breaks:

Sunday 22 July	12:30 - 14:00	Wednesday 25 July	12:30 - 13:30
Monday 23 July	12:30 - 14:00	Thursday 26 July	12:30 - 13:30
Tuesday 24 July	12:00 - 13:30	Friday 27 July	12:30 - 13:30

Note: BICC will be offering alternative arrangements for lunch within its premises, payable cash only

Information for Presenters

Paper presentations

Papers are allocated approximately 15 minutes for presentation, with an additional 2–3 minutes for questions and answers following each talk. The Session Chair introduces the speakers and moderates the discussion.

Each presentation room is equipped with a laptop computer and a projector for PowerPoint presentations. The available software may also allow for other types of presentations, such as embedded videos.

Hardware specifications of laptops:
- Intel Pentium Mobile 1.5 – 1.8 GHz
- 512 – 1024 MB memory
- 30 – 60 GB Hard Drive
- DVD/CD read/write

Software available on laptops (all in English language):
- Windows XP Professional
- MS – Office 2003
- Windows Media Player
- Adobe Reader

Laptops have a USB port accepting USB memory devices.

Presenters who wish to run specialised software need to bring their own laptop. Prior to their session, they should inform the Session Chair and test that their computer works with the projector in the room.

MAC computers are also acceptable. MAC users must bring their own adapter to connect to the VGA cable.

Internet connection is available in the presentation rooms.

Poster Sessions

Poster set–up will take place between
13:00 – 17:00 on Tuesday, 24 July 2007.

Poster removal will take place between
16:00 – 20:00 on Friday, 27 July 2007.

The posters will be mounted on poster boards (one poster per board) with tacks which are available on site. The poster boards are 2.45 meters high by 1 meter wide. Presenters can mount multiple single sheets of paper, larger posters, pictures, or any printed materials on the boards.

Presenters may also wish to indicate on the poster board the dates and times you will be available to provide brief presentations and answer questions.

Exhibitors

Exhibits may not be dismantled or removed until the close of the Exhibition. The storage of empty packaging in the booths is strictly prohibited. Exhibitors are kindly asked to contact the Conference Secretariat regarding the location of the storage room.

Message Boards

Three message boards, one for announcements of the Conference Organisers, one for use by the Conference participants, and one for job announcements, will be allocated near the Conference Secretariat, *BICC Level 1*.

Display Boards and Tables

Display boards and tables for Conference participants who wish to share or distribute promotional material, will be available near the Conference Secretariat, *BICC Level 1*.

Smoking Policy

HCI International 2007 is a smoke-free Conference. There are easily accessible outdoor areas at the Convention Center where smoking is permitted.

Mobile Phone Courtesy

HCI International 2007 requests that all mobile phones, pagers and other equipment with audible alarms be turned off in all sessions as a courtesy to the presenters and to the other attendees.

HCI International News

HCI International News is a newsletter about Human - Computer Interaction topics, the HCI International Conference series, and more.

The HCI International News is distributed through a mailing list and is also available on-line at:
www.hci-international.org

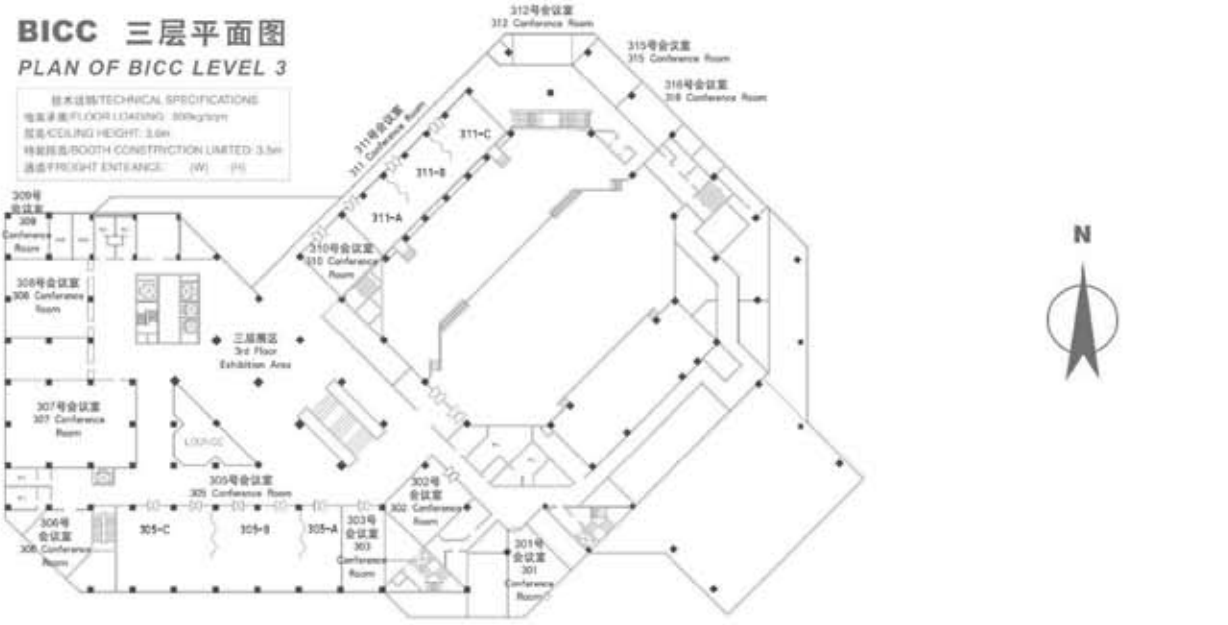
Subscribe to HCI International News:

http://lists.hci-international.org/mailman/listinfo/hciinternational

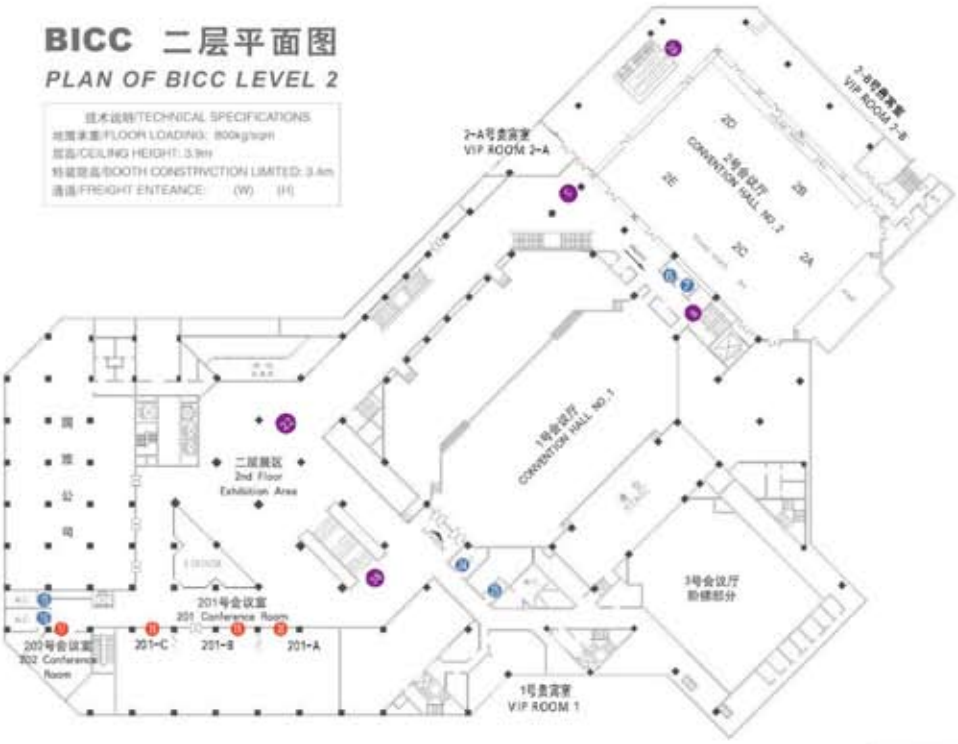
Floorplans

Beijing International Convention Center

BICC 三层平面图
PLAN OF BICC LEVEL 3



BICC 二层平面图
PLAN OF BICC LEVEL 2



BICC 一层平面图
PLAN OF BICC LEVEL 1

技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING: 800kg/sqm
层高/CEILING HEIGHT: 3.9m
特装搭建/BOOTH CONSTRUCTION LIMITED: 3.4m
通道/FREIGHT ENTEANCE: 3.9m(W)*2.4m(H)