

# HCI 2013 International

15th International Conference on  
Human - Computer Interaction

Thematic Areas:

**Human-Computer Interaction**

**Human Interface and the  
Management of Information**

Affiliated conferences:

10<sup>th</sup> International Conference on  
**Engineering Psychology and Cognitive Ergonomics**

7<sup>th</sup> International Conference on  
**Universal Access in Human-Computer Interaction**

5<sup>th</sup> International Conference on  
**Virtual, Augmented and Mixed Reality**

5<sup>th</sup> International Conference on  
**Cross-Cultural Design**

5<sup>th</sup> International Conference on  
**Online Communities and Social Computing**

7<sup>th</sup> International Conference on  
**Augmented Cognition**

4<sup>th</sup> International Conference on  
**Digital Human Modeling and applications in  
Health, Safety, Ergonomics and Risk Management**

2<sup>nd</sup> International Conference on  
**Design, User Experience and Usability**

1st International Conference on  
**Distributed, Ambient and Pervasive Interactions**

1st International Conference on  
**Human Aspects of Information Security,  
Privacy and Trust**



**Advance Program**

*version: 13 May 2013*



**21 - 26 July 2013**

**Mirage Hotel  
Las Vegas  
Nevada, USA**

Under the auspices of  
12 distinguished international boards of  
300 Board Members from 37 countries

[www.hcii2013.org](http://www.hcii2013.org)



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# Conference at a Glance

## Proceedings

The HCI International 2013 Conference Proceedings, will be published by Springer in a multi-volume set. Papers will appear in volumes of the Lecture Notes in Computer Science (LNCS) and Lecture Notes in Artificial Intelligence (LNAI) series. Extended Poster abstracts will be published in the Communications in Computer and Information Science (CCIS) series.



[www.springer.com/lncs](http://www.springer.com/lncs)  
[www.springer.com/series/7899](http://www.springer.com/series/7899)

All volumes will be available on-line through the SpringerLink Digital Library, readily accessible by all subscribing libraries around the world.

Volumes published as part of the Lecture Notes in Computer Science (LNCS) series, incl. its subseries Lecture Notes in Artificial Intelligence (LNAI) are indexed by the following services:

ISI Conference Proceedings Citation Index (<http://apps.isiknowledge.com>), EI Engineering Index (<http://ei.org>), ACM Digital Library (<http://portal.acm.org/dl.cfm>), IO-Port ([www.io-port.net](http://www.io-port.net)), dblp ([www.informatik.uni-trier.de/~ley/db](http://www.informatik.uni-trier.de/~ley/db)), Google Scholar (<http://scholar.google.com>), MathSciNet ([www.ams.org/mathscinet](http://www.ams.org/mathscinet)), Scopus ([www.scopus.com](http://www.scopus.com)), Zentralblatt MATH ([www.zentralblatt-math.org/zmath/en](http://www.zentralblatt-math.org/zmath/en)).

Volumes published as part of the Communications in Computer and Information Science (CCIS) are indexed by the following services:

ISI Conference Proceedings Citation Index (<http://apps.isiknowledge.com>), EI Engineering Index (<http://ei.org>), Scopus ([www.scopus.com](http://www.scopus.com))

## Conference Registration

The Conference registration fee includes:

- participation in all open technical sessions (i.e. Parallel Paper Presentations)
- entrance in the exhibition
- refreshment breaks between sessions (2 per day, mid morning and mid afternoon)
- Conference Proceedings
- and one ticket for the Conference Reception

## PROGRAM

<b>Sunday</b> 21 July 2013	09:00 - 17:30	Tutorials Day 1 - page 11
<b>Monday</b> 22 July 2013	09:00 - 17:30	Tutorials Day 2 - page 18
<b>Tuesday</b> 23 July 2013	08:30 - 17:00	Tutorials Day 3 - page 26
	17:30 - 19:00	Opening Plenary Session - page 5 Keynote Speech <b>Defy Gravity: The Art of Tangible Bits</b> by: Hiroshi Ishii Jerome B. Wiesner Professor of Media Arts and Sciences Associate Director of MIT Media Laboratory Co-Director of Things That Think Consortium Head of Tangible Media Group Massachusetts Institute of Technology
	19:30	Conference Reception
<b>Wednesday</b> 24 July 2013	08:00 - 18:00	Parallel paper presentations, Day 1 - page 36 Poster presentations, Day 1 Exhibition, Day 1
<b>Thursday</b> 25 July 2013	08:00 - 18:00	Parallel paper presentations, Day 2 - page 38 Poster presentations, Day 2 Exhibition, Day 2
<b>Friday</b> 26 July 2013	08:00 - 18:00	Parallel paper presentations, Day 3 - page 40 Poster presentations, Day 3 Exhibition, Day 3





# General Information

## Conference Reception

The Conference Reception will take place at 19:30 (right after the Opening Plenary Session) on Tuesday, 23 July 2013.

All Conference participants and accompanying persons, who carry an HCI International 2013 badge, will be permitted entrance.

Extra Conference Reception Tickets will be available from the Conference Secretariat until Tuesday, 23 July 2013, 17:00 hrs.

**Important note:** You must be of legal drinking age to drink alcohol. Please be ready to provide you ID upon request.

Coffee Breaks				
Day / Time	10:00 - 10:30	10:30 - 11:00	15:00 - 15:30	15:30 - 16:00
Sunday, 21 July		✓		✓
Monday, 22 July		✓		✓
Tuesday, 23 July	✓		✓	
Wednesday, 24 July	✓			✓
Thursday, 25 July	✓			✓
Friday, 26 July	✓			✓

## Internet Park

PCs with Internet connectivity will be provided in the Internet Park. Participants carrying their own portable equipment can connect their equipment through the available WiFi network.

Information about the Internet Park opening hours will become available in due course.

## Lunch

A wide range of options are available within the Mirage Hotel for Casual and Fine dining ([www.mirage.com/restaurants](http://www.mirage.com/restaurants)). Participants are kindly asked to make their own arrangements for lunch, during the following lunch breaks:

Sunday, 21 July	12:30 - 14:00
Monday, 22 July	12:30 - 14:00
Tuesday, 23 July	12:00 - 13:30
Wednesday, 24 July	12:30 - 13:30
Thursday, 25 July	12:30 - 13:30
Friday, 26 July	12:30 - 13:30



## Accommodation

As one of the world's busiest tourist destinations, the city of Las Vegas offers just about everything – spectacular shows, shops and restaurants, theme park attractions, and the natural beauty of the surrounding lakes, parks and canyons.

The Mirage, located on Las Vegas Strip, is recommended as the main hotel of the Conference. Many of the guest rooms offered are available with breathtaking views of the tropical pool, majestic mountains or the Las Vegas Strip. The Mirage, an AAA Four Diamond Award-winning resort, completed a fresh new makeover in August 2008 of all guest rooms. These smartly redesigned rooms feature stylish comfort complemented with ultra-modern amenities and chic upgrades.

A number of rooms have been reserved to be allocated on a first-come-first-served basis, while reduced rates have been agreed with the Hotel.

For more information, please visit the Conference Website.

[www.hcii2013.org/accommodation](http://www.hcii2013.org/accommodation)

### Hotel contact details:

The Mirage  
3400 Las Vegas Blvd South,  
Las Vegas, NV 89109  
USA  
Tel: +1-702-791-7111

## Sponsorship

Sponsorship in the context of HCI International 2013 is an ideal opportunity to expose your organization to an international audience of about 2,000 researchers, professionals and users in the field of HCI.

Sponsorship is not limited only to financial support, but can also take the form of provision of materials or services, such as:

*Conference reception, Coffee breaks (morning / afternoon), Registration bags, Printed Final Program, DVD Proceedings, Internet Park, T-Shirts and Polo-Shirts.*

For more detailed information please see:

[www.hcii2013.org/files/Hcii2013\\_Sponsorship\\_Opportunities.pdf](http://www.hcii2013.org/files/Hcii2013_Sponsorship_Opportunities.pdf)

Sponsors will also have the opportunity to exhibit, free of charge, their products or services through the Conference Exhibition. In case you wish to do so, the Conference Exhibition Administration will contact you.

If you are interested to contribute to this truly international event as a sponsor or you wish to receive more information, please contact: [sponsorship@hcii2013.org](mailto:sponsorship@hcii2013.org) We will be happy to assist you.

Tuesday, 23 July 2013 | 17:30

## **Defy Gravity: The Art of Tangible Bits**

### **Hiroshi Ishii**

Jerome B. Wiesner Professor of  
Media Arts and Sciences

Associate Director of [MIT Media Laboratory](http://www.media.mit.edu)<sup>1</sup>

Co-Director of [Things That Think Consortium](http://ttt.media.mit.edu)<sup>2</sup>

Head of [Tangible Media Group](http://tangible.media.mit.edu)<sup>3</sup>

[Massachusetts Institute of Technology, USA](http://www.mit.edu)<sup>4</sup>

### **Abstract**

Our vision of Tangible Bits is carried out through an artistic approach. Whereas today's mainstream Human Computer Interaction (HCI) and Design research address functional concerns – the needs of users, practical applications, and usability evaluation – Tangible Bits is a vision driven by concepts. This is because today's technologies will become obsolete in one year, and today's applications will be replaced in 10 years, but true visions – we believe – can last longer than 100 years.

Tangible Bits seeks to realize seamless interfaces between humans, digital information, and the physical environment by giving physical form to digital information, making bits directly manipulable and perceptible. Our goal is to invent new design media for artistic expression as well as for scientific analysis, taking advantage of the richness of human senses and skills – as developed through our lifetime of interaction with the physical world – as well as the computational reflection enabled by real-time sensing and digital feedback.

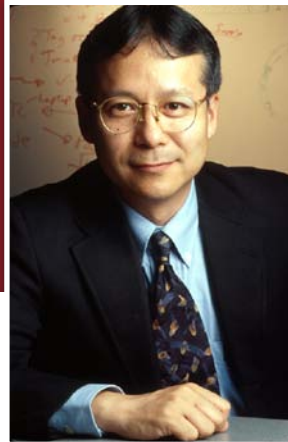
I will present the trajectory of our vision-driven research and a variety of interaction design projects that were presented and exhibited in Media Arts, Design, and Science communities including: ICC, Ars Electronica, Centre Pompidou, Victoria and Albert Museum, Venice Biennale, ArtFutura, IDSA, ICSID, AIGA, ACM CHI, SIGGRAPH, UIST, CSCW.

<sup>1</sup><http://www.media.mit.edu>

<sup>2</sup><http://ttt.media.mit.edu>

<sup>3</sup><http://tangible.media.mit.edu>

<sup>4</sup><http://www.mit.edu>



### **Hiroshi Ishii** Biographical Sketch

**Hiroshi Ishii** is a Jerome B. Wiesner Professor of Media Arts and Sciences at the MIT Media Lab. He was named Associate Director at the Media Lab in May 2008. He is co-director of the Things That Think (TTT) consortium and director of the Tangible Media Group. He founded and currently directs the Tangible Media Group pursuing a new vision of Human Computer Interaction (HCI): "Tangible Bits." His team seeks to change the "painted bits" of GUIs to "tangible bits" by giving physical form to digital information.

Prof. Ishii and his team have presented their vision of "Tangible Bits" at a variety of academic, industrial design, and artistic venues (including ACM SIGCHI, ACM SIGGRAPH, Industrial Design Society of America, AIGA, Ars Electronica, Centre Pompidou, and Victoria and Albert Museum,) emphasizing that the development of tangible interfaces requires the rigors of both scientific and artistic review. A display of many of the group's projects took place at the NTT InterCommunication Center (ICC) in Tokyo in the summer of 2000. The following year, a three-year-long exhibition titled "Get in Touch" featured the Tangible Media group's work at Ars Electronica Center (Linz, Austria) from September 2001 through August 2004. Prof. Ishii was elected to CHI Academy by ACM SIGCHI in 2006.

Prior to joining the MIT Media Lab from 1988-1994, Prof. Ishii led a CSCW research group at NTT Human Interface Laboratories Japan, where his team invented TeamWorkStation and ClearBoard. Prof. Ishii was a visiting assistant professor at the University of Toronto, Canada from 1993-1994. He has also received several degrees in engineering, including a B.E. degree in electronic engineering, M.E. and Ph.D degrees in computer engineering from Hokkaido University, Japan, in 1978, 1980, and 1992, respectively.

# International Program Boards

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## Exhibition

The HCI International Conference is an ideal opportunity to exhibit your products and services to an international audience of about 2,000 researchers, academics, professionals and users in the field of HCI.

The conference objective is to provide an international forum for the dissemination and exchange of up-to-date scientific information on theoretical, generic and applied areas of Human-Computer Interaction (HCI); Universal Access; Engineering Psychology; Cognitive Ergonomics; Virtual, Augmented and Mixed Reality; Cross-Cultural Design; Online Communities; Social Computing; Augmented Cognition; Digital Human Modeling; Design, User Experience and Usability; Distributed, Ambient and Pervasive Interactions; and Information Security, Privacy and Trust. This is accomplished through various modes of communication, such as plenary presentations, parallel sessions, poster sessions, tutorials, exhibitions, etc.

Attendees of the HCII 2013 Exhibition will have a unique opportunity to explore state-of-the-art HCI technology and interact with manufacturing representatives, vendors, publishers, and potential employers.

The Exhibition area will be configured to facilitate continuous interaction between exhibitors and conference participants. Two coffee breaks will also be served daily in this area.

For more information about the Exhibition, please contact the [Exhibition Administration](mailto:exhibition@hcie2013.org). ([exhibition@hcie2013.org](mailto:exhibition@hcie2013.org))

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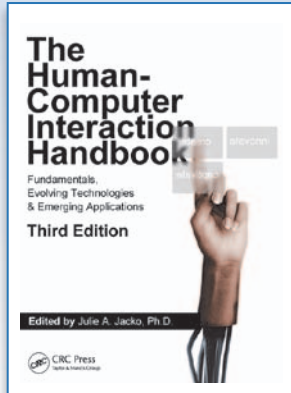




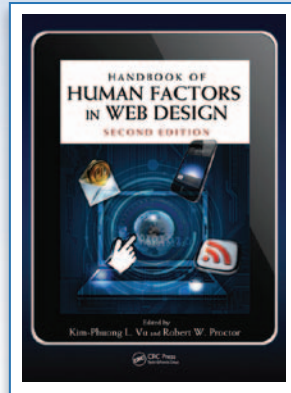
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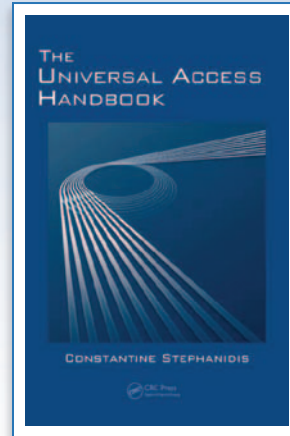
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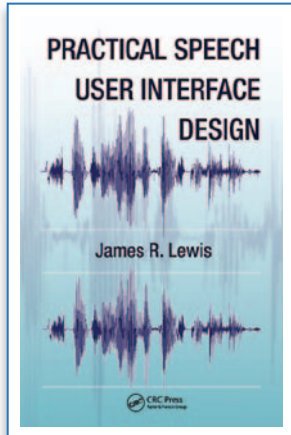
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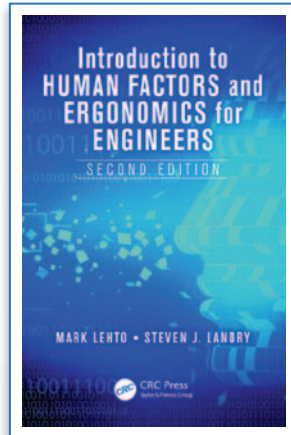
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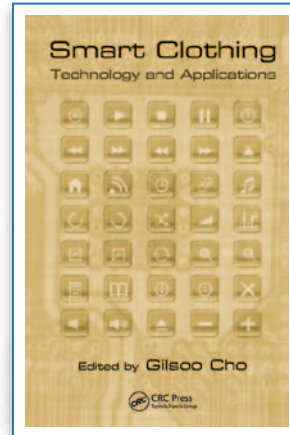
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**Cindy Carelli**

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Sunday, 21 July 2013			
	Tutorials	Duration	Time
T01	<b>Usability and UX: An integrated approach to design and evaluation</b> Nigel Bevan	Half - Day	09:00-12:30
T02	<b>Cognitive Neuroscience for Human Factors</b> Chris Forsythe	Half - Day	09:00-12:30
T03	<b>Structuring user interfaces</b> Martin Maguire	Half - Day	09:00-12:30
T04	<b>Qualitative research methods for interaction design</b> Panos Markopoulos	Half - Day	14:00-17:30
T05	<b>Culture-Centered HCI Design</b> Rüdiger Heimgärtner	Half - Day	14:00-17:30
T06	<b>Principles for Designing Interfaces Compatible with Human Cognition</b> Robert W. Proctor, Kim-Phuong L. Vu	Half - Day	14:00-17:30
T07	<b>User-centered design and accessibility in real-world contexts</b> Simeon Keates, Peter Olaf Looms	Half - Day	14:00-17:30

Monday, 22 July 2013			
	Tutorials	Duration	Time
T08	<b>Optimizing survey research for HCI purposes</b> Hendrik Müller, Aaron Sedley	Full - Day	09:00-17:30
T09	<b>Overview of Human Information Processing for HCI</b> Kim-Phuong L. Vu, Robert W. Proctor	Half - Day	09:00-12:30
T10	<b>Practical Speech User Interface Design for Conversational Systems</b> James R. Lewis	Half - Day	09:00-12:30
T11	<b>Human Factors in ICT for Healthcare</b> Vincent Duffy	Half - Day	09:00-12:30
T12	<b>Standardized Usability Questionnaires</b> James R. Lewis, Jeff Sauro	Half - Day	14:00-17:30
T13	<b>HCI for 3D and Immersive systems</b> Amy Ulinski Banic, Bill Sherman	Half - Day	14:00-17:30
T14	<b>Human Modeling for Decision Support</b> Vincent Duffy	Half - Day	14:00-17:30
T15	<b>HCI in Sci-Fi Movies and Television</b> Aaron Marcus	Half - Day	14:00-17:30

Tuesday, 23 July 2013			
	Tutorials	Duration	Time
T16	<b>Advances in Brain-Machine/Computer Interfaces</b> Günter Edlinger, Christoph Guger	Half - Day	08:30-12:00
T17	<b>How to Create User Requirements for Software</b> Anna Wichansky, Ultan O'Broin	Half - Day	08:30-12:00
T18	<b>User Interface Design and Adaptation for Multi-Device Environments</b> Fabio Paternò	Half - Day	08:30-12:00
T19	<b>An introduction to mobile app development</b> Benjamin Watson, Vidya Setlur	Half - Day	08:30-12:00
T20	<b>Mobile Persuasion Design</b> Aaron Marcus	Half - Day	08:30-12:00
T21	<b>Multimodal conversational human-robot interactions</b> Kristiina Jokinen	Half - Day	13:30-17:00
T22	<b>Eye Tracking in User Experience Design</b> Andrew J Schall	Half - Day	13:30-17:00
T23	<b>Human in the loop: Exploring human vulnerabilities of authentication</b> Theo Tryfonas	Half - Day	13:30-17:00
T24	<b>Mobile UX Design and Mobile UX Trends</b> Aaron Marcus	Half - Day	13:30-17:00
T25	<b>A journey into the world of avatar creation and use</b> Jacquelyn Morie, Kip Haynes, Eric Chance	Half - Day	13:30-17:00

View detailed descriptions of the Tutorials online:

[www.hcii2013.org/tutorials](http://www.hcii2013.org/tutorials)

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**Nigel Bevan**Professional Usability Services, *United Kingdom***Objectives**

To provide a framework that can be used to integrate traditional approaches to usability with the UX issues that create a good user experience. The framework can be used to identify the outcomes of interaction that will determine the relative importance of usability and UX when designing and evaluating interactive systems.

**Content and Benefits:**

Many proponents of UX have relegated usability to the role of a "hygiene factor". The tutorial will explain how the relative importance of usability and UX can be identified, and can form part of an integrated approach to specifying and evaluating the quality of a product.

Usability is conventionally associated with goals for effectiveness, efficiency and satisfaction, but has traditionally ignored personal hedonic goals, such as for "being competent", "being related to others", or "being special". UX has also identified that people value qualities of interaction such as fun, engagement, aesthetic pleasure and the avoidance of frustration. Another human goal is to use a trustworthy system and avoid any unacceptable risk of adverse consequences of interaction. These are all potential goals that users may have when interacting.

UX emphasizes understanding the timeline of interaction. The tutorial identifies the potentially analyzable or measurable outcomes of each usability and UX goal at each of the following stages: the objective process of interaction, the experience of interaction, the objectively measurable outcomes, the perceived outcomes, and the degree of satisfaction with the each perceived outcome. This generates a matrix in which the specific outcomes for each goal at each stage can potentially be specified, analyzed, and/or measured. This integration of usability and UX provides a more comprehensive approach than the traditional objective usability measures of effectiveness and efficiency and subjective measures of satisfaction.

The potential outcomes extend the range of issues that are might otherwise considered in the design or evaluation of an interactive system, and provide a checklist of issues whose relative importance will depend on the nature of the system and its objectives.

The tutorial will include exercises to apply the classification, and will explain how each outcome can be analyzed or measured.

**Target Audience:**

Usability and UX practitioners

**Nigel Bevan**

Biographical Sketch

**Nigel Bevan** ([www.nigelbevan.com](http://www.nigelbevan.com)) is an independent usability consultant with wide industrial and research experience. He has

been editor of several international standards for usability, software quality and usability methods. Nigel leads the UXPA Body of Knowledge project. He was a member of the National Academy of Science Committee on Human-System Design Support for Changing Technology. He has authored over 80 publications, and has a chapter providing a framework for cost benefits in *Cost-Justifying Usability* book.

**Publications**

The tutorial builds on and extends previously published papers by the author (available at [www.nigelbevan.com](http://www.nigelbevan.com)):

- Bevan, N. (2009) What is the difference between usability and user experience evaluation methods? UXEM'09 Workshop, INTERACT 2009, Uppsala, Sweden.
- Bevan, N. (2009) Extending quality in use to provide a framework for usability measurement. Proceedings of HCI International 2009, San Diego, California, USA
- Petrie, H. and Bevan, N. (2009) The evaluation of accessibility, usability and user experience. In: *The Universal Access Handbook*, C Stephanidis (ed), CRC Press.
- Bevan, N. (2008) Reducing risk through Human Centred Design. Proceedings of I-USED 2008, Pisa, September 2008.
- Bevan, N. (2008). Classifying and selecting UX and usability measures. Proceedings of Meaningful Measures: Valid Useful User Experience Measurement (VUUM), 5th COST294-MAUSE Open Workshop, 18th June 2008, Reykjavik, Iceland.
- Bevan, N. (2008) UX, Usability and ISO Standards. Values, Value and Worth workshop, CHI 2008.
- Bevan, N. (2007). Contributor to: *Human-System Integration in the System Development Process: A New Look*. Editors: Richard W. Pew and Anne S. Mavor. National Academies Press. [www.nap.edu/catalog/11893.html](http://www.nap.edu/catalog/11893.html).



Sunday, 21 July 2013

09:00-12:30

MORNING

## Chris Forsythe

Sandia National Laboratories, *United States*

### Objectives

Enable practitioners to apply basic knowledge from cognitive neuroscience to achieve more effective human-systems design.

### Content and Benefits:

There has been a revolution in our knowledge of the brain, and despite broad appreciation of the relevance of brain processes to everyday life, brain science has had little impact on most professional activities. The objective of this tutorial is to provide those working in Human Factors with a synopsis of key findings and theoretical advances from cognitive neuroscience that have direct bearing upon their profession. In some cases, this will entail new insights into factors explaining human performance and behavior, and in other cases, elucidate the mechanisms that underlie accepted practices regarding communication, decision making, training, team performance, etc.

Topics covered in the tutorial will include: attention and conscious awareness, decision making, perception, learning and memory, individual differences, and social interactions, as well as factors mediating brain processes such as sleep, caffeine, stress, etc. Additionally, the tutorial will address factors contributing to effective engineering systems design and management, and particularly, team collaboration. Through discussion of alternative approaches to neuroscience data collection, participants will be provided the knowledge to be thoughtful consumers of neuroscience research. Finally, the tutorial will summarize developments in operational neuroscience and neuroergonomics, and the use of neuroscience methods and technologies in operational settings.

### Target Audience:

The tutorial should be of broad interest to those practitioners and academics working in Human Factors, Human-Computer Interaction, Ergonomics or related fields. The tutorial requires no previous knowledge of neuroscience and is appropriate for individuals ranging from beginner to expert.



**Chris Forsythe**  
Biographical Sketch

**Chris Forsythe** (PhD) is a Distinguished Member of the Technical Staff at **Sandia National Laboratories** ( [www.sandia.gov](http://www.sandia.gov) )

in the USA. He has advanced degrees in cognitive psychology and biopsychology and 25 years experience working in applied settings. Primary interests have focused on the application of technology to improve human performance and developing operational applications of cognitive neuroscience.

## Martin Maguire

Design School, Loughborough University, *United Kingdom*

### Objectives

Many user interfaces, while sophisticated and attractive suffer from poor usability because users do not have a clear understanding of it or mental model of how it operates. This can prevent users from learning how to use an application and getting the most out of it. There are several techniques which can be used to design and present a clear structure for the user interface that will facilitate a clear mental model and ease of understanding and use. The main objective of this half day tutorial will therefore be to impart advice and guidance for the development of well-structured user interfaces and to enhance delegates' skills in applying them.

### Content and Benefits:

This tutorial will include both presentations and practical group work. The session will start by reviewing some examples of user interfaces found on mainstream products and to examine the structures behind them and the user psychology of why they are effective or not. Key guidelines for good design to create effective user interface structures and models will be presented. This will be followed by an audience exercise where they will create the outline design of a mobile application. Working in groups, delegates will create and produce a paper prototype which they will test under 'laboratory conditions' with a user from another group. The session will end with a plenary discussion about what has been learned and how that learning may be taken forward in delegates' own work. The tutorial will enable participants to approach the creation of a user interface structure more confidently and to appreciate how this can greatly enhance the usability of the design.

### Target Audience:

The target audience will primarily be for those involved in user interface design for applications. It may include people in different roles such as UX team members, front end developers, QA testers and user representatives. They may be responsible for designing or evaluating applications. The session will not assume any technical knowledge and could be of interest to both human factors and non-human factors professionals.



## Martin Maguire

Biographical Sketch

As a member of the Loughborough University Design School, **Martin Maguire**, ([www.lboro.ac.uk/departments/lds](http://www.lboro.ac.uk/departments/lds) and, [www.lboro.ac.uk/departments/lds/staff/dr-martin-maguire.html](http://www.lboro.ac.uk/departments/lds/staff/dr-martin-maguire.html)) has a background in computer studies and ergonomics. His main interests are in the usability of interactive systems including the needs of inexperienced users, older people and people with disabilities. He has been involved in several EU projects to develop human factors tools, methods and guidelines to promote usability within European IT programmes. Martin developed the RESPECT User-centred requirements handbook for telematics systems. He has conducted ergonomic appraisals of IT systems for many public sector and private organisations in the UK. At the University he teaches HCI and Interaction Design.

**Panos Markopoulos**

Eindhoven University of Technology, *the Netherlands*

**Objectives**

Participants will acquire an overview of qualitative research methods and understanding of when and how these can be used to inform interaction design. Participants will acquire hands on experience of analyzing and collecting such data. By the end of the tutorial participants will be able to locate and apply appropriate methods depending on the specific challenge at hand, and to appreciate trade offs these entail. They will also be able to adapt such methods to the needs of design or research projects.

**Content and Benefits:**

An introductory lecture will motivate the use of qualitative research methods and compare them to quantitative methods, relating these to different intellectual traditions like ethnography, action research, grounded theory, etc. Particular emphasis will be paid to the different needs of designers versus researchers in human computer interaction. An overview of the vast range of methods and techniques applicable in the field of human computer interaction and interaction design will be given, emphasizing commonalities and nuances that set them apart, covering techniques such as focus groups, repertory grids, cultural probes, performance ethnography, etc. This will help attendees relate disparate methods with roots in social sciences and design research. The purpose is to help participants easily relate different methods and variants to each other. The iterative nature of qualitative research will be motivated and illustrated in the context of practical activities. The notion of quality in qualitative research will be discussed and compared to those widely accepted for quantitative research. Finally, we shall discuss how to communicate the findings of qualitative research depending on the intended purposes and audience.

**Target Audience:**

The level is introductory, particularly appropriate for HCI researchers and practitioners without a background in behavioral research methods.

**Panos Markopoulos**  
Biographical Sketch

**Panos Markopoulos** is a computer scientist ([www.idemployee.id.tue.nl/p.markopoulos](http://www.idemployee.id.tue.nl/p.markopoulos)) who has more than 20 years experience in the field of Human Computer Interaction. He has worked on several topics, including task analysis, software engineering methods in human computer interaction, ambient intelligence, awareness systems and privacy, and interaction design for children. He is a Professor at the Eindhoven University of Technology ([www.tue.nl](http://www.tue.nl)), where a considerable part of his work concerns the appropriate application of research methods from social sciences in the field of interaction design.

**Books:**

- Evaluating Children's Interactive Products  
(<http://store.elsevier.com/product.jsp?isbn=9780123741110&pagename=search>)
- Awareness Systems  
([www.springer.com/computer/hci/book/978-1-84882-476-8](http://www.springer.com/computer/hci/book/978-1-84882-476-8))



Sunday, 21 July 2013

14:00-17:30

AFTERNOON

## Rüdiger Heimgärtner

Intercultural User Interface Consulting (IUIIC), Germany

### Objectives

Acquiring an overview of the state of the art/research in culture-centered HCI design and knowing and applying the most important methods for intercultural user interface design.

### Content and Benefits:

- Overview of the state of the art/research in culture-centered HCI design
- Cultural differences and their implications for HCI design
- Overview of methods used in intercultural HCI design
- Training on some of the most important methods for intercultural HCI design
- Knowing methodological problems and how to avoid them
- Deepening what was learned by reflecting upon it with others
- Discussion and reflection on the topics for application in your context

### Schedule

- Introduction, Overview of culture-centered HCI design (cf. Shen et al. 2006, Clemmensen & Röse 2012, Rau et al. 2012, Heimgärtner 2012), Knowledge of cultural differences and their effects on HCI design, culture-oriented requirement analysis (30 min. lecturer presentation)
- Method of culture-oriented HCI-Design (MCD, cf. Röse 2002), User Interface Characteristics (cf. Marcus 2006), HCI dimensions (cf. Heimgärtner 2012): Identification of cultural differences in HCI design (15 min. lecturer presentation, 30 min. exercise + 15 min. group presentations and discussion)
- Coffee Break (30 min.)
- Applying the learned method mix for cross-cultural design to use cases in HCI design (using existing applications defined by the participants) (15 min. task presentation and group and use case determination, 30 min. exercise and 15 min. group presentations & discussion)
- Closing (Summary, Discussion and Feedback (30 min.))

### Target Audience:

- HCI researchers, students and practitioners who want to understand and take into account cultural influences in HCI.
- Anyone who is interested in a more systematic approach to culture-centered HCI design. Some familiarity with usability and user centered design is assumed, but no specific prior knowledge is needed.



## Rüdiger Heimgärtner

Biographical Sketch

**Dr. Rüdiger Heimgärtner** is a specialist for cultural differences in HCI and has worked in software and HCI projects at Siemens and Continental. He is the founder and managing director of the company Intercultural User Interface Consulting (IUIIC) ([www.iuic.de](http://www.iuic.de)) and has provided training and consultation for Intercultural User Interface Design (IUID) since 2003.

Sunday, 21 July 2013

14:00-17:30

AFTERNOON

**Robert W. Proctor**

Purdue University, USA

**Kim-Phuong L. Vu**

California State University Long Beach, USA

**Objectives**

The goals of this tutorial are to provide HCI designers an overview of compatibility principles relevant to interface design and to illustrate use of the principles in the design of both traditional and mobile computer systems.

**Content and Benefits:**

Cognitive compatibility principles have been highlighted as an area of importance in human-systems integration since the earliest days of human factors and HCI. An indication of this importance is that the first article on compatibility effects, by Fitts and Seeger (1953), was included in the book *Selected Readings in Human Factors*, published by HFES in 1990. Most human factors and HCI specialists are aware of the importance of maintaining compatible relations between displays and controls, but they are not familiar with the broad range of cognitive compatibility effects that have been discovered and their implications for computer interface design. We will illustrate many of the most important compatibility phenomena and present compatibility guidelines and principles for application to design of traditional and mobile interfaces.

**Target Audience:**

This is an introductory tutorial geared toward academicians and practitioners who would like to learn about cognitive compatibility and its applications. No prior background relating to compatibility effects is required because we will set the tutorial within the context of human performance more generally. The tutorial should be of interest to computer scientists, industrial designers, and engineers who want to improve their designs by incorporating compatibility principles.

**Bio Sketch of Presenters:**

Drs. Proctor and Vu are authors of the book *Stimulus-Response Compatibility Principles: Data, Theory, and Application*, published in 2006 by CRC Press. They are leading researchers on compatibility effects and have published many articles highlighting their implications for applied problems.

**Robert W. Proctor**

Biographical Sketch

**Robert Proctor** is a Distinguished Professor of Psychology at Purdue ([www1.psych.purdue.edu/~rproctor](http://www1.psych.purdue.edu/~rproctor)).

Dr. Proctor's research focuses on basic and applied aspects of human performance. He has published over 200 research articles and numerous books and book chapters. He was co-editor of the first major book on compatibility, *Stimulus-Response Compatibility: An Integrated Perspective*, and is also co-author of the text *Human Factors in Simple and Complex Systems*. He is Fellow of the American Psychological Association and Association for Psychological Science, and Honorary Fellow of the Human Factors and Ergonomics Society.

**Kim-Phuong L. Vu**

Biographical Sketch

**Kim Vu** is Associate Professor of Psychology at California State University, Long Beach ([www.csulb.edu/~kvu8](http://www.csulb.edu/~kvu8)). She is Associate Director of the Center for Usability in

Design and Accessibility and of the Center for Human Factors in Advanced Aeronautics Technologies. Dr. Vu has over 75 publications in areas relating to human performance, human factors, and human-computer interaction. She is co-editor of the *Handbook of Human Factors in Web Design*.

Sunday, 21 July 2013

14:00-17:30

AFTERNOON

## Simeon Keates

Chair of HCI and Head of School, School of Engineering, Computing and Applied Mathematics, University of Abertay Dundee, *United Kingdom*

## Peter Olaf Looms

Chairman of the ITU-T focus group on audiovisual media accessibility and External Associate Professor at the Danish Technical University and the University of *Hong Kong*.

### Objectives

The objective of this tutorial is to introduce and explore both user-centered design and universal access and to show how they can be implemented successfully in corporate and research environments to deliver genuinely accessible and usable products and services. This tutorial will explore both the theory and its application, examining how real world constraints require the adaptation of theory to meet each new context of use.

### Content:

This tutorial will cover the basics and introduce more advanced aspects of both user-centered design and universal access. We will explore how they are fundamentally related and also their application in real-world situations.

It is widely accepted in principle that both user-centered design and universal access are essential for the development of products that are both usable and accessible by the widest possible range of users. However, neither has achieved ubiquity in industrial practice. There are many reasons for this - technological, organisational and cultural. In this tutorial we will examine these barriers to adoption, where they come from and how they can be overcome.

We will look at how user-centered design and universal access have been successfully implemented in typical design management processes, with a minimum of modifications to existing design practice. Significant advances in overall usability and accessibility can be readily achieved and this tutorial will be illustrated by numerous case studies where this has happened. You will see how some companies and organisations have risen to this challenge and how others have failed. By examining from their experiences, you will learn to identify and avoid the common reasons for failure. This also gives a great opportunity for researchers new to the field to learn how real-world experiences often differ from the theoretical approaches taught in the classroom.

In particular, we will examine the role of the whole supply ecosystem in the delivery of products and services – an aspect that is often overlooked by many universal access practitioners.

The case studies will include the design and evaluation of both hardware and software, including kiosks, robots, websites and a focus on the next generation of television and broadcast media using broadcast, Internet and hybrid broadcast/Internet distribution. The UN agency ITU will have published its roadmap for accessibility actions shortly before the tutorial is held and the ITU Focus Group on audiovisual media accessibility provides a useful backdrop on the major issues. There will be interactive design exercises to allow you to put your design skills to the test.

### Benefits:

Both instructors are highly experienced in designing, evaluating and delivering genuinely accessible solutions for a wide range of technologies and contexts. Participants in this tutorial will benefit from the theoretical underpinnings and practical examples and case studies that will be discussed. They will also have the opportunity to quiz both instructors about their experiences. The aim is for participants to understand the subtleties and nuances required to produce systems and products that meet the aspirations of universal access.

### Target Audience:

The tutorial is designed for anyone with an interest in universal access and accessibility, from academic researchers to practitioners attempting to develop accessible solutions.



## Simeon Keates

### Biographical Sketch

**Professor Simeon Keates** is Chair of HCI and Head of School of Engineering, Computing and Applied Mathematics at the University of Abertay Dundee ([www.abertay.ac.uk/studying/schools/secam](http://www.abertay.ac.uk/studying/schools/secam)). He was formerly an Associate Professor at the IT University of Copenhagen, where he lectured in the Design and Digital Communication study line. He obtained his PhD from the University of Cambridge, where he also worked as an Industrial Research Fellow in the Engineering Design Centre.

After leaving Cambridge, he moved to the US and joined the Accessibility Research Group at the IBM TJ Watson Research Center before moving to Boston and working at ITA Software as a Usability Lead designing interfaces for Air Canada.

Simeon also has an extensive history of consultancy, with clients including The Post Office (Royal Mail), the Social Security Administration, the UK Department of Trade and Industry, Danish Broadcasting Corporation (DR) and Lockheed Martin.



## Peter Olaf Looms

### Biographical Sketch

**Peter Olaf Looms** is Danish and was born and educated in the UK. He holds a Master's degree from the University of Cambridge.

Peter has worked for more than 30 years on policy and strategy in broadcasting. Since 2006 this has included television and digital media accessibility. He was instrumental in setting up the DTV4ALL consortium that assisted the European Commission in promoting e-inclusion for digital television across Europe (2008-2011).

Peter is currently chairman of the ITU-T Focus Group on Audiovisual Accessibility ([www.itu.int/en/ITU-T/focusgroups/ava](http://www.itu.int/en/ITU-T/focusgroups/ava)) that aims to produce a roadmap for digital media accessibility actions for the International Telecommunication Union by early 2013. He is involved in accessible media projects in Europe, China, India and Argentina.



## Hendrik Müller

Senior User Experience Researcher, Google, Inc., Sydney, Australia

## Aaron Sedley

Senior User Experience Researcher, Google, Inc., Mountain View, USA

### Objectives

Online surveys are widely used in HCI to gather feedback and measure satisfaction; at a glance there are many available tools, and the cost of conducting surveys appears low. However, there is a wide gap between quick-and-dirty surveys and surveys that are properly planned, constructed, and analyzed. This full-day tutorial will examine survey research approaches that meet HCI goals, selecting the appropriate sampling method, questionnaire design best practices, identifying and avoiding common survey biases, and considerations for survey implementation, fielding, and analysis. Interactive exercises as well as numerous examples will be used throughout the entire tutorial to engage the attendees with the material and to make it immediately applicable to their work. The audience will gain an appreciation for the breadth and depth of surveys in HCI, combined with keys to conducting valid, reliable, and impactful survey research themselves.

In particular, attendees will learn about:

- The role of survey research to measure attitudes and to gather feedback
- When it is and when it is not appropriate to use survey methods
- The entire survey lifecycle, from goals to project planning, sampling considerations, questionnaire design, choosing the right tool, fielding, and analysis
- How to design surveys, with an understanding of sources of survey error and questionnaire biases

### Content:

Below is a detailed outline of the topics for the morning and afternoon session:

#### Part 1: Surveys fundamentals and survey use in HCI research

- Introduction to survey research
- Exercise: Attendees' experience with survey research
- Survey types and examples
- A short history of survey research
- Surveys appropriateness in the context of HCI
- Exercise: Identifying survey appropriateness in proposed scenarios
- Overview of the survey life cycle
- Research goals & constructs
- Exercise: Turning goals into constructs
- Population & sampling (sample methods, modes, sample sizes)
- Open Q&A

#### Part 2: Questionnaire design and survey biases

- Overview of the survey life cycle
- Question types & when to use each
- Questionnaire biases
- Other question types to be avoided

- Visual design considerations
- Exercise: Identifying biases from example surveys
- Testing and optimizing your survey
- Implementation considerations for online surveys
- Maximizing response rates
- Data analysis fundamentals (closed & open-ended data)
- Open Q&A

### Target Audience:

People from academia, industry, and government with a common desire to further their knowledge of survey research, i.e., including but not limited to user experience researchers, other user experience practitioners, product managers, and analysts. The tutorial targets both those wanting to use surveys and other feedback-gathering methods as a quick and simple tool, as well as those looking to refine their approach to survey research.



## Hendrik Müller

Biographical Sketch

**Hendrik Müller (Mueller)** is a senior user experience researcher at Google currently in Sydney, Australia. He leads user research for

Google Drive, supports Google Docs, and previously worked on Google Health and several other products. His research interests focus on file management, cloud storage, collaboration, mobile devices, and survey methodology among other methods. Together with other researchers, he leads survey efforts within Google's user experience team to measure user happiness. Hendrik received his master's degree in Human-Computer Interaction from the Georgia Institute of Technology in Atlanta, USA.



## Aaron Sedley

Biographical Sketch

**Aaron Sedley** is a senior user experience researcher at Google, Inc. in Mountain View, focused on tracking and analyzing

user attitudes via surveys. He currently leads survey research within Search, and consults with teams across Google on survey methodology, planning and implementation. Aaron initiated Happiness Tracking Surveys (HaTS) at Google in 2006, an attitudinal measurement platform that is now deployed across over 15 products. Prior to joining Google in 2003, Aaron held research positions with New York Times Digital, Young & Rubicam, and the Carnegie Endowment for International Peace. He earned a bachelor's degree in Government from Wesleyan University.

### Kim-Phuong L. Vu

California State University Long Beach, USA

### Robert W. Proctor

Purdue University, 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:

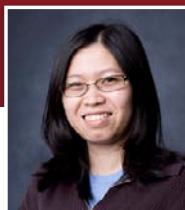
HCI is fundamentally an information-processing task. The human information-processing approach is based on the idea that human performance, from displayed information to a response, is a function of several distinct processes. The nature of these processes, how they are arranged, and the factors that influence how quickly and accurately a particular process operates, can be discovered through appropriate research methods. Because information-processing analyses are used in HCI in several ways, it is beneficial to be familiar with basics of the approach and specific applications to HCI.

Basic facts and theories about information-processing capabilities are taken into consideration when designing 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.

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.

#### Target Audience:

This tutorial is geared toward human factors and HCI professionals who do not have much background in human information processing or for those who want a refresher course concerning basic principles of human information processing, recent developments in the area, and what it has to offer HCI. It should be of interest to computer scientists, industrial designers, and engineers who want to improve their designs by incorporating information-processing analyses.



### Kim-Phuong L. Vu

Biographical Sketch

**Kim-Phuong L. Vu** is Professor of Psychology at California State University, Long Beach ([www.csulb.edu/~kvu8](http://www.csulb.edu/~kvu8)). She is Associate Director of the Center for Usability in Design and Accessibility and of the Center for Human Factors in Advanced Aeronautics Technologies at CSULB. Dr. Vu has over 100 publications in areas relating to human performance, human factors, and human-computer interaction. She is co-author of the book *Stimulus-Response Compatibility Principles: Data, Theory, and Application* and co-editor of the *Handbook of Human Factors in Web Design* (2nd ed.). Dr. Vu was the recipient of the 2009 Earl A. Alluisi Award for Early Career Contributions of Division 21 (Applied Experimental and Engineering Psychology) of the American Psychological Association.



### Robert W. Proctor

Biographical Sketch

**Robert Proctor** is a Distinguished Professor of Psychology at Purdue ([www1.psych.purdue.edu/~rproctor](http://www1.psych.purdue.edu/~rproctor)). Dr. Proctor's research focuses on basic and applied aspects of human performance. He has published over 200 research articles and numerous books and book chapters. He was co-editor of the first major book on compatibility, *Stimulus-Response Compatibility: An Integrated Perspective*, and is also co-author of the text *Human Factors in Simple and Complex Systems*. He is Fellow of the American Psychological Association and Association for Psychological Science, and Honorary Fellow of the Human Factors and Ergonomics Society.

**James R. Lewis**

IBM Software Group, USA

**Objectives**

Taught by the author of "Practical Speech User Interface Design", the objective of this course is to provide a basic foundation in current leading practices (many of which are not intuitive) in speech user interface design for interactive voice response applications. Although speech is the most natural form of communication between humans, most people find using speech to communicate with machines anything but natural. Drawing from psychology, human-computer interaction, linguistics, and communication theory, this course will provide a comprehensive yet concise survey of practical speech user interface (SUI) design, including practice-based and research-based guidance on how to design effective, efficient, and pleasant speech applications that people can really use. The techniques for designing usable SUIs are not obvious, and to be effective, must be informed by a combination of critically interpreted scientific research and leading design practices.

Students will learn about the foundations of SUI design (technologies and key concepts in linguistics and communication), important overall aspects of SUI design, how to get started (high-level design decisions: barge-in, speech output methods, speech recognition methods, prompting styles, help styles, role of call center agents), specific aspects of design (low-level design decisions: creating introductions, avoiding poor practices, timing issues, dialog design, confirming input), and will participate in after-lecture exercises to try out new skills.

**Content and Benefits:**

The course will begin with an introduction to speech user interface design fundamentals, including speech technologies and key issues from psycholinguistics and conversational pragmatics. The next goal is to provide background in self-service technologies and associated market and psychological research which provides additional foundation for IVR design decisions. Design decisions for speech-enabled IVR include high-level and low-level decisions. Important high-level design decisions include decisions related to barge-in methods, use of recorded prompts versus synthesized speech (and when to combine them), simple versus complex speech recognition, concise versus verbose prompting styles, use or non-use of global navigation commands, how to provide help, and the role of call-center agents. Low-level (detailed) design topics will include creating introductions (and avoiding poor practices in introductions), timing issues, dialog design, designing effective menus and prompts, and confirming user input. After covering this material, attendees will participate in class exercises in the crafting of introductions, designing menus, and conducting informal Wizard-of-Oz evaluations.

**Part 1:** Introduction

- a. Speech technologies
- b. Key concepts in human language and communication

**Part 2:** Self-service technologies

- a. Satisfaction with and adoption of self-service technologies
- b. Waiting for service
- c. Service recovery
- d. Consequences of forced use of self-service technologies

**Part 3:** Getting started: High-level design decisions

- a. Choosing the barge-in style
- b. Selecting recorded prompts or synthesized speech
- c. Simple versus complex speech recognition
- d. Concise versus verbose prompting styles
- e. Speech versus speech plus touchtone
- f. Global navigation commands
- g. Help mode versus self-revealing help
- h. Role of human agents in a deployed system

**Part 4:** Getting specific: Low-level design decisions

- a. Creating introductions
- b. Avoid poor practices in introductions
- c. Getting the right timing
- d. Designing dialogs
- e. Constructing appropriate menus and prompts
- f. Confirming user input

**Part 5:** Classroom exercises

- a. Design an introduction
- b. Design a menu
- c. Conduct a WOZ evaluation

**Part 6:** Wrapping up**Target Audience:**

Attendees are not expected to have a background in speech recognition or the design of IVR applications. That said, there has been enough new research over the past 10 years that people with extensive experience in IVR design will likely find new information to inform their design practices.

**James R. Lewis**  
Biographical Sketch

**James R. (Jim) Lewis** is currently a senior human factors engineer (at IBM since 1981), with a primary focus on the design and evaluation of user interfaces (graphical, spoken, mobile) (<http://drjim.0catch.com>). He is a Certified Human Factors Professional with a Ph.D. in Experimental Psychology (Psycholinguistics). Jim is an internationally recognized expert in usability testing and measurement. He was the technical team lead for the human factors/usability group working in IBM speech product development from 1999 through 2005, and has experience in all areas of speech system usability (including desktop systems, embedded systems, text-to-speech systems, speech interactive voice response applications, and natural language understanding technologies). Before that, he was the lead user experience designer for a number of mobile products, including the product now widely regarded as the first smart phone, the Simon. He is the author of the books *Practical Speech User Interface Design* (2011) and *Quantifying the User Experience: Practical Statistics for User Research* (2012).



Monday, 22 July 2013

09:00-12:30

MORNING

## Vincent Duffy

Purdue University, USA

### Objectives

An introduction to human factors and ergonomics will be given with a focus on healthcare. Fundamental principles will be introduced considering the physical, cognitive and organizational aspects. By the end of the tutorial students should be able to assess studies with these elements included.

### Content:

The tutorial will include a special section that focuses on the process, methods and structuring of research studies in addition to the implementations specific healthcare practice that integrates human factors principles. With emphasis on patient safety, healthcare information technology implementation, medication impairment and human performance, this tutorial will be accessible to a wide range of participants from practitioners such as healthcare clinicians, to engineers who may or may not have much experience with human factors or clinical applications.

### Target Audience:

Participants may include current practitioners and students of related fields including healthcare, information technology and the social sciences.



## Vincent Duffy

### Biographical Sketch

The instructor, **Vincent Duffy** is a faculty member at Purdue University with a dual appointment in the School of Industrial Engineering and the Department of Agricultural & Biological Engineering ([https://engineering.purdue.edu/Engr/People/ptProfile?resource\\_id=9261](https://engineering.purdue.edu/Engr/People/ptProfile?resource_id=9261)). He is a faculty affiliate of the Regenstrief Center for Healthcare Engineering and has taught a related course for Doctor of Nursing program for the past six years.

Monday, 22 July 2013

14:00-17:30

AFTERNOON

## James R. Lewis

IBM Software Group, USA

## Jeff Sauro

[www.measuringusability.com](http://www.measuringusability.com), USA

### Objectives

Standardized usability questionnaires are questionnaires designed for the assessment of perceived usability, typically with a specific set of questions presented in a specified order using a specified format with specific rules for producing scores based on the answers of respondents. For usability testing, standardized questionnaires are available for assessment of a product at the end of a study (post-study – for example, QUIS, SUMI, PSSUQ, SUS, and, most recently, UMUX and UMUX-LITE) and after each task in a study (post-task – for example, ASQ, Expectation Ratings, SEQ, SMEQ, and Usability Magnitude Estimation). Standardized questionnaires are also available for the general assessment of website usability (for example, WAMMI and SUPR-Q).

All of these questionnaires have undergone psychometric qualification, including assessment of reliability, validity, and sensitivity, making them valuable tools for usability practitioners. The purpose of this course is to provide an introduction to standardized usability measurement, an inventory of currently available instruments (including their psychometric properties) for after-task and after-study measurement, and discussion of recent research in the important characteristics of standardized usability questionnaires (including their interrelationships and statistical connections to other metrics).

At the end of the course, attendees will know about the key properties and uses for the currently available standardized usability questionnaires.

### Content and Benefits:

The course starts with coverage of the basic psychometric properties of standardized measurement – reliability, validity, and sensitivity. The next topic is the inventory of post-study questionnaires (such as the QUIS, SUMI, PSSUQ, SUS, and, most recently, UMUX and UMUX-LITE) – descriptions of the instruments, summaries of their known psychometric properties, and key recent research findings. The SUS will receive special attention due to the relatively large amount of normative and usage data that has become available for it in the past five years. Following that we will cover the available after-task questions/questionnaires (such as ASQ, Expectation Ratings, SEQ, SMEQ, and Usability Magnitude Estimation), with descriptions, summaries, and recent research findings. We will end with a discussion of other standardized usability questionnaires of interest to the CHI community (e.g., some specifically for website evaluation and some key questionnaires from the marketing research literature, such as the TAM and Net Promoter Score).

1. Introduction to standardized usability measurement
2. Post-study questionnaires
3. Post-task questionnaires
4. Questionnaires for assessing the perceived usability of websites
5. Other questionnaires of interest
6. Wrapping up

### Target Audience:

The course will likely be of interest to a wide variety of attendees, but will be especially useful to those usability practitioners and HCI

researchers who currently use or plan to use standardized usability questionnaires.

### Relevant links:

- $\mu$ Measuring Usability ([www.measuringusability.com](http://www.measuringusability.com))
- UsableΣStats (<http://www.usablestats.com>)

### Bio Sketch of Presenters:

Jeff and Jim are co-authors of the 2012 book from Morgan-Kaufmann, “Quantifying the User Experience: Practical Statistics for User Research” and its companion book, “Excel and R Companion to ‘Quantifying the User Experience: Practical Statistics for User Research’: Rapid Answers to over 100 Examples and Exercises”.



## James R. Lewis

### Biographical Sketch

Dr. **James R. (Jim) Lewis** Ph.D., CHFP (<http://drjim.0catch.com>), graduated with an M.A. in Engineering Psychology in 1982 from New Mexico State University, and received

his Ph.D. in Experimental Psychology (Psycholinguistics) from Florida Atlantic University in 1996. He has worked as a human factors engineer and usability practitioner at IBM since 1981. He has published influential research on the measurement of usability satisfaction, use of confidence intervals, and sample size estimation for usability studies. He is on the editorial board of the International Journal of Human-Computer Interaction and the Journal of Usability Studies, and wrote the chapter on usability testing for the 3rd and 4th editions of the Handbook of Human Factors and Ergonomics (2006/2012). From 2004-2005 he chaired the Formative Usability Testing Metrics Workgroup for National Institute of Standards and Technology (NIST). He is a BCPE Certified Human Factors Professional, an IBM Master Inventor, author of “Practical Speech User Interface Design” (2011), was recently voted onto the board of the Association for Voice Interaction Design, and is a member of UPA and HFES.



## Jeff Sauro

### Biographical Sketch

**Jeff Sauro** is a Usability Engineer and statistical analyst with over a decade of experience conducting quantitative usability and statistical analysis for Oracle,

Intuit, PeopleSoft, PayPal, Sage Software and General Electric. Jeff has presented and taught courses at CHI, HCII, HFES and UPA. He was the guest editor for Interactions Magazine dedicated to Quantifying Usability. He holds a Masters from Stanford University from their school of Education specializing in teaching quantitative concepts. His teaching style is to work backwards from practical problems that the usability practitioner is likely to encounter when quantifying usability. From these problems he takes actual usability data and shows how to make better decisions with numbers.

Monday, 22 July 2013

14:00-17:30

AFTERNOON

## Amy Ulinski Banic

University of Wyoming and Idaho National Laboratory, USA

## Bill Sherman

Indiana University and Idaho National Laboratory, USA

### Objectives

Participants in this tutorial will:

- Learn about low-cost immersive systems (input and output hardware).
- Learn how to utilize these hardware solutions.
- Be provided with hands-on instruction of APIs to serve as a base for 3D UI (Free VR, etc..)
- Learn about 3D UI components and design as they relate to immersive systems
- Learn how these issues relate to the design of user-interface components (metaphors, mental models, navigation, interaction, and appearance) for 3D environments.
- Learn about the cognitive and perception issues and challenges for immersive environments that affect UX

### Content:

- Terminology of Immersive systems (hardware and software) and 3D UI design components and issues.
- Low-cost hardware list and suggestions for putting together immersive system
- Open-source software list and basic instructions for setting up simple application
- Instructions for use of basic input technologies for immersive environments
- 3D UI design methodology and UX evaluation
- Discussion of cognitive and perception Issues and challenges for immersive environments, stimulated by provided examples.

### Benefits:

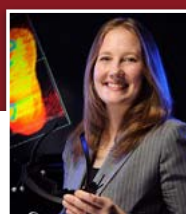
With 3D technology and immersive environments becoming more popular, this tutorial will allow traditional HCI researchers, professionals, developers, etc to initiate work in 3D UI for immersive environments. This tutorial is focused on basic low-cost technology, open-source software, and new UI issues faced when designing for 3D environments and immersive technology.

### Target Audience:

Target audience for this tutorial include traditional HCI/CHI/UI/UX designers, analysts, developers, usability professionals, cognitive scientists, visual and interaction designers, ethnographers, and other professionals in HCI who may know relatively little about 3D UI for immersive systems and 3D environments who may want to or already would like to initiate work in this area. Additionally anyone who may be interested in low cost immersive hardware and software systems for other uses.

### Relevant links:

IQ-station (<http://iq-station.com>)



## Amy Ulinski Banic

### Biographical Sketch

**Amy Ulinski Banic** is an Assistant Professor ([www.cs.uwyo.edu/faculty/abanic.html](http://www.cs.uwyo.edu/faculty/abanic.html))

in the Department of Computer Science in the College of Engineering and Applied Science at the University of Wyoming and holds a joint appointment at Idaho National Laboratory (INL), Center for Advanced Energy Studies (CAES). She is the founder and director of the 3D Interaction and Agents (3DIA) research lab at the University of Wyoming. Her research focus is on 3D User Interfaces for Virtual Environments, Immersive Visualizations, and Virtual Humans, primarily in bimanual and multi-modal interaction. Dr. Banic received her Ph.D. and M.S. from the University of North Carolina at Charlotte in 2008, and B.S. in CS and B.A. in Art from Duquesne University in 2003. She held a Post-Doctoral Fellowship position in the Virtual Environments Group at Clemson University, School of Computing.



## Bill Sherman

### Biographical Sketch

**Bill Sherman** is Senior Technical Advisor in the Advanced Visualization Lab (<http://pti.iu.edu/avl>) at Indiana University.

Sherman's primary area of interest is in applying immersive technologies to scientific visualizations. He has been involved in visualization and virtual reality technologies for over 20 years, and has been involved in establishing several immersive research facilities.



Monday, 22 July 2013

14:00-17:30

AFTERNOON

### Vincent Duffy

Purdue University, USA

#### Objectives

An overview of models developed over the past four decades will be provided and opportunities for emerging areas will be explained.

#### Content:

Digital Human Models models can assist in providing early indication of product fit, occupational safety and health. Such models are incorporated into modern and commercially available Computer-Aided Engineering software tools. They incorporate best practices across a wide variety of disciplines including Product Lifecycle Management, aviation, manufacturing and service industries, automotive design and habitability for space travel. Applications in this field demonstrate how to reduce the need for prototyping and incorporate ergonomics and human factors earlier in the design process.

#### Target Audience:

Practitioners and researchers working in inter-disciplinary operations, decision making and design.



### Vincent Duffy

#### Biographical Sketch

The instructor, **Vincent Duffy** is a faculty member at Purdue University with a dual appointment in the School of Industrial Engineering and the Department of Agricultural & Biological Engineering ([https://engineering.purdue.edu/Engr/People/ptProfile?resource\\_id=9261](https://engineering.purdue.edu/Engr/People/ptProfile?resource_id=9261)). He is a faculty affiliate of the Regenstrief Center for Healthcare Engineering and has taught a related course for Doctor of Nursing program for the past six years. Dr. Duffy has taught courses titled Work Analysis & Design I & II and Digital Human Modeling at Purdue University. He was recently a Fulbright Scholar in The Russian Federation with a faculty appointment at Bauman Moscow State Technical University in their Faculty of Engineering Business and Management. Duffy is a Certified Professional Ergonomist and has edited six published books on Digital Human Modeling through Springer's LNCS Series and CRC Press.

Monday, 22 July 2013

14:00-17:30

AFTERNOON

## Aaron Marcus

President, Aaron Marcus and Associates, Inc., Berkeley, California, USA

### Objectives

Participants in this course will:

- Understand how science-fiction movies and television have/have not incorporated fundamental principles of user-centered design to achieve usability, usefulness, and appeal
- Understand the development of HCI/UX of science-fiction in the popular media over the past 100 years
- Understand how to combine their professional knowledge of HCI/UX to look at popular media

### Content and Benefits:

**Abstract:** HCI in Sci-Fi Movies and Television will summarize and analyze the past 100 years of human-computer interaction as incorporated into science-fiction cinema and videos, beginning with the advent of movies in the early 1900s (Melies' "A Trip to the Moon," which was recently referenced in the recent movie "Hugo").

For many decades movies have shown technology in advance of its commercialization (for example, video phones and wall-sized television displays, hand-gesture systems, and virtual reality displays). In some cases mistaken views about what is usable, useful, and appealing seem to be adopted, perhaps because of their cinematic benefits. In any case, these media have served as informal "test-beds" for new technologies of human-computer interaction and communication. They provide ample evidence for heuristic evaluations, ethnographic analysis, market analysis, critique of personas and use scenarios, and new approaches to conceptual and visual design.

The course will explore issues of what is "futuristic" and what is not, gender-role differences, optimism/pessimism, and user-centered design characteristics in more than two dozen films and a half-dozen television shows. Examples from China, India, and Japan will also be referenced.

Participants will be informally quizzed about their recognition of the media examples shown and their analysis of contexts, technologies, business models, user communities, and designs. Discussion with participants throughout the presentation will be encouraged.

**Benefits of the Tutorial:** Increased understanding of key issues, challenges, philosophies, and principles related to the tutorial topic.

Increased awareness of cutting-edge/future products and services related to the tutorial topic.

Increased knowledge of how to use UX/HCI skills, expertise, and experience to analyze sci-fi media.

**Post-Conference Activities:** Following up from the conference, The speaker plans to send participants who wish to receive them additional papers, as well as an extensive bibliography and list of links relevant to the tutorial topic. They will be able to access and read the free eBook, which they can download, view the one-

hour YouTube video, and join sci-fi and HCI discussion groups in the UK, Germany, India, China, and Japan, about which I shall inform them.

### Target Audience:

The tutorial is appropriate for:

1. Especially for people who are new to HCI/UX and to Sci-Fi
2. People who have some experience with the HCI/UX and/or Sci-Fi
3. People who have much experience with HCI/UX and would like to learn more about Sci-Fi

HCI/UX/CHI/Visua/Mobile professionals in these (alphabetical order) professions:

- Analysts
- Cognitive Scientists
- Designers
- Evaluators of usability and user-experience
- Marketers
- Researchers: Advanced R+D
- Software Engineers

### Links:

- AM+A Website ([www.amanda.com](http://www.amanda.com))
- Previous version of the primary lecture on youtube: <http://uebermedien.org/retrospektive/video-keynote-aaron-marcus>



## Aaron Marcus

### Biographical Sketch

Since 1982, **Mr. Marcus** has been President of AM+A. He has taught at six universities (Princeton, Yale, UC/Berkeley, Hebrew University/Jerusalem, Illinois Institute of Technology's Institute of Design, and the University of Toronto). In 1992, he received the National Computer Graphics Association's annual award for contributions to industry. In 2000, the International Council of Graphic Design Organizations (ICOGRADA) named him a Master Graphic Designer of the Twentieth Century. In 2007, the American Institute of Graphic Arts (AIGA) named him a Fellow of for his work in cross-cultural design. In 2008, he was elected to the CHI Academy. In 2009, he received the UPA Service award for being Editor-in-Chief of UX Magazine for five years. He has given keynote plenary presentations ACM/SIGGRAPH 1980, ACM/SIGCHI 1999, UPA 2005/Montreal, and User Friendly 2012/Beijing. He is now a Master of the De Tao Academy in Beijing and is starting a Center for User-Experience Innovation in Shanghai. He is also an International Advisor to the Dragon Design Foundation, Beijing, China.

### Günter Edlinger

g.tec medical engineering GmbH/Guger Technologies OG, Austria

### Christoph Guger

g.tec medical engineering GmbH/Guger Technologies OG, Austria

#### Objectives

The Brain-Machine/Computer Interface (BCI) research area is a vital and fast expanding field. BCIs have been developed during the last years for people with severe disabilities to improve their quality of life. Applications of BCI systems comprise the restoration of movements, communication and environmental control. However, recently BCI applications have been also used in different research areas e.g. in the field of virtual reality. The Tutorial will discuss necessary prerequisites to successfully perform BCI experiments in non-invasive and invasive ways. Live demonstrations of BCI control will allow to understand the progress of the technology.

#### Content:

- insights into the hardware for BCI research
- insights into the software for BCI research
- enabling participants to run their own experiments
- giving participants the chance to analyze their BCI performance
- showing how to control a smart home environment
- showing avatar control with the BCI
- showing robot control with the BCI
- discussing advantages/disadvantages of dry/wet sensors
- discussing non-invasive and invasive BCI approaches

#### Target Audience:

The goal of the workshop is to bring together researcher and interested audience to describe and demonstrate the options available in the field of Brain/Neural Machine Interfaces. Especially usability and reliability of BCI control allows now developing and displaying more advanced applications. We think that such a workshop will be very well accepted from the audience working in the area of HCI combining different modalities for interactions.

#### Relevant links:

- State of Art in BCI research: The BCI Award 2010 book chapter  
[www.gtec.at/Research/State-of-the-Art-in-BCI-research](http://www.gtec.at/Research/State-of-the-Art-in-BCI-research)
- BCI videos: New results from g.tec and many others  
[www.gtec.at/Research/Videos](http://www.gtec.at/Research/Videos)
- intendiX: User-Ready Brain-Computer Interface Applications ([www.intendix.com](http://www.intendix.com))



### Günter Edlinger

Biographical Sketch

**Günter Edlinger** ([www.gtec.at](http://www.gtec.at)) studied control engineering at the University of Technology Graz and carried out research work at the Institute of Biomedical Engineering (Prof. Pfurtscheller) at the University of Technology Graz. He worked there as an assistant professor and teacher and received his PhD degree in 1998. The topic of his PhD work was the design of a High Resolution EEG. He is co-founder of gtec. He is responsible for R&D with special emphasis on the development and production of medical systems since more than 15 years.



### Christoph Guger

Biographical Sketch

**Christoph Guger** ([www.gtec.at](http://www.gtec.at)) studied biomedical engineering at the University of Technology Graz and Johns Hopkins University in Baltimore, USA. Then he carried out research work at the Department of Medical Informatics (Prof. Pfurtscheller) at the University of Technology Graz and received his PhD degree in 1999. The topic of his PhD work was the design of an EEG-based brain-computer interface. This was the first real-time BCI system with continuous feedback. He also developed the real-time analysis with common spatial patterns which is still the fastest and most accurate approach for oscillatory BCIs and developed also a P300 BCI with very high accuracy and speed. In the last years he worked also with ALS and tetraplegic patients in different countries.



## Anna Wichansky

Ph.D, CPE, Senior Director, Oracle Applications User Experience, USA

## Ultan O'Broin

Director, Oracle Applications User Experience, USA

### Objectives

- To explain why usability must be included in requirements for major software implementations, including upgrades and tailoring scenarios
- To provide hands-on practice with ISO-standard methods to articulate, document, and measure usability requirements
- To provide operational techniques to determine achievement of customers' usability goals
- To teach you how to complete the [Common Industry Specification for Usability - Requirements \(CISU -R\)](#), the requirements extension of [ISO 25062, Common Industry Format for Usability Testing](#), using a case study example

### Content and Benefits:

1. Pre-work: Read a business case study of a fictitious company acquiring financial software, to be distributed in advance.
2. Introduction: objectives, key takeaways, instructors' backgrounds, agenda
3. What are User Requirements: definition; examples; importance in developing usable software; Levels 1- 3 of CISU-R
4. Context of Use: ISO definition; importance in developing usable software; examples
  - a. Determining User Characteristics: user profiles; personas
  - b. Types of User Requirements: Physical, technological, social, cross-cultural; stakeholders; tasks & goals; usage scenarios; training
  - c. How to recruit, interview, and observe users; how developers differ from users
  - d. CISU-R Level 1 compliance
  - e. Group Exercise 1. Brainstorming Context of Use for an Enterprise Application
5. Usability Criteria: ISO definition; importance in developing usable software
  - a. ISO concepts of effectiveness, efficiency, and satisfaction
  - b. Core user performance and satisfaction criteria
  - c. Goal-line metaphors
  - d. CISU-R Level 2 compliance
  - e. Group Exercise 2. Brainstorming Usability Criteria for an Enterprise Application
6. Usability Test Methods: ISO definition; importance to developing usable software
  - a. Common test methods
  - b. Basic components of a user test
  - c. CISU-R Level 3 compliance
  - d. Group Exercise 3. Brainstorming Usability Test Methods for an Enterprise Application
7. Public domain resources
8. Questions & Answers
9. Benefits:
  - a. ensure you design the right product for the right audience in the right context of use
  - b. learn the same ISO standard methods and techniques used by professional software implementation consultants working for large enterprises
  - c. take away a complete CISU-R document example, provided at the end of the course.

### Target Audience:

novice UX researchers; all levels of software designers, product managers, marketing managers, consultants, and developers

### Relevant links:

- [www.oracle.com/webfolder/ux/applications/getInvolved/OUAB/index.html](http://www.oracle.com/webfolder/ux/applications/getInvolved/OUAB/index.html)
- Usable Apps Blog <https://blogs.oracle.com/usableapps>
- User experience assistance: design & development <https://blogs.oracle.com/userassistance>



## Anna Wichansky

### Biographical Sketch

**Anna Wichansky Ph.D CPE** is an applied experimental psychologist who specializes in the study of how users interact with new technology. She has an M.S. and Ph.D in human factors from Tufts University, Medford, Massachusetts, USA and A.B. from Harvard University, Cambridge, Massachusetts, USA in psychology.

She has researched, developed, and tested user interfaces for transportation, telecommunications, space exploration, electronic instrumentation, computer hardware, software, graphics, and media products. She has a patent for a remote control for interactive television. She worked at the U.S. Department of Transportation Research and Special Programs Administration, Bell Laboratories, Hewlett-Packard, and Silicon Graphics, where she founded the Customer Research and Usability group. At Oracle, she founded and directed the Corporate Usability Labs, and the Advanced User Interface Research group. She is currently Senior Director of Applications User Experience.

Anna is a Fellow of the Human Factors and Ergonomics Society and director emerita of the Board of Certification of Professional Ergonomists. She is on the editorial board of the international scientific journal *Ergonomics*. She has organized paper sessions for previous HCI International conferences, and is a frequent presenter at ACM SIGCHI annual meetings.



## Ultan O'Broin

### Biographical Sketch

**Ultan O'Broin** has worked in Oracle applications development in the US and Europe, Middle East, and Asia since 1996. He is a passionate evangelist for applications user experience, communicating usability guidance and resources to Oracle applications developers, partners, and customers worldwide. Professional and Ph.D research interests include digital seniors, user experience design patterns, cloud-based software developer productivity, and technology globalization.

**Fabio Paternò**CNR-ISTI, *Italy***Objectives**

This tutorial aims to help user interface designers and developers to understand the issues involved in multi-device interactive applications accessed through mobile and stationary devices even exploiting different interaction modalities

**Content and benefits:**

The tutorial aims to help user interface designers and developers to understand the issues involved in multi-device interactive applications. For this purpose it provides a review of the state of art in terms of concepts, techniques, languages, and tools, with the goal to understand the design space of the possible solutions in order to better apply them and think about new ones. The tutorial will consider how to address the device adaptation issue at both design- and run-time. Particular attention will be dedicated to adaptation in Web applications and also to the use of model-based techniques. It will also discuss how adaptation and continuity can be supported in distributed and migratory user interfaces

**Target Audience:**

The tutorial will be interesting for interactive software developers and designers who want to understand the issues involved in multi-device interactive applications and the space of the possible solutions. Likewise, user interface designers would benefit in that they could work more effectively and make their choices more explicit in designing pervasive interactive services. In addition, other researchers who would like to have an update on the state of art and research results in the field will find the tutorial of interest.

**Fabio Paternò**

Biographical Sketch

**Fabio Paternò** (<http://giove.isti.cnr.it/~fabio>)is Research Director at CNR-ISTI  
(<http://giove.isti.cnr.it>), where his main

research interests are in user interfaces for ubiquitous environments, model-based design and development, tools and methods for multi-device interactive applications, migratory interfaces. In these areas he has coordinated several projects and the development of various tools. He is an ACM Distinguished Scientist.

Tuesday, 23 July 2013

08:30-12:00

MORNING

## Benjamin Watson

North Carolina State University, USA

## Vidya Setlur

Tableau Software, USA

### Objectives

A half-day, journeyman developer's introduction to developing apps for mobile devices including phones and tablets; platforms such as iOS, Android, Windows Phone and the web; and an overview of the industry and its app stores.

### Content and Benefits:

This hands-on course will help journeyman developers who have never developed for mobile devices before get a start in this market. The course will span a comprehensive set of topics focused on developing mobile apps, including an overview of the mobile industry and its app markets, a comparison of mobile and desktop applications, and a survey of mobile development environments. The course will then move to a detailed discussion of UI and graphics development for mobiles, including simple examples for iOS, Android, Windows Phone and the web. During the course itself, various smartphones will be loaned to attendees enabling them to follow along with in class exercises.

### Outline:

1. Ben Watson - Introduction, Mobile Industry and iOS
  - a. Welcome
  - b. The state of the mobile industry
  - c. The state of app stores worldwide
  - d. Design patterns and storyboards
  - e. Cloud services
  - f. iOS coding examples
  - g. Questions and break
2. Vidya Setlur - Mobile UIs in Windows Phone and on the web
  - a. Good design practice
  - b. UI layouts
  - c. UI components
  - d. Event handling
  - e. Maps and sensors
  - f. Cameras
  - g. Windows Phone and web coding examples
  - h. Questions and break
3. Ben Watson - Mobile graphics in Android and on the web
  - a. OpenGL ES 1.1 and 2.0
  - b. WebGL
  - c. Android and web coding examples
  - d. Questions
4. Watson & Setlur: open questions

### Target Audience:

The course is designed for journeyman developers who have not built any applications for mobile devices. Good programming skills in Java, C or C++, and familiarity with a

programming environment such as Eclipse or Visual Studio are expected. Some knowledge of at least one graphics API such as OpenGL or DirectX would also be helpful.

### Course home page:

Developing Visual Interfaces for Mobile Devices

<http://mobicourse.blogspot.gr>



## Benjamin Watson

Biographical Sketch

**Benjamin Watson** is Associate Professor (<http://watson.csc.ncsu.edu>) of Computer Science at North Carolina State University (<http://www.csc.ncsu.edu>). His Design Graphics Lab focuses on the engineering of visual experience, and spans the intersections between graphics, perception, design, and interaction. Much of his work has migrated to the mobile platform, as the most pervasive of visual interfaces. Watson co-chaired the Graphics Interface 2001, IEEE Virtual Reality 2004 and ACM Interactive 3D Graphics and Games (I3D) 2006 conferences, and was co-program chair of I3D 2007. Watson is an ACM and senior IEEE member. He earned his doctorate at the Graphics, Visualization and Usability Center of the Georgia Institute of Technology.



## Vidya Setlur

Biographical Sketch

**Vidya Setlur** (<http://vidyasetlur.com>) is newly principal researcher in mobile experience at Tableau Software ([www.tableausoftware.com](http://www.tableausoftware.com)). For several years before that, she was principal research scientist in mobile experience at Nokia Research Center. Her research interest lies at the intersection of HCI and computer graphics, particularly in the area of iconography and content retargeting. At Nokia, much of her work emphasizes practicality and usefulness to better facilitate tasks performed with a mobile computational device. Vidya has taught mobile courses at conferences such as MobiSys, ACM CHI Conference on Human Factors in Computing Systems, the International Society for Optics and Photonics (SPIE) conferences as well as at universities such as Carnegie Mellon University and San Jose State University. She earned her doctorate in Computer Graphics at Northwestern University.



## Aaron Marcus

President, Aaron Marcus and Associates, Inc., Berkeley, California, USA

### Objectives

Participants in this tutorial will:

- Learn new terms and concepts to understand mobile user-centered design, personas, use-scenarios, and especially information design theory and persuasion design theory.
- Learn how these concepts relate to the design of mobile user-interface components (metaphors, mental models, navigation, interaction, and appearance).
- Learn practical trade-offs from studying competitive analyses and case-study results

### Content and Benefits:

#### Abstract

The tutorial reviews four case studies of mobile persuasion design for smart phones and tablet concepts that combine information design and persuasion design to change people's behavior. Each case study will review the subject matter, personas and use scenarios, information architecture, wireframes and detailed screen designs, as well as evaluations. Case studies are the Green Machine, the Health Machine, the Money Machine, and the Story Machine. Other case studies may be mentioned/shown, depending on time available.

#### Benefits of the Tutorial:

- Increased understanding of key issues, challenges, philosophies, and principles related to the tutorial topic
- Increased awareness of cutting-edge products and services related to the tutorial topic
- Increased knowledge of how to use your skills, expertise, and experience in this tutorial topic

#### Post-Conference Activities:

Following up from the conference, the speaker plans to send participants who wish to receive them additional papers, as well as an extensive bibliography and list of links relevant to the tutorial topic.

#### Target Audience:

The tutorial is appropriate for:

1. Especially for people who are new to the topic
2. people who have some experience with the HCI and/or mobile UX design, persuasion design and the subject-matter areas covered
3. people who have lots of experience with HCI and/or mobile UX design, persuasion design, and the subject-matter areas covered

The target audience:

HCI/UX/CHI/Visua/Mobile professionals in these (alphabetical order) professions:

- Analysts
- Anthropologists/Ethnographers
- Designers
- Evaluators of usability and user-experience
- Marketers
- Researchers
- Software Engineers

#### Links:

- AM+A Website (<http://www.amanda.com>)
- Previous version of the primary lecture on you tube <http://www.youtube.com/watch?v=m-AOPjUjYGk&feature=youtu.be>



## Aaron Marcus

### Biographical Sketch

**Mr. Marcus** has written over 300 articles; written/co-written eight books, including *The Past 100 Years of the Future: HCI in Science-Fiction Movies and Television* (2012). He has written chapters/case studies for seven handbooks of UI design, information appliances, and culture; has presented lectures/organized panels about science-fiction and HCI since 1992; has published, lectured, and tutored at conferences internationally; and consulted internationally, for more than 40 years. He is the Editor-in-Chief Emeritus of *User Experience*, is an Editor of *Information Design Journal*, wrote a regular column for *Interactions* for five years, serves/served on the editorial/advisory boards of *Visible Language*; and the International Institute for Information Design. He is a Visiting Professor at IIT's Institute of Design in Chicago. He is now a Master of the De Tao Academy in Beijing and is starting a Center for User-Experience Innovation in Shanghai. He is also an International Advisor to the Dragon Design Foundation, Beijing, China.

Tuesday, 23 July 2013

13:30-17:00

AFTERNOON

**Kristiina Jokinen**

University of Helsinki and University of Tartu, Finland

**Objectives**

The tutorial aims to give an overview of the research issues and challenges related to human-robot interactions, especially concerning multimodal behaviours and social conversational interaction capabilities. In addition to speech interaction, we will focus on visual signals and the use of gesturing in information presentation and in dialogue management. We will survey a wide range of possibilities for such human-robot interactive applications. Examples are drawn from the WikiTalk robotic system, and its multimodal behaviour.

**Content and benefits:**

Human-robot interaction has recently been the object of much research and development. Besides the development and evaluation of integrated technological platforms for various input and output modalities, robots also come close to such applications that can support the use of rich natural (language) communication capabilities.

This tutorial will focus on human-robot interaction, and especially on the communication that is meant to be conversational and interesting. This kind of interaction is important in the context of “socially interactive robots”, where the robot needs to have a natural interface for interacting with users: the robot may e.g. need to present important information to the human user, provide interesting news, or give explanations about its own actions and what it is doing.

This tutorial deals with the possibilities and challenges in making interaction with an artificial agent more natural and interesting. We will address issues related to multimodal communication strategies that are necessary to maintain the coherence of the conversation (topic-tracking, topic-switching, new information management, etc.), and to provide multimodal feedback using gaze, nodding and gesturing. Moreover, it is important to engage the partner in the interaction and keep their interest, show rapport, and create mutual bonds. For this end, it is important to equip the artificial agent with behaviours that allow various kinds of sensory input and their interpretation with respect to the environment and the underlying communicative goals.

The tutorial will study examples from the corpus of real human-robot interactions, collected during the evaluation of the Nao WikiTalk system, which was developed at the 8th International Summer Workshop on Multimodal Interfaces in Metz, 2012.

**Target Audience:**

The tutorial is aimed at researchers and graduate students who are interested in the design and use of natural language within robot interactions. It does not presuppose any prior understanding of technical concepts nor require previous experience in interaction or robot technologies, although familiarity with these may help in following of the presentation.

**Kristiina Jokinen**

## Biographical Sketch

**Kristiina Jokinen** is Adjunct Professor and Project Manager at University of Helsinki ([www.ling.helsinki.fi/~kjokinen](http://www.ling.helsinki.fi/~kjokinen)), and leads the

3I (Intelligent Interactive Informatics) Research Group. She is also Adjunct Professor of Interaction Technology at University of Tampere, Finland, and Visiting Professor at University of Tartu, Estonia. In 2009-2010 she was Visiting Professor at Doshisha University in Kyoto.

Her research focuses on spoken dialogue modelling, multimodal interaction management (especially gestures and eye gaze), natural language communication, and human-machine interaction. She has given regular courses on multimodal interaction and intelligent interactive systems, and in 2011 she organised the Nordic Research Training Course “Feedback, Communicative Gesturing, and Gazing” in Helsinki, and in 2012 she led the summer workshop “Speech, gaze and gesturing – multimodal conversational interaction with Nao robot” in Metz, together with Graham Wilcock.

She has published many papers and articles, and three books: *Constructive Dialogue Modelling - Speech Interaction and Rational Agents* (John Wiley), *Spoken Dialogue Systems* (together with M. McTear; Morgan & Claypool) and *New Trends in Speech-based Interactive Systems* (edited together with F. Chen; Springer).

She has had several national and international cooperation projects and served in several programme and review committees, e.g. she is the Programme Chair for the 2013 International Conference of Multimodal Interaction (ICMI). She is Secretary-Treasurer of SIGDial, the ACL/ISCA Special Interest Group for Discourse and Dialogue.

## Andrew Schall

SPARK Experience Design, USA

### Objectives

This is an introductory course in eye tracking methodology and will provide an overview of how eye tracking can be a valuable tool for user researchers. The course will feature a diverse mix of presentation materials and participatory activities including eye tracking visualizations and video clips from past research studies, group and individual exercises, and hands-on experience with an eye-tracker. Attendees will also get the chance to design an eye tracking research study and analyze eye tracking data in small groups using eye tracking software that will be installed on several laptop computers.

### Tutorial attendees will learn:

- The fundamentals of eye tracking methodology in the field of user experience
- How to design a user experience test to best utilize eye tracking technology
- How to effectively conduct and moderate an eye tracking session
- How to analyze eye tracking data to reveal usability and design issues

### Content and Benefits:

Topics covered in the session will include:

- How to identify questions that eye tracking can help answer
- How to design a robust eye tracking research project: Understanding key linking assumptions and how they shape design and limit implementation and analysis
- Tips for translating a research plan to an eye tracking experiment
- How to collect reliable data: Critical differences between moderating traditional usability testing and usability testing with eye tracking
- Survey of eye tracking analysis methods and questions they address
- Learn how to recognize (and resolve) problems in other people's eye tracking studies. Attendees will also be given the opportunity at designated times to ask questions of the instructors and also to discuss eye tracking methodology with other attendees.

### Target Audience:

Participants should be familiar with traditional usability testing methodology. Participants do NOT need to have any experience with eye tracking. The instructor will assume that participants do not have any background in eye tracking and will cover the basics through intermediate level content.



## Andrew Schall

Biographical Sketch

**Andrew Schall** has worked with numerous public and private organizations to use eye tracking as part of their user-centered design process ([www.sparkexperience.com/about-andrewschall.html](http://www.sparkexperience.com/about-andrewschall.html)) including organizations such as Aflac, Fossil, GlaxoSmithKline, NASA, PBS, and U.S. Department of Energy. His eye tracking projects have ranged from understanding how children interact with online multimedia to evaluating advanced library search and retrieval systems. He has pioneered new ways to collect, analyze, and present eye tracking data. He is currently working on methods to synthesize eye tracking data with web analytics for a more holistic understanding of the user's experience. Andrew was formerly the eye tracking guru and trainer at Human Factors International, and has conducted his Eye tracking Bootcamp with several organizations including Comcast and GlaxoSmithKline. Andrew has over 10 years of experience as a UX researcher and designer, and is currently Director of User Experience at SPARK Experience Design ([www.sparkexperience.com](http://www.sparkexperience.com)), a UX consulting firm outside Washington, DC. He received his B.S. in Information Technology & New Media from the Rochester Institute of Technology, M.S. in Interaction Design & Information Architecture from the University of Baltimore, and is currently a Ph.D. candidate in Human-Centered Computing at the University of Maryland, Baltimore County.

**LinkedIn:** [www.linkedin.com/in/andrewschall](http://www.linkedin.com/in/andrewschall)



Tuesday, 23 July 2013

13:30-17:00

AFTERNOON

**Theo Tryfonas**

Bristol Cryptography Group, University of Bristol, UK

**Objectives**

To discuss human aspects of authentication process design, explore the reasons of human-related failures, provide examples of relevant vulnerabilities, misconceptions and ill defined authentication schemes that facilitated exploitation of human factors. The discussions will enable interface designers, system analysts, IT managers and other key stakeholders to understand essential human-centric aspects of computer security, especially as far as authentication (i.e. establishing and verification of someone's identity) is concerned.

**Content and benefits:**

The tutorial will cover aspects of cognitive biases of password, PIN and lock pattern setting by end users, it will explore the design obstacles to password policy compliance, 'soft' side channel attacks (i.e. when information is leaked through interactions with people using the system, as opposed to attacking the system directly), social engineering as well as state of art countermeasures of usable security. We will also discuss ways that security measures can be enacted successfully within the context of an organisation, causing least disruption to business operations, looking at examples of effective designs as well as end user awareness campaigns.

**Target Audience:**

requirements engineers, software designers, human-computer interface specialists.

**Theo Tryfonas**  
Biographical Sketch

**Dr Theo Tryfonas** (BSc, MSc, PhD, CISA, MBCS CITP) is a Senior Lecturer at the Faculty of Engineering with

interests in methodologies, tools and techniques for assessing security of computing technology and developing an understanding of emerging cyber-threats ([www.bris.ac.uk/engineering/people/theo-tryfonas](http://www.bris.ac.uk/engineering/people/theo-tryfonas)).

He also works in the area of digital forensics exploring human and technical aspects of the analysis of digital evidence and its challenges in a national and international context. He has co-authored over 50 relevant articles in international journals and conferences and has assisted forensic investigations acting as an Expert Witness for several cases prosecuted under the Child Protection, the Fraud and the Computer Misuse Acts. He is currently coordinator of the EU-funded project ForToo (HOME/2 010/ISEC/AG/INT/002) working on developing tools for forensic analysis of network-related incidents.

**Bristol Cryptography Group**

[www.cs.bris.ac.uk/Research/CryptographySecurity](http://www.cs.bris.ac.uk/Research/CryptographySecurity)

## Aaron Marcus

President, Aaron Marcus and Associates, Inc., Berkeley, California, USA

### Objectives

Participants in this tutorial will:

- Learn new terms, concepts, and issues to understand mobile user-centered design, guidelines, personas, and use-scenarios.
- Learn latest trends and challenges of design of mobile user-interface components (metaphors, mental models, navigation, interaction, and appearance).
- Learn practical trade-offs from studying competitive analyses and case-study results

### Content and Benefits:

#### Abstract

The tutorial presents essential concepts of mobile user-experience design and reviews mobile UX trends in the US, Europe, and Asia. The lectures also provide detailed case studies of developing UX designs specifically for China, a classic disaster of mobile UX design due to lack of user-centered design, and other key issues of mobile UX design for smart phones and tablets.

#### Benefits of the Tutorial:

- Increased understanding of key issues, challenges, philosophies, and principles
- Increased awareness of current and cutting-edge products and services
- Increased knowledge of how to use your skills, expertise, and experience

#### Post-Conference Activities:

Following up from the conference, The speaker plans to send participants who wish to receive them additional papers, as well as an extensive bibliography and list of links relevant to the tutorial topic.

#### Target Audience:

The tutorial is appropriate for:

1. Especially for people who are new to the topic
2. people who have some experience with the HCI and/or Mobile UX Design and Trends
3. people who have lots of experience with HCI and/or Mobile UX Design and Trends

#### The target audience:

HCI/UX/CHI/Visua/Mobile professionals in these (alphabetical order) professions:

- Analysts
- Anthropologists/Ethnographers
- Designers
- Evaluators of usability and user-experience

- Marketers
- Researchers
- Software Engineers

#### Links:

- AM+A Website (<http://www.amanda.com>)



## Aaron Marcus

### Biographical Sketch

**Mr. Marcus** has written over 300 articles; written/co-written eight books, including *The Past 100 Years of the Future: HCI in Science-Fiction Movies and Television* (2012).

He has written chapters/case studies for seven handbooks of UI design, information appliances, and culture; has presented lectures/organized panels about science-fiction and HCI since 1992; has published, lectured, and tutored at conferences international; and consulted internationally, for more than 40 years. He is the Editor-in-Chief Emeritus of *User Experience*, is an Editor of *Information Design Journal*, wrote a regular column for *Interactions* for five years, serves/served on the editorial/advisory boards of *Visible Language*; and the International Institute for Information Design. He is a Visiting Professor at IIT's Institute of Design in Chicago. He is now a Master of the De Tao Academy in Beijing and is starting a Center for User-Experience Innovation in Shanghai. He is also an International Advisor to the Dragon Design Foundation, Beijing, China.

## Jacquelyn Morie

Institute for Creative Technologies, University of Southern California, USA

## Kip Haynes

Institute for Creative Technologies, University of Southern California, USA

## Eric Chance

Institute for Creative Technologies, University of Southern California, USA

### Objectives

1. Understand how to create and use avatars in a variety of immersive environments
2. Gain knowledge about the scope of avatar use: history, demographics, statistics, styles and more
3. Explore the most recent (and future) research into avatar use and how it affects the user

### Content and Benefits:

This tutorial will cover the rise of avatar use within immersive environments and how this represents a sea change for interfacing with one's computer. The tutorial will cover the history of avatar use, how and why people use avatars, and the huge rise in the numbers of people who now regularly use some type of avatar representation. We will cover avatar creation systems and then present an in-depth look at the latest research concerning avatar use. The session will close with a group discussion of suggested future research directions in this area.

### Target Audience:

People who are interested in, create, or use immersive environments that feature avatars. Social experts who wonder about the impact of the increasing use of avatars, especially by children. Researchers interested in the psychological aspects of avatar use. Virtual world developers who seek insights to making more accessible and interesting environments.



Biographical Sketches

## Jacquelyn Ford Morie

**Jacquelyn Ford Morie, PhD**, is a Senior Researcher at USC's Institute for Creative Technologies (ICT) (<http://ict.usc.edu>), working in immersive environments for training and health applications. She has created several novel telehealth care activities in virtual worlds and brings her background in art and computer animation to enhance patient engagement with these programs. Previously she spent six years in the animation and special effects industries. Her early research was in developing emotionally evocative virtual reality immersive environments, and currently she is also begun a program of research into how avatars affect the people who use them.

## Kip Haynes

**Kip Haynes**, who earned his degree in Computer Engineering from WVU in 1998, spent the early part of his career developing high performance parallel distributed rendering applications for large scale data visualization projects. He joined the ICT (<http://ict.usc.edu>), in 2003 as manager of a research project investigating parallel and distributed systems for a variety of ARMY training and simulation efforts. Subsequently he has overseen the technical integration and implementation of several of the ICT's high profile military training systems, including Joint Effects Call for Fire Training (JFETS), INOTS (Immersive Naval Officer Training Simulation), ELITE (Emergent Leader Immersive Training Environment) and TOPSS-VW (Transitional Online Post-deployment Soldier Support in Virtual Worlds).

## Eric Chance

**Eric Chance** is a USC film program alumnus who specializes in user-generated content for the virtual worlds such as Second Life, where he has been a resident since early 2004. Past clients in SL include Linden Lab, blueair.tv, Eyebeam, and ICT (<http://ict.usc.edu>). He has worked in the film and live audio industries, theatrical set construction, and studied comic book design from 1997-1998 under the editor-in-chief of Antarctic Press. He is passionate about interactivity, sound, game design, art, and learning. Programs and languages he is familiar with include Second Life, Qavimator, Photoshop, Maya, Cool Edit Pro/Adobe Audition, Premiere, Avid, Speed Razor, LSL, C++, and Max/MSP among others.



# Parallel Sessions Overview

Wednesday, **24 July 2013**

Morning **08:00 - 12:30**

	08:00 – 10:00 (page 42 - 47)	10:30 – 12:30 (page 48 - 53)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>• A New Horizon for Social Information Systems (I)</li> <li>• Computational Intelligence for Signal and Image Processing -I</li> <li>• Designing and evaluating novel interaction environments</li> <li>• Innovative interaction approaches</li> <li>• Formal and model-based design and development approaches</li> </ul>	<ul style="list-style-type: none"> <li>• A New Horizon for Social Information Systems (II)</li> <li>• Computational Intelligence for Signal and Image Processing -II</li> <li>• Multimodal and ambient communication and collaboration</li> <li>• Designing Situated Experiences: Models, Technologies, Applications</li> <li>• Patterns and Models for User Interface Construction</li> <li>• Communication and HCI in Korea</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>• Designing Usable Interfaces for HCI</li> <li>• Usability for Product design and Industrial Application - I</li> </ul>	<ul style="list-style-type: none"> <li>• HCI considerations for NextGen</li> <li>• Usability for Product design and Industrial Application - II</li> <li>• Adaptive and User Guiding Information Service and Interface - I</li> </ul>
<b>EPCE</b>	<ul style="list-style-type: none"> <li>• Human Factors &amp; Security</li> <li>• Harmonization towards Performance in Future Air Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Cognitive factors of interaction</li> </ul>
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>• Assessing Information by Younger and/or Older Users</li> <li>• Human, Computer and Environment - I</li> <li>• Creating a Continuum of Care - I</li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion, Design, Technical Devices for Older People</li> <li>• eBooks, eLearning, Digital Libraries/Multimedia: Accessibility, Markets and Copyrights</li> <li>• Creating a Continuum of Care - II</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>• VR and AR for games and entertainment</li> <li>• Navigation and safety in complex environments</li> </ul>	<ul style="list-style-type: none"> <li>• Presence, communication and collaboration in VR environments</li> </ul>
<b>CCD</b>	<ul style="list-style-type: none"> <li>• Design at the Edges (I)</li> </ul>	<ul style="list-style-type: none"> <li>• Design at the Edges (II)</li> </ul>
<b>OCSC</b>	<ul style="list-style-type: none"> <li>• Friendship and affect in Social Communities</li> </ul>	<ul style="list-style-type: none"> <li>• User behaviour in social communities - I</li> </ul>
<b>AC</b>	<ul style="list-style-type: none"> <li>• Opportunities for Augmented Cognition in Cyber Operations</li> <li>• Intuitive Sensemaking</li> </ul>	<ul style="list-style-type: none"> <li>• Research Innovations and Augmented Cognition</li> </ul>
<b>DHM</b>	<ul style="list-style-type: none"> <li>• Utilizing Traditional Wisdom and Technologies for Quality Care</li> <li>• DHM Applications and Validation - I</li> </ul>	<ul style="list-style-type: none"> <li>• DHM Applications and Validation - II</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>• Design, Ergonomics, and Usability - I</li> <li>• Enhancing Government Website Usability</li> <li>• User Experience for Smart Devices and Environments</li> <li>• Designing for healthcare experiences</li> </ul>	<ul style="list-style-type: none"> <li>• Designing for playing experiences</li> <li>• Designing for learning experiences</li> <li>• Designing for cultural experiences</li> <li>• Embodied Haptic Interfaces</li> </ul>
<b>DAPI</b>	-	<ul style="list-style-type: none"> <li>• Pervasive Civic Computing</li> </ul>
<b>HAS</b>	-	<ul style="list-style-type: none"> <li>• Security, Forensic and Legal Aspects of Human-Computer Interaction</li> </ul>

**HCI** Human-Computer Interaction • **HIMI** Human Interface and the Management of Information

**EPCE** Engineering Psychology and Cognitive Ergonomics • **UAHCI** Engineering Psychology and Cognitive Ergonomics

**VAMR** Virtual, Augmented and Mixed Reality • **CCD** Cross-Cultural Design • **OCSC** Online Communities and Social Computing

# Sessions DAY 1

Wednesday, 24 July 2013

Afternoon 13:30 - 18:00

	13:30 – 15:30 (page 54 - 59)	16:00 – 18:00 (page 60 - 65)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>Information search and retrieval</li> <li>Putting together Computer Science, Ergonomics and Medicine: a multidisciplinary study about e-health interfaces</li> <li>New Technology and User Experience for Next Educational Environment</li> <li>Interacting with the web - I</li> </ul>	<ul style="list-style-type: none"> <li>Games and Usability</li> <li>User Experience for Creating Vision</li> <li>Designing and Developing for the Smart-Device World</li> <li>HCI advances in Health Care Systems</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>Adaptive and User Guiding Information Service and Interface - II</li> <li>HCI Studies in Management Information Systems (I)</li> <li>User-oriented technologies and services</li> </ul>	<ul style="list-style-type: none"> <li>HCI Studies in Management Information Systems (II)</li> <li>Embodied Interaction and Communication</li> <li>The Design, Development, and Application of Simulation Systems to Meet Training Needs</li> </ul>
<b>EPCE</b>	<ul style="list-style-type: none"> <li>Cognitive issues in Aviation</li> <li>Cognitive aspects of HCI and usability</li> <li>Cognitive factors in learning</li> </ul>	-
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>LEDA: Ludic Engagement Designs for ALL, ArtAbilitation + GameAbilitation</li> <li>Human, Computer and Environment - II</li> </ul>	<ul style="list-style-type: none"> <li>eInclusion - Policies, Programs, Best Practices ... and Lessons Learnt</li> <li>Inclusive Technologies</li> <li>Creativity, Mobile Multimedia Systems, Human and Social Factors in Software: Communicability Excellence for All</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>3D environments</li> </ul>	-
<b>CCD</b>	<ul style="list-style-type: none"> <li>Social networking and online behavior analysis</li> <li>Cross-cultural design of IT products and services</li> </ul>	<ul style="list-style-type: none"> <li>HCI-based welfare system design: Studies from two Asian countries</li> <li>Design and Research in Multinational Companies</li> </ul>
<b>OCSC</b>	<ul style="list-style-type: none"> <li>Social Games and entertainment</li> </ul>	<ul style="list-style-type: none"> <li>User behaviour in social communities - II</li> </ul>
<b>AC</b>	<ul style="list-style-type: none"> <li>Human-Systems Integration R&amp;D Agenda 2050</li> </ul>	<ul style="list-style-type: none"> <li>New tools, techniques, and applications</li> </ul>
<b>DHM</b>	<ul style="list-style-type: none"> <li>Anthropometric data analysis and application</li> </ul>	<ul style="list-style-type: none"> <li>Product Fit</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>Design, Ergonomics, and Usability - II</li> <li>Interaction and materiality - I</li> <li>Explore User Experiences through Object to Space</li> <li>Gamification @ Work</li> <li>eMobility - The customer's perspective</li> </ul>	<ul style="list-style-type: none"> <li>Interaction and materiality - II</li> <li>SciFi and HCI: Trends and Issues in Movies and Television</li> <li>Product Design</li> <li>Shopping and Banking</li> <li>Designing for the web user experience</li> <li>Design, User Experience and Usability in Tourism-related Applications</li> <li>Globalization and Localization of DUXU</li> </ul>
<b>DAPI</b>	<ul style="list-style-type: none"> <li>Aesthetics in Interaction</li> </ul>	<ul style="list-style-type: none"> <li>Models for Spatial and Embodied Interaction</li> </ul>
<b>HAS</b>	-	<ul style="list-style-type: none"> <li>The Soft Foundations of Cybersecurity Science</li> </ul>

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**DUXU** Design, User Experience and Usability • **DAPI** Distributed, Ambient and Pervasive Interactions  
**HAS** Human Aspects of Information Security, Privacy and Trust

# Parallel Sessions Overview

Thursday, **25 July 2013**

Morning **08:00 - 12:30**

	08:00 – 10:00 (page 66 - 71)	10:30 – 12:30 (page 72 - 77)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>• Computational Intelligence for Signal and Image Processing -III</li> <li>• HCI in aviation</li> <li>• Cultural and Sociotechnical perspectives in HCI</li> <li>• Aging Computer Users</li> <li>• Motion, Gesture and Expression recognition - I</li> </ul>	<ul style="list-style-type: none"> <li>• Capturing the context of use</li> <li>• Gamification: How to motivate your users with game mechanics</li> <li>• Affective Interaction</li> <li>• Gaze-based interaction</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>• HCI Studies in Management Information Systems (III)</li> <li>• Relationality Design and Relationality-oriented Systems Design - I</li> <li>• Tactile and haptic interaction in HCI</li> </ul>	<ul style="list-style-type: none"> <li>• Relationality Design and Relationality-oriented Systems Design - II</li> <li>• Improvement in Learning and Educational Environments using ICT</li> <li>• Human Factors in Collaborative Safe Driving</li> </ul>
<b>EPCE</b>	<ul style="list-style-type: none"> <li>• HCI Aspects of Optimal Healing Environments</li> </ul>	<ul style="list-style-type: none"> <li>• Cognitive Aspects in complex visual environments</li> </ul>
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>• Ergonomics in Architecture</li> <li>• Interaction Models and Techniques for Ageing and Impairment - I</li> <li>• Multimodal Interfaces: Designing Across Boundaries - I</li> </ul>	<ul style="list-style-type: none"> <li>• Universal Access: Interaction Science - I</li> <li>• Interaction Models and Techniques for Ageing and Impairment - II</li> <li>• Multimodal Interfaces: Designing Across Boundaries - II</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>• Design and development support environments</li> <li>• Health and Rehabilitation Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Social and Visual Technologies: New Trends in the Improvement of University Education</li> </ul>
<b>CCD</b>	<ul style="list-style-type: none"> <li>• Culture and user experience</li> </ul>	<ul style="list-style-type: none"> <li>• Design for Feeling</li> <li>• Cultural Differences in Human Computer Interaction</li> </ul>
<b>OCSC</b>	-	<ul style="list-style-type: none"> <li>• User eXperience+: Shared Experience Design for Online Communities and Social Computing</li> </ul>
<b>AC</b>	<ul style="list-style-type: none"> <li>• Neurophysiological Measures for Assessment in Education and Training</li> <li>• A Translational Approach to Neurotechnology Development</li> </ul>	<ul style="list-style-type: none"> <li>• Augmenting Human Capabilities on Training Ranges: Towards the Smart Instrumented Training Ranges of the Future</li> </ul>
<b>DHM</b>	<ul style="list-style-type: none"> <li>• Human Factors in Healthcare - I</li> </ul>	<ul style="list-style-type: none"> <li>• Human Factors in Healthcare - II</li> <li>• Human Models for a comprehensive analysis of mobile Human-Computer-Interaction</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>• Children Interactive Learning Experience</li> <li>• User experience in knowledge management</li> <li>• Architecture and models for user experience design</li> </ul>	<ul style="list-style-type: none"> <li>• Designing Experiences for Facilitating Positive Behavior Change (I)</li> <li>• Design, Ergonomics, and Usability - III</li> <li>• Disaster Information and management</li> <li>• Exploring the Turkish UX Design and Research Landscape</li> <li>• Usability in the Real World: Everyday Experiences</li> </ul>
<b>DAPI</b>	<ul style="list-style-type: none"> <li>• Interaction in Ambient Intelligence</li> </ul>	-
<b>HAS</b>	<ul style="list-style-type: none"> <li>• Passwords, Captcha and User Identification</li> </ul>	-

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# Sessions DAY 2

Thursday, 25 July 2013

Afternoon 13:30 - 18:00

	13:30 – 15:30 (page 78 - 83)	16:00 – 18:00 (page 84 - 89)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>• Multimodal and Multicultural Communicative Agents (MMMCA)</li> <li>• Socio-cultural Aspects in Monolingual and Multilingual Human-Computer Interaction</li> <li>• TLC: Technology for Living and Caring</li> <li>• Kawaii, Kansei and affective value creation</li> <li>• Consumer behaviour and persuasive interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Learning environments</li> <li>• Advanced mobile interaction</li> <li>• HCI in critical contexts</li> <li>• Human Aspects of Enterprise Information Systems</li> <li>• Culture, art, music and creativity</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>• Technologies for learning and teaching</li> <li>• Management of Information for Decisions</li> <li>• Design and Evaluation of Human Interface</li> </ul>	<ul style="list-style-type: none"> <li>• Information search</li> <li>• New perspectives on service engineering</li> <li>• Digital Museum</li> </ul>
<b>EPCE</b>	<ul style="list-style-type: none"> <li>• Cognitive issues at work</li> </ul>	<ul style="list-style-type: none"> <li>• Human Factors in Flight Operations</li> </ul>
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>• Universal Access: Interaction Science - II</li> <li>• Accessibility of Documents - I</li> <li>• Design Access in Interaction and Human Factors</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility of Documents - II</li> <li>• Ambient Assisted Living</li> <li>• Collective Intelligence: impact on e-inclusion</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>• Visualization Techniques for Human-Automation Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Emerging Trends in Virtual, Augmented and Mixed Reality</li> </ul>
<b>CCD</b>	<ul style="list-style-type: none"> <li>• Design for urban experience and social innovation</li> </ul>	<ul style="list-style-type: none"> <li>• How Industry Policy Shaping UI/UX Research</li> </ul>
<b>OCSC</b>	-	<ul style="list-style-type: none"> <li>• Online Communities and Social Computing in Higher Education</li> </ul>
<b>AC</b>	<ul style="list-style-type: none"> <li>• Augmented Cognition in High Risk Environments</li> <li>• Novel Approaches in Augmented Cognition</li> </ul>	<ul style="list-style-type: none"> <li>• Operational Neuroscience</li> </ul>
<b>DHM</b>	<ul style="list-style-type: none"> <li>• New Development in the Human-Centered Design in Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• DHM in Aviation and Space</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>• Designing Experiences for Facilitating Positive Behavior Change (II)</li> <li>• Ergonomics in Design of Information Systems - I</li> <li>• Agile User Experience Design</li> <li>• Semiotics, Language, Interaction</li> <li>• Cross-Cultural UX in the Life Science Industry</li> </ul>	<ul style="list-style-type: none"> <li>• Ergonomics in Design of Information Systems - II</li> <li>• Beyond Flat Screens: Bringing Design Thinking to Life</li> <li>• Developing Next Generation Crowd Sourced UAVs</li> <li>• Enterprise Software Product UI Design</li> </ul>
<b>DAPI</b>	<ul style="list-style-type: none"> <li>• Smart cities, building and places</li> </ul>	<ul style="list-style-type: none"> <li>• Pervasive Systems for Assistive Environments</li> </ul>
<b>HAS</b>	-	<ul style="list-style-type: none"> <li>• Security Behaviour</li> </ul>

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# Parallel Sessions Overview

Friday, **26 July 2013**

Morning **08:00 - 12:30**

	08:00 – 10:00 (page 90 - 95)	10:30 – 12:30 (page 96 - 101)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>UX Engineering and UX Design</li> <li>Intelligent User Interfaces for Privacy-respecting, Personal Information Management across the Social Web</li> <li>Speech and Dialogue Systems</li> <li>Driving and interacting</li> <li>Novel text input methods</li> </ul>	<ul style="list-style-type: none"> <li>Gesture-based interaction</li> <li>Recognizing Emotions</li> <li>Design and evaluation techniques and methods for medical and rehabilitation devices</li> <li>User interface design</li> <li>Human - Robot Interaction</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>Automotive and Aviation</li> <li>Communication Enhancement</li> <li>Customer value by human interface</li> </ul>	<ul style="list-style-type: none"> <li>Application in physiological and behavioral research for HCI related field</li> <li>Personalised information spaces</li> <li>Safety-critical applications</li> </ul>
<b>EPCE</b>	<ul style="list-style-type: none"> <li>Human Factors and road safety</li> <li>Human-Automation Integration Issues in Highly Automated Unmanned Vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Situated Cognitive Engineering for Citizen's Well-Being</li> </ul>
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>Design Access in Human Communication and Interaction</li> <li>Multi-Modal, Multi-Party, and Multi-Brain Brain-Computer Interfacing</li> <li>Accessibility and Software Design for All</li> </ul>	<ul style="list-style-type: none"> <li>Design Access in Ergonomics and Interaction</li> <li>Inclusive education</li> <li>Technologies for Enhancing Universal Access</li> <li>Cutting Edge in Information Display: Recent Advances in Ergonomic Research for the Use of E-papers</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>Computational Aspects of Mental Models of Human-Robot Teamwork</li> <li>Virtual and Augmented Reality HCI in Medicine</li> </ul>	<ul style="list-style-type: none"> <li>VR and Ultra Reality</li> </ul>
<b>CCD</b>	<ul style="list-style-type: none"> <li>Product &amp; Service Innovation based on New Developments in Human Factors</li> <li>Globally Distributed Work- the Interplay between the Social and the Technical</li> </ul>	<ul style="list-style-type: none"> <li>Design for Individual Differences</li> </ul>
<b>OCSC</b>	-	<ul style="list-style-type: none"> <li>eSociety 2.0 - I</li> </ul>
<b>AC</b>	-	<ul style="list-style-type: none"> <li>Applications of Optical Brain Imaging</li> </ul>
<b>DHM</b>	-	<ul style="list-style-type: none"> <li>Models and simulations in complex human environments</li> <li>Working with computers: ergonomics, safety and health considerations</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>Cross-Cultural Interface Design</li> <li>User Experience for Mobile Business Applications</li> <li>Industrial Software User Experience</li> <li>Energy Feedback Design and Information Visualization</li> <li>Interaction design in daily activity</li> </ul>	<ul style="list-style-type: none"> <li>Design, Ergonomics, and Usability - IV</li> <li>Usability Methods and Tools</li> </ul>
<b>DAPI</b>	<ul style="list-style-type: none"> <li>Interaction for Ubiquitous Virtual Reality - I</li> </ul>	<ul style="list-style-type: none"> <li>Interaction for Ubiquitous Virtual Reality - II</li> </ul>
<b>HAS</b>	-	<ul style="list-style-type: none"> <li>Intent Semantics: New Concept in Trust R&amp;D</li> </ul>

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# Sessions DAY 3

Friday, 26 July 2013

Afternoon **13:30 - 18:00**

	13:30 – 15:30 (page 102 - 107)	16:00 – 18:00 (page 108 - 113)
Thematic Area	Session Title	Session Title
<b>HCI</b>	<ul style="list-style-type: none"> <li>Interaction Design for Development (ID4D) of Indigenous Communities</li> <li>Haptics: Towards interacting with the world via touch</li> <li>UI Prototyping methods and tools</li> <li>Motion, Gesture and Expression recognition - II</li> <li>Inclusive Design for HCI</li> </ul>	<ul style="list-style-type: none"> <li>Emerging Issues in HCI</li> <li>UX Design Processes &amp; Evaluation Methods</li> <li>Interacting with the web - II</li> </ul>
<b>HIMI</b>	<ul style="list-style-type: none"> <li>Service engineering and interaction</li> <li>Human-centered Information Systems and Applications</li> <li>Designing complex environments</li> </ul>	<ul style="list-style-type: none"> <li>Management of interaction</li> <li>Creating social media</li> </ul>
<b>EPCE</b>	-	<ul style="list-style-type: none"> <li>Cognitive aspects in society</li> </ul>
<b>UAHCI</b>	<ul style="list-style-type: none"> <li>Non visual smart environments</li> <li>Robots in everyday life</li> <li>Interaction and Education for the Deaf</li> <li>Senior Workforce</li> </ul>	<ul style="list-style-type: none"> <li>Cutting Edge in Information Display: Recent Advances in Ergonomic Research for the Use of 3D</li> <li>Smart Products and Services</li> <li>Innovative technologies for children with ASD</li> </ul>
<b>VAMR</b>	<ul style="list-style-type: none"> <li>The Role of Virtual, Augmented and Mixed Reality in STEAM Education for the 21st Century</li> </ul>	<ul style="list-style-type: none"> <li>Human robot interaction and haptics</li> <li>Exploring complexity through simulation and immersion</li> </ul>
<b>CCD</b>	<ul style="list-style-type: none"> <li>Human-computer interaction and human errors in complex systems</li> <li>Knowledge Sharing</li> </ul>	<ul style="list-style-type: none"> <li>Towards a cross-cultural web</li> <li>User-centered Design for Life Technology</li> </ul>
<b>OCSC</b>	-	<ul style="list-style-type: none"> <li>eSociety 2.0 - II</li> </ul>
<b>AC</b>	<ul style="list-style-type: none"> <li>Using Augmented Cognition for Gamification</li> </ul>	<ul style="list-style-type: none"> <li>Modeling the Complex Dynamics of Teamwork</li> </ul>
<b>DHM</b>	<ul style="list-style-type: none"> <li>Emerging Technologies in Working Conditions</li> <li>Automation design and human systems integration: modeling, validation and certification issues</li> </ul>	<ul style="list-style-type: none"> <li>Biomechanics in Product and Process Design</li> </ul>
<b>DUXU</b>	<ul style="list-style-type: none"> <li>Design, Ergonomics, and Usability - V</li> <li>Inclusive and open design</li> <li>Mobile Web &amp; Mobile App Design and Usage</li> </ul>	<ul style="list-style-type: none"> <li>Users' involvement, needs and requirements in DUXU</li> <li>Usability studies</li> <li>Design at the Frontier of User-Experience Development</li> <li>Service innovation and creativity management</li> </ul>
<b>DAPI</b>	<ul style="list-style-type: none"> <li>Design and development frameworks and methods in Ambient Intelligence</li> </ul>	<ul style="list-style-type: none"> <li>User monitoring in Ambient Intelligence</li> </ul>
<b>HAS</b>	<ul style="list-style-type: none"> <li>Encouraging an Information Security Culture by addressing Human Behavior</li> </ul>	-



## HCI

Human-Computer Interaction

<p><b>A New Horizon for Social Information Systems (I)</b> Chair(s): Yoshio Nakatani, Shogo Nishida.</p>	<p><b>Computational Intelligence for Signal and Image Processing -I</b> Chair(s): Ping Guo, Fuqing Duan.</p>	<p><b>Designing and evaluating novel interaction environments</b> Chair(s): To be announced</p>	<p><b>Innovative interaction approaches</b> Chair(s): Frode Eika Sandnes.</p>
<p><b>Applying to Twitter Networks of a Community Extraction Method using Intersection Graph and Semantic Analysis</b> Toshiya Kuramochi, Naoki Okada, Kyouhei Tanikawa, Yoshinori Hijikata, Shogo Nishida.</p> <p><b>A Method for Promoting Interaction Awareness by Biological Rhythm in Elementary School Children</b> Kyoko Ito, Kosuke Ohmori, Shogo Nishida.</p> <p><b>Communication Analysis of Remote Collaboration System with Arm Scaling Function</b> Nobuchika Sakata, Tomoyuki Kobayashi, Shogo Nishida.</p> <p><b>Evaluation of an Information Delivery System for Hearing Impairments at a School for Deaf</b> Atsushi Ito, Takao Yabe, Koichi Tsunoda, Kazutaka Ueda, Tohru Ifukube, Hikaru Tauchi, Yuko Hiramatsu.</p> <p><b>The Proposal of the Remote Consultation Service System Using the Outline Function for Consultation</b> Hiroshi Yajima, Takuto Gotoh.</p> <p><b>An Awareness System for Supporting Remote Communication - Application to Long-distance Relationships -</b> Tomoya Ohiro, Tomoko Izumi, Yoshio Nakatani.</p> <p><b>The Present Condition and Problems for Elderly People Participating in Communities</b> Noriyuki Kobayashi, Shohei Yamane, Kotaro Ohori, Akihiko Obata.</p>	<p><b>Intent Capturing Through Multimodal Inputs</b> Weimin Guo, Cheng Cheng, MingKai Cheng, Yonghan Jiang, Honglin Tang.</p> <p><b>Semi-Supervised Remote Sensing Image Segmentation Using Dynamic Region Merging</b> Ning He, Ke Lu, Yixue Wang, Yue Gao.</p> <p><b>Kernel based Weighted Group Sparse Representation Classifier</b> Bingxin Xu, Ping Guo, C. L. Philip Chen.</p> <p><b>Classification based on LBP and SVM for human embryo microscope images</b> Yabo Yin, Yun Tian, Weizhou Wang, Fuqing Duan, Zhongke Wu, Mingquan Zhou.</p> <p><b>Visual Image Reconstruction from fMRI Activation Using Multi-scale Support Vector Machine Decoders</b> Yu Zhan, Jiakai Zhang, Suta Song, Li Yao.</p> <p><b>A New Real-time Visual SLAM Algorithm Based on the Improved FAST Features</b> Liang Wang, Rong Liu, Chao Liang, Fuqing Duan.</p>	<p><b>Evaluating Devices and Navigation Tools in 3D Environments</b> Marcela Câmara, Priscilla Braz, Ingrid Monteiro, Alberto Raposo, Simone Barbosa.</p> <p><b>Effect of Unresponsive Time for User's Touch Action of Selecting an Icon on the Video Mirror Interface</b> Kazuyoshi Murata, Masatsugu Hattori, Yu Shibuya.</p> <p><b>Evaluation of a Soft-Surfaced Multi-Touch Interface</b> Anna Noguchi, Toshifumi Kurosawa, Ayaka Suzuki, Yuichiro Sakamoto, Tatsuhito Oe, Takuto Yoshikawa, Buntarou Shizuki, Jiro Tanaka.</p> <p><b>A Remote Pointing Technique using Pull-out</b> Takuto Yoshikawa, Yuusaku Mita, Takuro Kuribara, Buntarou Shizuki, Jiro Tanaka.</p> <p><b>Two Handed Mid-Air Gestural HCI: Point + Command</b> Matthias Schwaller, Simon Brunner, Denis Lalanne.</p> <p><b>Using Kinect for 2D and 3D Pointing Tasks: Performance Evaluation</b> Alexandros Pino, Evangelos Tzemis, Nikolaos Ioannou, Georgios Kouroupetroglou.</p> <p><b>Kinect® as Interaction Device with a Tiled Display</b> Amilcar Meneses Viveros, Erika Hernández Rubio.</p>	<p><b>RFID Mesh Network as an Infrastructure for Location Based Services for the Blind</b> Hugo Fernandes, Jose Faria, Paulo Martins, Hugo Paredes, João Barroso.</p> <p><b>The Link Between Inclusive Design and Innovation: Some Key Elements</b> Kristin Skeide Fuglerud, David Sloan.</p> <p><b>Designing Copresent Cycling Experience</b> Yun-Maw Kevin Cheng, Wei-Ju Chen, Tong-Ying Wu, Frode Eika Sandnes, Chris Johnson, Chao-Yang Yang.</p> <p><b>Gesture-Based Applications for Elderly People</b> Weiqin Chen.</p> <p><b>Design of a Wearable Haptic Vest as a Supportive Tool for Navigation</b> Anak Agung Gede Dharma, Takuma Oami, Yuhki Obata, Li Yan, Kiyoshi Tomimatsu.</p> <p><b>Facial Electromyogram Activation as Silent Speech Method</b> Lisa R Rebenitsch, Charles Owen.</p> <p><b>Data Visualisation, User Experience and Context: A Case Study from Fantasy Sport</b> Rob H Euman, Jose Abdelnour-Nocera.</p>

WEDNESDAY 8:00 - 10:00



# Parallel Sessions

## HCI

### Formal and model-based design and development approaches

Chair(s): To be announced

### A Logical Design Method for User Interface using GUI Design Patterns

Ichiro Hirata, Toshiki Yamaoka.

### Visual Interfaces Design Simplification through Components Reuse

Javier Rodeiro Iglesias, Pedro Teixeira-Faria.

### Fuzzy Logic Approach for Adaptive Systems Design

Makram Soui, Mourad Abed, Khaled Ghedira.

### Design and Implementation of Ergoidentifier: A Tool for Automated Identification of Websites Interaction Elements

Oscar Francisco Santos, Marcelo Morandini.

### Communicating Ideas in Computer-Supported Modelling Tasks: A Case Study with BPMN

Juliana Jansen Ferreira, Clarisse Sieckenius De Souza.

### Extending the Information of Activity Diagrams with a User Input Classification

Cindy Mayas, Stephan Hörold, Heidi Krömker.

### Parallel Rendering of Human-Computer Interaction Industrial Applications on Multi-/Many-Core Platforms

Sven Hermann, Arquimedes Canedo, Max Wang.

## HIMI

### Designing Usable Interfaces for HCI

Chair(s): Robert Proctor.

### The Influence of Password Restrictions and Mnemonics on the Memory for Passwords of Older Adults

Kim-Phuong Vu, Martina Hills.

### Intuitive Design for Non-touch Screen Scrolling: Evidence from a Continuous Text-movement Task

Jing Chen, Robert Proctor.

### Value Added by the Axiomatic Usability Method for Evaluating Consumer Electronics

Yinni Guo, Yu Zhu, Gavriel Salvendy, Robert Proctor.

### A Visual Discrimination Task for Symbols in Air Traffic Management

Mary Ngo, Kim-Phuong Vu, Tristan Grigoleit, Thomas Z Strybel.

### A Precursory Look at Potential Interaction Objectives Affecting Flexible Robotic Cell Safety

April Savoy, Alister McLeod.

### Are Prescription Labels Usable? A Review and Analysis

Meghann Herron, Kim-Phuong Vu.

### Developing concepts of a ground control station for unmanned aircraft

Gregory A Morales, Mark Pestana.

### Usability for Product design and Industrial Application - I

Chair(s): Yen-Yu Kang.

### Usability Evaluation of the Universal Computer Workstation under Supine, Sitting and Standing Postures

Hsin-Chieh Wu, Min-Chi Chiu, Cheng-Lung Lee, Ming-Yao Bai.

### A Study of Different Consumer Groups' Preferences of Time Display on Watches

Wen-chih Chang, Wei Ting Chen.

### Usability Study of Icon Designs with Social Network Functions

Chien-Hsiung Chen, Wen-Hsin Hsiao, Shih-Chieh Chen, Yen-Yu Kang.

### An innovative product design curriculum stimulating by imagination factors

Yinghsiu HUANG, Kai-Wei Hsieh.

### The Display Medium, Academic Major and Sex Effect of High School Students on Visuospatial Abilities Test Performance

Yen-Yu Kang.

### Research on the Measurement of Product Sales with Relation to Visual Planning for Commercial Websites

Chu-Yu Sun.

### A Method for Developing Quality Function Deployment Ontology

Ken Tomioka, Fumiaki Saitoh, Syohei Ishizu.

## EPCE

continues...

### Human Factors & Security

Chair(s): Alex Stedmon.

### Autonomous Control in Military Logistics Vehicles: Trust and Safety Analysis

Nicole Gempton, Stefanos Skalistis, Jane Furness, Siraj Shaikh, Dobrila Petrovic.

### A Collaborative Multi-source Intelligence Working Environment: A Systems Approach

Peter Eachus, Ben Short, Alex Stedmon, Jennie Brown, Margaret Wilson, Lucy Lemansky.

### Analysing Deceptive Speech

Christin Kirchhübel, Alex Stedmon, David Howard.

### Human Factors and the Human Domain: Exploring Aspects of Human Geography and Human Terrain in a Military Context

Alex Stedmon, Brendan Ryan, Pat Fryer, Anneley McMillan, Nick Sutherland, Alyson Langley.

### Tackling financial and economic crime through strategic intelligence management

Babak Akhgar.

### Transparency of military threat evaluation through visualizing uncertainty and system rationale

Tove Helldin, Göran Falkman, Maria Riveiro, Anders Dahlbom, Mikael Lebram.

Human Interface and the Management of Information

Engineering Psychology and Cognitive Ergonomics

WEDNESDAY 8:00 - 10:00



WEDNESDAY 8:00 - 10:00

## EPCE

**Harmonization towards Performance in Future Air Transportation**  
Chair(s): Shan Fu.

**Human factors modeling schemes for pilot-aircraft system: A complex system approach**  
Dan Huang, Shan Fu.

**The Experimental Research of Task Load Quantitative Analysis Based on the Pupil Diameter**  
Xueli He, Wang Lijing.

**The Influence of Guanxi Gradient on Crew Resource Management and Values in the Cockpit**  
Hung-Syng Jing, Berlin Chen.

**A Layered Multi-Dimensional Description of Pilot's Workload Based on Objective Measures**  
Zhen Wang, Shan Fu.

**Pilot Preferences on Displayed Aircraft Control Variables**  
Anna Trujillo, Irene Gregory.

**Pilot Attention Allocation Modeling under Multiple Factors Condition**  
Xu Wu, Xiaoru Wanyan, Damin Zhuang.

**Cognitive Operations in the Manually Controlled Rendezvous and Docking and their Implications for Interface Design and Inflight Cognitive Performance Monitoring**  
Yu Tian, Shanguang Chen, Chunhui Wang, Zhiqiang Tian, Yi Xiao, Ting Jiang.

**Digital Expression of Civil Pilot's Basic Operation**  
Jiang Zhuoyuan, Chen Bin, Cao Quanxin, Liang Yuandong.

## UAHCI

Universal Access in Human-Computer Interaction

**Assessing Information by Younger and/or Older Users**  
Chair(s): Eugenius Loos, Jennifer C Romano Bergstrom.

**Youth, Video Games, and the Constellation of Information**  
Crystle Martin.

**Age-Related Differences in Search Strategy and Performance when Using a Data-Rich Web Site**  
Erica Olmsted-Hawala, Jennifer C Romano Bergstrom, Wendy Rogers.

**SERPs and Ads on Mobile Devices: An Eye Tracking Study for Generation Y**  
Soussan Djamasbi, Adrienne Hall-Phillips, Ruijiao (Rachel) Yang.

**What «Digital Divide» Between Generations? A Cross-National Analysis Using Data from the World Internet Project**  
Tiago Lapa, Gustavo Cardoso.

**Age Differences in the Knowledge and Usage of QR Codes**  
Jonathan Mendelson, Jennifer C Romano Bergstrom.

**Designing for the Wisdom of Elders: Age Related Differences in Online Search Strategies**  
Robert J Youmans, Brooke G. Bellows, Christian A Gonzalez, Brittany Sarbone, Ivonne Figueroa.

**Ibero-American Minors: How Are They Accessing and Using Information**  
Charo Sádaba.

**Human, Computer and Environment - I**  
Chair(s): Jerzy Charytonowicz.

**The Current Possibilities for Controlling Parameters of Environment of Housing and Workplace Based on the Selected Architectural Realizations**  
Pawel Horn.

**Creating Public Space in Wroclaws Urban Housing Environment**  
Barbara Gronostajska.

**Problems of the Acoustics of Interiors in Architectural and Constructional Solutions of the Extension of the Wroclaw Opera Building and Summer Scene**  
Boguslaw Wowrzeczka, Jacek Dziegielewski.

**The Computed-Aided Judiciary - How the Contemporary Technologies Change the Courtroom Design?**  
Grazyna Hryniewicz-Lamber.

**Social Dimension of Sustainable Development - Safety and Ergonomics in Maintenance Activities**  
Malgorzata Jasiulewicz-Kaczmarek, Przemyslaw Drozyner.

**Creating a Continuum of Care - I**  
Chair(s): Josette Jones, John Finnell.

**Supporting the continuum of care for combat wounded patients: Adaptive interfaces for Personal Health Records**  
Harry D. Tunnell, Aeshwarya Verma.

**Evaluation of User Interface of Computer Application Developed for Screening Pediatric Asthma**  
Maryam Zolnoori, Josette Jones, Mostafa Moin, Hassan Heidarnejad, Mohammad Reza Fazlollahi, Masoud Hosseini.

**Facilitators and Barriers to patients' engagements with Personal Health Records: Systematic review**  
Abdulrahman Jabour, Josette Jones.

**Complexity Analysis of a Transfer Center**  
Josette Jones, Michelle Lenox, Shelly M Maersch, Tami Raute, Cortney Gundlach, Mark Pfaff.

**Data Reduction for Continuum of Care: An Exploratory Study Using the Predicate-Argument Structure to Pre-Process Radiology Sentences for Measurement of Semantic Similarity**  
Eric Tyner Newsom, Josette Jones.

**Ontological Model for CDSS in Knee Management**  
Kanitha Phalakornkule, Josette Jones, John Finnell.

**A Pilot Study: Integrating an Emergency Department with Indiana's Prescription Drug Monitoring Program**  
Hamed Abedtash, John Finnell.

# Parallel Sessions

## VAMR

Virtual, Augmented and Mixed Reality

### VR and AR for games and entertainment

Chair(s): To be announced

### An Experience on Natural Sciences Augmented Reality Contents for Preschoolers

Antonia Cascales, Isabel Laguna, David Perez Lopez, Pascual Perona, Manuel Contero.

### A 3-D Serious Game to Simulate A Living of A Beehive

José Figueiredo, Vera Werneck, Rosa M. E. M. Costa.

### On the Use of Augmented Reality Technology for Creating Interactive Computer Games

Chin-Shyurng Fahn, Meng-Luen Wu, Wei-Tyng Liu.

### Developing Augmented Reality Application to Enhance Science Education in Kindergarten

Taghreed Abdullah Noorsaeed.

### System Development of Immersive Technology Theatre in Museum

Yi Chia Nina Lee, Li-Ting Shan, Chien-Hsu Chen.

### An Immersive Environment for a Virtual Cultural Festival

Liang Li, Woong Choi, Kozaburo Hachimura.

### AR'istophanes: Mixed Reality Live Stage Entertainment with Spectator Interaction

Thiemo Kastel, Marion Kesmaecker, Krzysztof Mikolajczyk, Bruno Filipe Duarte-Goncalves.

### Navigation and safety in complex environments

Chair(s): To be announced

### Empirical Investigation of Transferring Cockpit Interactions >From Virtual to Real-Life Environments

Diana Reich, Elisabeth Dittrich.

### Predicting Navigation Performance with Psychophysiological Responses to Threat in a Virtual Environment

Christopher G. Courtney, Michael Dawson, Albert "Skip" Rizzo, Brian J. Arizmendi, Thomas D. Parsons.

### Evaluating distraction and disengagement of attention from the road

Valentine Ikechukwu Nwakacha, Gary Burnett, Andrew Crabtree.

### Mixed Reality Environment for Mission Critical Systems Servicing and Repair

Andrea F. Abate, Fabio Narducci, Stefano Ricciardi.

### A New Approach for Indoor Navigation Using Semantic Webtechnologies and Augmented Reality

Tamas Matuszka, Gergó Gombos, Attila Kiss.

### A Study of Navigation and Selection Techniques in Virtual Environments Using Microsoft Kinect

Peter F. Dam, Priscilla F. A. Braz, Alberto B. Raposo.

## CCD

Cross-Cultural Design

### Design at the Edges (I)

Chair(s): Rungtai Lin, Po-Hsien Lin.

### Consumers' Evaluation and Perception within the Trend of Cultural Creative Design

Chi-Hsien Hsu, Shu-Hsuan Chang, Jung-Yu Lin.

### The Effects of Emotion on Judgements of Effectiveness and Good-design

Hui Yueh Hsieh.

### Employing Poetry Culture for Creative Design with a Polyphonic Pattern

Mo-Li Yeh, Po-Hsien Lin, Ming-sian Wang.

### The Research on Cognition Design in Chinese Opera Mask

Tai-Jui Wang, Yu-Ju Y Lin, Jun-Liang Chen.

### A Study of the Attraction Factors of Japanese Pop-culture by Young People in Taiwan

Chen-hao Fan, I-Hsin Fan, Huang-Tsun Lu, Suyao Lee.

### The Influence of Design Training and Spatial Solution Strategies on Spatial Ability Performance

Han-Yu Lin.

### The Effect of Exhibition Visit and Photograph Watch on Visitor's Experience

Jun-Liang Chen, Si-Jing Chen, Chih-Long Lin.

## OCSC

Online Communities and Social Computing

### Friendship and affect in Social Communities

Chair(s): To be announced

### You Are Not Alone Online: A Case Study of Long Distance Romantic Relationships in the Renren Online Community

Yurong He, Kari Kraus, Jennifer Preece.

### Who Are Seeking Friends? The Portrait of Stranger-Seeker in Social Network Sites

Xitong Yue, Yuanyuan Shi, Huajian Cai.

### Understanding Social Network Sites (SNSs) Preferences: Personality, Motivation, and Happiness Matters

Yuanyuan Shi, Xitong Yue, Jin He.

### A consideration of the functions that support to find new friends in social games

Kohei Otake, Tomofumi Uetake, Akito Sakurai.

### Exploratory Study on Online Social Networks User from SASANG Constitution - Focused on Korean Facebook users

Joung Youn Lee, Hyun Suk Kim, Eunjung Choi, Soon Jeong Choi.

### Looking Back At Facebook Content And The Positive Impact Upon Wellbeing: Exploring Reminiscing As A Tool For Self Soothing

Alice K Good, Arunasalam Sambhanthan, Wahid Panjganj.

### Searching Emotional Scenes in TV Programs based on Twitter Emotion Analysis

Takashi Yamauchi, Yuki Hayashi, Yukiko Nakano.

WEDNESDAY 8:00 - 10:00



WEDNESDAY 8:00 - 10:00

Augmented Cognition	<p><b>AC</b></p> <p><b>Opportunities for Augmented Cognition in Cyber Operations</b> Chair(s): Chris Forsythe.</p>	<p><b>Intuitive Sensemaking</b> Chair(s): Denise M Nicholson.</p>
	<p><b>Adaptive Systems for Cyber Operator Augmentation</b> Benjamin Knott, Scott Galster, Gregory Funke.</p> <p><b>Enhanced Training for Cyber Situational Awareness</b> Susan Stevens-Adams, Armida Carbajal, Austin Silva, Kevin Nauer, Benjamin Anderson, Theodore Reed, Chris Forsythe.</p> <p><b>Identifying Contextually-Driven Perceptions of Risk in Cybersecurity Operations</b> Jennifer Cowley, James Cebula.</p> <p><b>Instrumenting Competition-based Exercises to Evaluate Cyber Defender Situation Awareness</b> Theodore Reed, Kevin Nauer, Austin Silva.</p> <p><b>Effects of Teamwork versus Group Work on Signal Detection in Cyber Defense Teams</b> Prashanth Rajivan, Michael Champion, Nancy Cooke, Shree Jariwala, Geneviève Dubé, Verica Buchanan.</p> <p><b>Improving Tool Support for Software Reverse Engineering in a Security Context</b> Brendan Cleary, Christoph Treude, Fernando Figueira Filho, Margaret-Anne Storey, Martin Salois.</p> <p><b>Human Dimension in Cyber Operations Research and Development Priorities</b> Chris Forsythe, Austin Silva, Susan Stevens-Adams, Jeffrey Bradshaw.</p>	<p><b>Modeling Cues for Intuitive Sensemaking Simulations</b> Sae Schatz, Kathleen Bartlett.</p> <p><b>Towards Evaluating Computational Models of Intuitive Decision Making with fMRI Data</b> James Niehaus, Victoria Romero, Avi Pfeffer.</p> <p><b>Human Memory Systems: A Framework for Understanding the Neurocognitive Foundations of Intuition</b> Paul J Reber, Mark Beeman, Ken Paller.</p> <p><b>Using Simulation Based Training Methods for Improved Warfighter Decision Making</b> Perakath Benjamin, Paul Koola, Kumar Akella, Michael Graul, Michael Painter.</p> <p><b>Instrumenting a Perceptual Training Environment to Support Dynamic Tailoring</b> Robert E Wray, Jeremiah Folsom-Kovarik, Angela Woods.</p> <p><b>Enhancing Intuitive Decision Making through Implicit Learning</b> Joseph Cohn, Peter Squire, Ivy Estabrooke, Elizabeth O'Neill.</p> <p><b>Intuitive Sensemaking: From Theory to Simulation-Based Training</b> Kathleen Bartlett, Margaret Nolan, Andrea Marraffino.</p>

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management	<p><b>DHM</b></p> <p><b>Utilizing Traditional Wisdom and Technologies for Quality Care</b> Chair(s): Akihiko Goto, Noriaki Kuwahara.</p>	<p><b>DHM Applications and Validation - I</b> Chair(s): Vincent Duffy.</p>
	<p><b>A Study of The Effect of The Shape, The Color, and The Texture of Ikebana on A Brain Activity</b> Yuki Ikenobo, Yoshiyuki Kida, Noriaki Kuwahara, Akihiko Goto, Akirou Kimura.</p> <p><b>Home Care Risk Management: Nursing Issues Related to Technology</b> Juliana J. Brixey, James P. Turley.</p> <p><b>Supporting Conversation for People with Dementia by Introducing a Computer-based Third Element to the Interaction</b> Norman Alm, Arlene Astell, Gary Gowans, Maggie Ellis, Phillip Vaughan, Richard Dye.</p> <p><b>Feedback-based Self-training System of Patient Transfer</b> Zhifeng Huang, Ayanori Nagata, Masako Kanai-Pak, Jukai Maeda, Yasuko Kitajima, Mitsuhiro Nakamura, Kyoko Aida, Noriaki Kuwahara, Taiki Ogata, Jun Ota.</p> <p><b>Effect evaluation of recreational coloring carried out at pay nursing home</b> Shinichiro Kawabata, Maki Nasu, Akiyoshi Yamamoto, Noriaki Kuwahara, Yoshiyuki Kida, Akihiko Goto, Hiroyuki Hamada.</p> <p><b>Development of a Measurement and Evaluation System for Bed-Making Activity for Self-Training</b> Ayanori Nagata, Zhifeng Huang, Masako Kanai-Pak, Jukai Maeda, Yasuko Kitajima, Mitsuhiro Nakamura, Kyoko Aida, Noriaki Kuwahara, Taiki Ogata, Jun Ota.</p> <p><b>The relationship between nursing students' attitudes towards learning and effects of self-learning system using Kinect</b> Mitsuhiro Nakamura, Yasuko Kitajima, Jun Ota, Taiki Ogata, Zhifeng Huang, Ayanori Nagata, Kyoko Aida, Noriaki Kuwahara, Jukai Maeda, Masako Kanai-Pak.</p>	<p><b>Grip Force and CR-10 Ratings For Youth Females</b> Kai Wai Li, Yu C. Lin.</p> <p><b>Modeling Body Shape from Surface Landmark Configurations</b> Matthew P Reed.</p> <p><b>Development of Human Balance Assessment System with Continuous Center of Gravity Tracking</b> Ben-Yi Liao, Chi-Wen Lung, Yih-Kuen Jan.</p> <p><b>Using Methods-Time Measurement to Connect Digital Humans and Motion Databases</b> Ali Keyvani, Dan Lämkkull, Gunnar Bolmsjö, Roland Örtengren.</p> <p><b>Friction Measurements in a Hand Tool Factory</b> Kai Wai Li, Ching-Chung Chen, Liwen Liu, Chih-Yong Chen.</p> <p><b>Anatomy-based variational modeling of Digital Hand and its verification</b> Yulai Xie, Satoshi Kanai, Hiroaki Date.</p> <p><b>Towards Enhancing the Acoustic Models for Dysarthric Speech</b> Kuruvachan K George, C Santhosh Kumar.</p>



# Parallel Sessions

## DUXU

Design, User Experience, and Usability

<p><b>Design, Ergonomics, and Usability - I</b> Chair(s): Marcelo Soares, Tareq Ahram.</p>	<p><b>Enhancing Government Website Usability</b> Chair(s): Sarah J Swierenga.</p>	<p><b>User Experience for Smart Devices and Environments</b> Chair(s): To be announced</p>	<p><b>Designing for healthcare experiences</b> Chair(s): To be announced</p>
<p><b>Perception of Gamification: between Graphical Design and Persuasive Design</b> Cathie Marache-Francisco, Eric Brangier.</p> <p><b>Ergonomic Evaluation of Usability With Users - Application of The Technique of Cooperative Evaluation</b> Marcelo Penha, Walter Correia, Marcelo Soares, Fabio Campos, Marina Barros.</p> <p><b>Exploring The Need For, and Feasibility of A Web-based Self-management Resource for Teenage and Young Adult Cancer Survivors in The UK</b> Louise Moody, Andrew Turner, Jane Osmond, Joanna Kosmala-Anderson, Louise Hooker, Lynn Batehup.</p> <p><b>Modeling Consumer Sensitivity for Product Design and Perceived Usability</b> Tareq Ahram, Waldemar Karwowski, Nabin Sapkota.</p> <p><b>Application of Virtual Reality Technologies in Consumer Product Usability</b> Christianne Soares Falcão, Marcelo Soares.</p> <p><b>The Conjunction Fallacy and Its Impacts in the User's Data Acquisition Process</b> Fabio Campos, Dino Lincoln, Maria A Neves, Walter Correia, Marcelo Soares.</p> <p><b>Human Error in Aviation: The Behavior of Pilots Facing the Modern Technology</b> Isnard Thomas Martins, Edgard Thomas Martins, Marcelo Soares, Lia Giraldo Augusto.</p>	<p><b>Department of Homeland Security Websites Uncoupled: An Evaluation of Online Counterterrorism and Security Information Across Agencies</b> Anna Langhorne.</p> <p><b>Content as Conversation in Government Websites</b> Ginny Redish.</p> <p><b>From the Ground-up: Role of Usability and Aesthetics Evaluation in Creating a Knowledge-based Website for the U.S. Army Corps of Engineers</b> Dennis B Propst, Sarah J Swierenga, Graham L Pierce, Eunseong Jeong, Constantinos K. Coursaris.</p> <p><b>Usability of County Election Websites</b> Cyd Harrell, Andrea Fineman, Ethan Newby, Dana Chisnell, Whitney Quesenbery.</p> <p><b>Rap Backs: Continuous Workforce Monitoring to Improve Patient Safety in Long-Term Care</b> Fuad Abujarad, Sarah J Swierenga, Toni Dennis, Lori Post.</p> <p><b>Engaging Citizens with UX Design</b> Kate Walser.</p>	<p><b>Design and Evaluation of a Predictive Model for Smart Phone Selection</b> Yerika Jimenez, Patricia A Morreale.</p> <p><b>Evaluation of Effects of Textures Attached to Mobile Devices on Pointing Accuracy</b> Yoshitomo Fukatsu, Tatsuhiro Oe, Yuki Kuno, Buntarou Shizuki, Jiro Tanaka.</p> <p><b>A Proposal for Optimization Method of Vibration Pattern of Mobile Device with Interactive Genetic Algorithm</b> Makoto Fukumoto, Takafumi Ienaga.</p> <p><b>Sharing Kinetic Interactions for Mobile Devices</b> Bashar Altakrouri, Darren Carlson, Andreas Schrader.</p> <p><b>NUI-based Floor Navigation – A Case Study</b> Ulrich Furbach, Markus Maron.</p>	<p><b>Lazy Eye Shooter: Making a Game Therapy for Visual Recovery in Adult Amblyopia Usable</b> Jessica Bayliss, Indu Vedamurthy, Mor Nahum, Dennis Levi, Daphne Bavelier.</p> <p><b>Designing Co-located Tabletop Interaction for the Rehabilitation of Brain Injury</b> Jonathan Duckworth, Patrick Thomas, David Shum, Peter Wilson.</p> <p><b>Design for Relaxation During Milk Expression using Biofeedback</b> Loe M.G. Feijs, Jeanine Kierkels, Nicolle H. Van Schijndel, Marjolein Van Lieshout.</p> <p><b>PainDroid: A Mobile Tool for Pain Visualization and Management</b> Tor-Morten Gronli, Gheorghita Ghinea, Fotios Spyridonis, Jarle Hansen.</p> <p><b>Application of Rhetorical Appeals in Interactive Design for Health</b> Sauman Chu, G. Mauricio Mejia.</p>

WEDNESDAY 8:00 - 10:00

## HCI

Human-Computer Interaction

<p><b>A New Horizon for Social Information Systems (II)</b> Chair(s): Yoshio Nakatani, Shogo Nishida.</p>	<p><b>Computational Intelligence for Signal and Image Processing -II</b> Chair(s): Ping Guo, Fuqing Duan.</p>	<p><b>Multimodal and ambient communication and collaboration</b> Chair(s): To be announced</p>	<p><b>Designing Situated Experiences: Models, Technologies, Applications</b> Chair(s): Matthias Rehm, Søren Eskildsen.</p>
<p><b>An Estimation Framework of A User Learning Curve on Web-based Interface Using Eye Tracking Equipment</b> Masanori Akiyoshi, Hidetoshi Takeno.</p> <p><b>Further Benefit of a Kind of Inconvenience for Social Information Systems</b> Hiroshi Kawakami.</p> <p><b>An Empirical Investigation of Similarity-driven Trust Dynamics in A Social Network</b> Yugo Hayashi, Victor Kryssanov, Hitoshi Ogawa.</p> <p><b>Robust Face Recognition System Using a Reliability Feedback</b> Shotaro Miwa, Shintaro Watanabe, Makito Seki.</p> <p><b>Development of Push-Based English Words Learning System by Using E-Mail Service</b> Shimpei Matsumoto, Masanori Akiyoshi, Tomoko Kashima.</p> <p><b>An Evacuation Place Reasoning System to Support Disaster Rescue Teams</b> Akihiro Kawabe, Tomoko Izumi, Yoshio Nakatani.</p> <p><b>Multi-layer Control and Graphical Feature Editing using Server-side Rendering on Ajax-GIS</b> Takeo Sakairi, Takashi Tamada, Katsuyuki Kamei, Yukio Goto.</p>	<p><b>Correcting Distortion of Views into Aquarium</b> Yukio Ishihara, Makio Ishihara.</p> <p><b>AugmentedBacklight: Expansion of LCD Backlights Using Lighting Methods in the Real World</b> Maho Oki, Koji Tsukada, Itiro Siio.</p> <p><b>A Dense Stereo Matching Algorithm with Occlusion and Less or Similar Texture Handling</b> Hehua Ju, Chao Liang.</p> <p><b>A Coastline Detection Method Based on Level Set</b> Qian Wang, Ke Lu, Fuqing Duan, Ning He, Lei Yang.</p> <p><b>Annotate Train Evaluate. A Unified Tool for the Analysis and Visualization of Workflows in Machine Learning Applied to Object Detection</b> Michael Storz, Marc Ritter, Robert Manthey, Holger Lietz, Maximilian Eibl.</p> <p><b>Tracking End-Effectors for Marker-less 3D Human Motion Estimation in Multi-view Image Sequences</b> Wenzhong Wang, Zhaoqi Wang, Xiaoming Deng, Bin Luo.</p> <p><b>A model based semantic frames detection and retrieval in video using motion vector and occurrence rate of shot boundaries</b> Pradipkumar Ishwarbhai Panchal, Shabbir Merchant, Nirav Patel.</p>	<p><b>Multi-party Human-Machine Interaction Using a Smart Multimodal Digital Signage</b> Tony Tung, Randy Gomez, Tatsuya Kawahara, Takashi Matsuyama.</p> <p><b>Multimodal Smart Interactive Presentation System</b> Hoang-An Le, Khoi-Nguyen C. Mac, Truong-An Pham, Vinh-Tiep Nguyen, Minh-Triet Tran.</p> <p><b>Development of Communication Support System at Mealtimes Using Tabletop Interface</b> Junko Itou, Shizuka Takao, Jun Munemori.</p> <p><b>Research on a Large Digital Desktop Integrated in a Traditional Environment for Informal Collaboration</b> Mariano Perez Pealez, Ryo Suzuki, Ikuro Choh.</p> <p><b>Social TV EPG Interaction Design for Multi-screen Environment</b> Fang You, Ting Xie, Jianmin Wang, Peng Xiao, Lulu Qian, Hongmei Li.</p> <p><b>Subjective Ratings in an Ergonomic Engineering Process using the Example of an In-Vehicle Information System</b> Michael Krause, Klaus Bengler.</p>	<p><b>Mobile Recommender Systems in e-learning</b> Oswaldo Velez-Langs, Nelson Sánchez Sánchez.</p> <p><b>Evaluating Intelligibility Usage and Usefulness in a Context-Aware Application</b> Brian Y Lim, Anind Dey.</p> <p><b>Challenges for Contextualizing Language Learning - Supporting Cultural Integration</b> Søren Eskildsen, Matthias Rehm.</p> <p><b>Mobile Inquiry-based Learning - A Study of Collaborative Scaffolding and Performance</b> Jalal Nouri, Teresa Cerrato-Pargman, Karwan Zetali.</p> <p><b>Identifying and Representing Elements of Local Contexts in Namibia</b> Kasper Rodil, Kasper L. Jensen, Matthias Rehm, Heike Winschiers-Theophilus.</p> <p><b>Examining the Role of Contextual Exercises and Adaptive Expertise on CAD Model Creation Procedures</b> Michael D Johnson, Elif Ozturk, Lauralee Valverde, Bugrahan Yalvac, Xiaobo Peng.</p>

WEDNESDAY 10:30 - 12:30

# Parallel Sessions

## HCI

<p><b>Patterns and Models for User Interface Construction</b> Chair(s): Christian Märtin, Peter Forbrig.</p>	<p><b>Communication and HCI in Korea</b> Chair(s): Donghun Chung.</p>
<p><b>Formal Pattern Specifications to Facilitate Semi-Automated User Interface Generation</b> Jürgen Engel, Christian Märtin, Christian Herdin, Peter Forbrig.</p> <p><b>Requirements for a Definition of Generative User Interface Patterns</b> Stefan Wendler, Ilka Philippow.</p> <p><b>Evaluation of User Interface Description Languages for Model-Based User Interface Development in the German Automotive Industry</b> Gerrit Meixner, Marius Orfgen, Moritz Kümmerling.</p> <p><b>Semantic Execution of Subject-oriented Process Models</b> Albert Fleischmann, Werner Schmidt, Christian Stary.</p> <p><b>Patterns and Models for Automated User Interface Construction: In Search of the Missing Links</b> Christian Märtin, Christian Herdin, Jürgen Engel.</p> <p><b>Special Challenges for Models and Patterns in Smart Environments</b> Peter Forbrig, Christian Märtin, Michael Zaki.</p> <p><b>Agility based on Stakeholder Interaction - Blending Organizational Learning with Interactive BPM</b> Christian Stary, Werner Schmidt, Albert Fleischmann.</p>	<p><b>Effects of Facebook friends' collective mood on individual's psychological well-being</b> Indeok Song.</p> <p><b>Influence of Gaming Display and Controller on Perceived Characteristics, Perceived Interactivity, Presence, and Discomfort</b> Hyunji Lee, Donghun Chung.</p> <p><b>Do All People Enjoy the Benefits from Technology Innovation?</b> Yoon Jeon Koh, Jaeheon Park, Byung Do Chung.</p> <p><b>Toward a New Design Philosophy of HCI: Knowledge of Collaborative Action of "We" Human-and-Technology</b> HyunKyoung Cho, Chang-Soo Park.</p>

## HIMI

continues...

Human Interface and the Management of Information

<p><b>HCI considerations for NextGen</b> Chair(s): Kim-Phuong Vu.</p>	<p><b>Usability for Product design and Industrial Application - II</b> Chair(s): Yen-Yu Kang.</p>
<p><b>Development of Haptic Assistance for Route Assessment Tool of NASA NextGen Cockpit Situation Display</b> Eric Park, Jose Robles, Paul Sim, Ryan O'Connor, Martin Koltz, Gregory Arnsdoff, Panadda Marayong, Thomas Z Strybel, Kim-Phuong Vu.</p> <p><b>Measuring UAS Pilot Responses to Common Air Traffic Clearances</b> Jason Ziccardi, Zach Roberts, Ryan O'Connor, Conrad Rorie, Gregory A Morales, Vernol Battiste, Thomas Z Strybel, Dan Chiape, Kim-Phuong Vu, Jay Shively.</p> <p><b>Are the Intrusive Effects of SPAM Probes Present when Operators Differ by Skill Level and Training?</b> Hector I. Silva, Jason Ziccardi, Tristan Grigoleit, Vernol Battiste, Thomas Z Strybel, Kim-Phuong Vu.</p> <p><b>Pre-Study Walkthrough with a Commercial Pilot for a Preliminary Single Pilot Operations Experiment</b> Ryan O'Connor, Zach Roberts, Jason Ziccardi, Robert Koteskey, Joel Lachter, Quang Dao, Walter Johnson, Vernol Battiste, Kim-Phuong Vu, Thomas Z Strybel.</p> <p><b>Training Air Traffic Controller Trust in Automation within a NextGen Environment</b> Tiana M Higham, Kim-Phuong Vu, Jim Miles, Thomas Z Strybel, Vernol Battiste.</p> <p><b>The Effects of Early Training with Automation Tools on the Air Traffic Management Strategies of Student ATCos</b> Henri Battiste, William Choi, Tina Mirchi, Karen Sanchez, Kim-Phuong Vu, Dan Chiape, Thomas Z Strybel.</p>	<p><b>The Designing Expressions of the Special Visual Effect Film in the Digital Technology</b> Tsun-Hsiung Yao, Chu-Yu Sun.</p> <p><b>The Relationship Between Handlebar and Saddle Heights on Cycling Comfort</b> Min-Chi Chiu, Hsin-Chieh Wu, Nien-Ting Tsai.</p> <p><b>An Analysis of Smartphone Size Regarding Operating Performance</b> Zunhwa Chiang, Chia Ching Wen, An-Che Chen, Cheng-yu Hou.</p> <p><b>Usability Evaluation Of The Touch Screen User Interface Design</b> Chih-Yu Hsiao, You-Jia Liu, Mao-Jiun Wang.</p> <p><b>On the reading performance of text layout, switch position, topic of text, and luminance contrast for Chinese E-books interface design</b> Wen-Te Chang, Ling-Hung Shih, Zunhwa Chiang, Kuo-Chen Huang.</p> <p><b>Development of a chest X-ray examination support system for foreigners using a personal digital assistant</b> Mitsuru Miyata, Chikamune Wada, Masahiro Iinuma.</p> <p><b>Situation Aware Interaction with Multi-modal Business Applications in Smart Environments</b> Mario Aehnelt, Sebastian Bader, Gernot Ruscher, Frank Krüger, Bodo Urban, Thomas Kirste.</p>

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## HIMI

### Adaptive and User Guiding Information Service and Interface - I

Chair(s): Hanmin Jung.

### User Guiding Information Supporting Application for Clinical Procedure in Traditional Medicine

Hyun Chul Jang, Yong-Taek Oh, Anna Kim, Sang Kyun Kim.

### Human Support System for Elderly People in Daily Life

Shimizu Shunji, Hiroaki Inoue.

### Analytics on Online Discussion and Commenting Services

Sungho Shin, Sangkeun Park, Jinseop Shin, Sa-Kwang Song, Sung-Pil Choi, Hanmin Jung.

### Usability Compliance Audit for Technology Intelligence Services

Nadine Pietras, Mazhar Sajjad, Myungkwon Hwang, Jinhung Kim, Sa-Kwang Song, Do-Heon Jeong, Seungwoo Lee, Hanmin Jung.

### Overview of Global User Interfaces For Localization

Clara Peters, Mazhar Sajjad, Myungkwon Hwang, Jinhung Kim, Sa-Kwang Song, Do-Heon Jeong, Seungwoo Lee, Hanmin Jung.

### Designing and Verifying Application Schema by Applying Standard Element for Managing Ocean Observation Data

Sun-Tae Kim, Lee-Kyum Kim, Tae-Young Lee.

### Visualization of Anomaly Data Using Peculiarity Detection on Learning Vector Quantization

Fumiaki Saitoh, Syohei Ishizu.

## EPCE

### Cognitive factors of interaction

Chair(s): To be announced

### Presenting a Fire Alarm Using Natural Language: The Communication of Temporal Information

Yan Ge, Xianghong Sun, Li Wang.

### Development of a Graphical User Interface as Data Collection Tool for Cognitive Performance in a Navigation Task

Katherine G. Bagley, Eui Park.

### An Approach to Optimal Text Placement on Images

Gautam K. Malu, Bipin Indurkha.

### Effects of Task and Presentation Modality in Detection Response Tasks

Roman Vilimek, Juliane Schaefer, Andreas Keinath.

### Effect of Transliteration on Readability

Sambhav Jain, Kunal Sachdeva, Ankush Soni.

Engineering Psychology and Cognitive Ergonomics

## UAHCI

### Inclusion, Design, Technical Devices for Older People

Chair(s): Jennifer C Romano Bergstrom, Eugenius Loos.

### Small Input Devices Used by the Elderly – How Sensorimotor Transformation and Task Complexity Affect Interaction

Michael Oehl, Luisa Dahlmanns, Christine Sutter.

### Are Internet and Social Network Usage Associated with Wellbeing and Social Inclusion of Seniors? – The Third Age Online Survey on Digital Media Use in Three European Countries

Dirk Richter, Stijn Bannier, Ruediger Glott, Markus Marquard, Thomas Schwarze.

### Senior Patients Online: Which Functions should a Good Patient Website Offer?

Nadine Bol, Christin Scholz, Ellen Smets, Eugenius Loos, Hanneke De Haes, Julia Van Weert.

### How E-Inclusion and Innovation Policy Affect Digital Access and Use for Senior Citizens in Europe

Stijn Bannier, Ruediger Glott, Valérie Meijjs.

### Age and Computer Self-Efficacy in the Use of Digital Technologies: An Investigation of Prototypes for Public Self-Service Terminals

Günther Schreder, Michael Smus, Karin Siebenhandl, Eva Mayr.

### Design for Adapted Devices: an Evaluation Tool of Smart Things for Seniors

Javier Barcenilla, Charles Tijus, Djamel Aissaoui, Eric Brangier.

### A Usability Study of Websites for Older Travelers

Kate Finn, Jeff Johnson.

### eBooks, eLearning, Digital Libraries/Multimedia: Accessibility, Markets and Copyrights

Chair(s): Ana Isabel B. B. Paraguay.

### Access to Books: Human Rights, Copyright and Accessibility

Abigail P. Rekas.

### Can Accessible Digital Formats Improve Reading Skills, Habits and Educational Level For Dyslectic Youngsters?

Simon Moe, Michael Wright.

### Online Digital Libraries at Universities: an inclusive proposal

Amanda Meincke Melo, Joseane Giacomelli da Silva.

### AccSciTech: A Global Approach to Make Scientific and Technical Literature Accessible

Alex Bernier, Dominique Burger.

### Nonvisual Presentation and Navigation within the Structure of Digital Text-Documents on Mobile Devices

Martin Lukas Dorigo, Bettina Harriehausen-Mühlbauer, Ingo Stengel, Paul S Haskell-Dowland.

### Accessible online learning: How much accessible? For whom?

Projetar Para Todos, Ana Isabel B. B. Paraguay.

### Implementing Disability Accommodations in a Widely Distributed Web based Visualization and Analysis Platform – Weave

Heather Granz, Merve Tuccar, Shweta Purushe, Georges Grinstein.

Universal Access in Human-Computer Interaction



# Parallel Sessions

## UAHCI

### Creating a Continuum of Care - II

Chair(s): Josette Jones, John Finnell.

### Ambient Assistive Technology Considered Harmful

Yngve Dahl, Babak Farshchian, Anders Kofod-Petersen, Silje Bøthun, Kristine Holbø, Jarl Reitan.

### Application of human error identification (HEI) techniques to cognitive rehabilitation in stroke patients with limb apraxia

Charmayne ML Hughes, Chris Baber, Marta Bienkiewicz, Joachim Hermsdörfer.

### Design of Intuitive Interfaces for Electric Wheelchairs to Prevent Accidents

Hitoshi Tamura, Yasushi Kambayashi.

### Analysis of User-Generated Multimedia Data on Medication Management and Consumption Behavior Using Data Mining Techniques

Chaiwo Lee, Lisa D'Ambrosio, Richard Myrick, Joseph Coughlin, Olivier De Weck.

### Increasing Physical Activity by Implementing a Behavioral Change Intervention Using Information Technology

Lynn Vincz, Hadi Kharrazi.

## VAMR

### Presence, communication and collaboration in VR environments

Chair(s): To be announced

### Passive Viewpoints in a Collaborative Immersive Environment

Sarah D Coburn, Lisa R Rebenitsch, Charles Owen.

### Enhancing Social Presence in Augmented Reality-Based Telecommunication System

Jea In Kim, Taejin Ha, Woontack Woo, Chung-Kon Shi.

### DigiLog Space Generator for Tele-collaboration in an Augmented Reality Environment

Kyungwon Gil, Taejin Ha, Woontack Woo.

### Perceived Presence's Role on Learning Outcomes in a Mixed Reality Classroom of Simulated Students

Aleshia T Hayes, Stacey Hardin, Charles E Hughes.

### Onomatopoeia Expressions for Intuitive Understanding of Remote Office Situation

Kyota Higa, Masumi Ishikawa, Toshiyuki Nomura.

### How Fiction Informed the Development of Telepresence and Teleoperation - An Historical Perspective

Gordon Mair.

Virtual, Augmented and Mixed Reality

## CCD

### Design at the Edges (II)

Chair(s): Rungtai Lin, Po-Hsien Lin.

### A Study of Applying Qualia to Business Model of Creative Industries

Hui-Yun Yen, Christopher LIN, Rungtai Lin.

### A Study of Aesthetic Analysis on Modern Crafts

Po-Hsien Lin, Mo-Li Yeh, Rungtai Lin.

### The Difference of User Perception between Similarity and Dissimilarity Judgments

MingXian Sun, Chi-Hsien Hsu, Ming-Chuen Chuang.

### Exploring Local Characteristic Product Analysis from an Emotional Design Perspective

Yu-Ju Y Lin, Wei-Han Chen, Tai-Jui Wang.

### A Study about the Culture Service Process and Tools Design

Chen-hao Fan, I-Hsin Fan, Chun Chieh Weng, Jia-Haur Liang, Huang-Tsun Lu.

### The Study of Style for Kogi Pottery Art in Life

Chi-Hsiung Chen, Shih-Ching Lin.

### Research on Symbol Expression for Eye Image in Product Design

: the Usage of the Chinese Traditional "Yun Wen"  
Chi-Chang Lu, Po-Hsien Lin.

Cross-Cultural Design

## OCSC

### User behaviour in social communities - I

Chair(s): To be announced

### Quantifying Cultural Attributes for Understanding Human Behavior on the Internet

Santosh Kumar Kalwar, Kari Heikkinen, Jari Porras.

### Sentiment Classification of Web Review using Association Rules

Man Yuan, Ouyang Yuanxin, Zhang Xiong, Sheng Hao.

### Empirical Study of Routine Structure in University Campus

Kingkarn Sookhanaphibarn, Ekachai Kanyanucharat.

### A Three-Level Approach to the Study of Multi-cultural Social Networking

Yifan Jiang, Oscar Debruijn.

### Online Idea Contests: Identifying Factors for User Retention

Stefan Richter, Stefan Perkmann Berger, Giordano Koch, Johann Füller.

### Eye Tracking Analysis of User Behavior in Online Social Networks

Wan Adilah Wan Adnan, Wan Nur Hafizhoh Hassan, Natrah Abdullah, Jamaliah Taslim.

### Assessing the Possibility of a Social e-book by Analyzing Reader Experiences

Seyeon Lee, Jea In Kim, Chung-Kon Shi.

Online Communities and Social Computing

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## AC

Augmented Cognition

### Research Innovations and Augmented Cognition

Chair(s): Peter Walker.

### The Information Exoskeleton: Augmenting Human Interaction with Information Systems

James Allen, Susan Regli, Kathleen Stibler, Patrick Craven, Peter Gerken, Polly Tremoulet.

### Towards noise-enhanced Augmented Cognition

Alexander J Casson.

### Augmenting Instructional Design with State-Based Assessment

Kevin Oden.

### Guided Learning Algorithms: An Application of Constrained Spectral Partitioning to Functional Magnetic Resonance Imaging (fMRI)

Henry L Phillips, Peter Walker, Carrie Kennedy, Owen Carmichael, Ian Davidson.

### Developing Visualization Techniques for Improved Information Comprehension and Reduced Cognitive Workload

Scott Scheff, Tristan Plank, John Wilson, Angelia Sebok.

### From Explicit to Implicit Speech Recognition

Chad M. Spooner, Erik Viirre, Bradley Chase.

### Augmented Interaction: Applying the Principles of Augmented Cognition to Human-Technology and Human-Human Interactions

Anna D Skinner, Lindsay Long, Jack Vice, John Blich, Cali M. Fidopiastis, Chris Berka.

## DHM

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

### DHM Applications and Validation - II

Chair(s): Vincent Duffy.

### Extraction of Light Stripe Centerline Based on Self-Adaptive Thresholding and Contour Polygonal Representation

Qingguo Tian, Yujie Yang, Xiangyu Zhang, Baozhen Ge.

### A Study for Conducting Waves by Using the Multi-channel Surface EMG

Tomohiro Kosuge, Naoaki Itakura, Kazuyuki Mito.

### Artificial Neural Network-Based Prediction of Human Posture

Mohammad H Bataineh, Tim Marler, Karim Abdel-Malek.

### Ergonomic Assessment of Patient Barrow Lifting Technique Using Digital Human Modeling

Wen Cao, Meng Jiang, Ying Han, Mohammad Khasawneh.

### Ergonomics Study of Direct and Indirect Visibility Evaluation at Uncontrolled Intersections Based on Three-Dimensional Computer Simulation

Midori Mori, Noboru Kubo.

### Assessment of body surface potential mapping in VDT-operators

Anna Janocha, Marcin Grabowski, Witold Pilecki, Robert Skalik, Krystyna Laszki-Szcząchor, Ewa Janocha, Piotr Frąszczak, Małgorzata Sobieszczęńska.

## DUXU

Design, User Experience, and Usability

### Designing for playing experiences

Chair(s): To be announced

### Designing for learning experiences

Chair(s): To be announced

### Augmenting Yu-Gi-Oh! Trading Card Game as Persuasive Transmedia Storytelling

Mizuki Sakamoto, Tatsuo Nakajima.

### Work and gameplay in the transparent 'magic circle' of gamification. Insights from a gameful collaborative review exercise

Razvan Rughinis.

### Stand Up, Heroes!: Gamification for Standing People on Crowded Public Transportation

Itaru Kuramoto, Takuya Ishibashi, Keiko Yamamoto, Yoshihiro Tsujino.

### Teachers and Children Playing with Factorization: Putting Prime Slaughter to The Test

Andrea Valente, Emanuela Marchetti.

### Exploring Adjustable Interactive Rings in Game Playing: Preliminary Results

Leonardo Cunha de Miranda, Heiko Hornung, Roberto Pereira, Maria Cecília C. Baranauskas.

### Math Fluency through Game Design

Wanda Eugene, Tiffany Barnes, Jennifer Wilson.

### Measuring Usability of the Mobile Mathematics Curriculum-based Measurement Application with Children

Mengping Tsuei, Hsin-Yin Chou, Bo-Sheng Chen.

### Investigation of Interaction Modalities Designed for Immersive Visualizations using Commodity Devices in the Classroom

Kira Lawrence, Alisa Maas, Neera Pradhan, Treschiel Ford, Jacqueline Shinker, Amy Banic.

### Improving User Experience in e-Learning, the Case of the Open University of Catalonia

Eva De Lera, Magí Almirall, Llorenç Valverde, Mercè Gisbert.

### Exploring Information-Triage: speculative interface tools to help college students conduct online research

Liese Zahabi.

### The Learning Machine: Mobile UX Design that Combines Information Design with Persuasion Design

Aaron Marcus, Yuan Peng, Nicola Lecca.

### Development and Validation of an Instrument to Measure the Usability of Educational Artifacts Created with Web 2.0 Applications

Tihomir Orehovački, Nikolina Žajdela Hrustek.

### Toward Social Media Based Writing

John P Sadauskas, Daragh Byrne, Robert Atkinson.

# Parallel Sessions

## DUXU

### Designing for cultural experiences

Chair(s): To be announced

### VMUXE - An Approach to User Experience Evaluation for Virtual Museums

Bianca Gockel, Holger Graf, Alfonsina Pagano, Joakim Eriksson, Sofia Pescarin.

### Towards a Common Implementation Framework for Online Virtual Museums

Katarzyna Wilkosinska, Andreas Aderhold, Holger Graf, Yvonne A Jung.

### Behind Livia's Villa - A Case Study for the Devolution of Large Scale Interactive «in-site» to «on-line» Application

Guido Lucci Baldassari, Emanuel Demetrescu, Sofia Pescarin, Joakim Eriksson, Holger Graf.

### Border Crosser - A Robot As Mediator Between The Virtual And Real World

Anke Tallig, Wolfram Hardt, Maximilian Eibl.

### Examining Interdisciplinary Prototyping in the Context of Cultural Communication

Michael Heidt.

### Blinklifier: A Case Study for Prototyping Wearable Computers in Technology and Visual Arts

Katia Fabiola Canepa Vega, Patricia J. Flanagan, Hugo Fuks.

### Exhibiting Emotion: Capturing Visitors' Emotional Responses to Museum Artefacts

Genevieve Alelis, Ania Bobrowicz, Chee Siang Ang.

### Embodied Haptic Interfaces

Chair(s): Patricia J. Flanagan.

### Tassophonics: Nanotechnology as the Magical Unknown

Audrey Samson, Kristina Andersen.

### Creating Instantly Disappearing Prints using Thermochromic Paint and Thermal Printer in an Interactive Art Installation

Miu Ling Lam.

### Empowering Electronic Divas through Beauty Technology

Katia Fabiola Canepa Vega, Hugo Fuks.

### Gestural, Emergent and Expressive: Three research themes for haptic interaction

Jared Donovan, Gavin Sade, Jennifer Seevinck.

### Fashioning Embodied Interfaces: Open Wearables Crafting

Valerie Lamontagne.

### Haptic Interface Aesthetics - 'Feedback Loops, Live Coding and How to Harness the Potential of Embodied Estrangement in Artistic Practices and Aesthetic Theories within Interface Culture'

Patricia J. Flanagan.

## DAPI

### Pervasive Civic Computing

Chair(s): Shin'ichi Konomi.

Distributed, Ambient and Pervasive Interactions

### A Human-Probe System that Considers On-body Position of a Mobile Phone with Sensors

Kaori Fujinami, Yuan Xue, Satoshi Murata, Shigeki Hosokawa.

### Blog-based Personal LBS

Hideki Kaji, Masatoshi Arikawa.

### A Precision Navigation System for Public Transit Users

Masaki Ito, Satoru Fukuta, Takao Kawamura, Kazunori Sugahara.

### Rapid Development of Civic Computing Services: Opportunities and Challenges

Shin'ichi Konomi, Kenta Shoji, Wataru Ohno.

### Portable Health Clinic: A Pervasive Way to Serve the Unreached Community for Preventive Healthcare

Ashir Ahmed, Sozo Inoue, Eiko Kai, Naoki Nakashima, Yasunobu Nohara.

### The Effects of Multimodal Mobile Communications on Cooperative Team Interactions Executing Distributed Tasks

Gregory Burnett, Andres Calvo, Victor S. Finomore, Gregory Funke.

## HAS

### Security, Forensic and Legal Aspects of Human-Computer Interaction

Chair(s): Pavel Ocenasek.

Human Aspects of Information Security, Privacy and Trust

### The Practice of Global Internet Filtering

Pavel Ocenasek.

### On the Secure and Safe Data Synchronization

Pavel Ocenasek, Jaromir Karmazin.

### Legal Protection for Personal Information Privacy

Yinan Liu.

### Ethical Issues Surrounding the Asymmetric Nature of Workplace Monitoring

John D Bustard.

### A Reasonable Expectation of Privacy? Secrecy and National Security in a Democracy

Kathleen Hogan.

### The Privacy Paradox Between Users' Attitudes, Stringent Legal Framework and (the Lack of) Adequate Implementation Tools

Shara Monteleone.

WEDNESDAY 10:30 - 12:30

# Parallel Sessions

## HCI

### Human-Computer Interaction

**Information search and retrieval**  
Chair(s): To be announced

**Usability Guidelines for Desktop Search Engines**

Manuel Burghardt,  
Tim Schneidermeier, Christian Wolff.

**Search Strategies in Hypermedia Navigation and Spatial Abilities: A Comparison with Physical Navigation**

Aurelie Brouwers.

**Design of a Visual Query Language for Geographic Information System on a Touch Screen**

Siju Wu, Samir Otmame,  
Guillaume Moreau, Myriam Servières.

**A Study on Document Retrieval System Based on Visualization to Manage OCR Documents**

Kazuki Tamura, Tomohiro Yoshikawa,  
Takeshi Furuhashi.

**Web Searching for Health**

**Information: An Observational Study to Explore Users' Emotions**  
Pallavi Rao Gadahad, Yin-Leng Theng,  
Joanna Sin Sei Ching, Natalie Pang.

**Putting together Computer Science, Ergonomics and Medicine: a multidisciplinary study about e-health interfaces**

Chair(s): Claudia Renata Mont'Alvão.

**Usability of a Social Network as a Collaborative Learning Platform Tool for Medical Students**

Leonardo Frajhof, Ana Cláudia Costa Arantes, Aline Teodosio dos Santos Cardozo, Carlos Jose Pereira de Lucena, Carlos Alberto Pereira de Lucena, Claudia Renata Mont'Alvão.

**Software Engineering in Telehealth, an Extension of Sana Mobile Applied to the Process of a Routine Hospital**

Alfredo V. Carvalho, Carlos Jose Pereira de Lucena, Elder Cirilo, Paulo Henrique Alves, Pedro Augusto Miranda, Gustavo Robichez, Fábio Rodrigo Araújo, Gabriel Lima.

**Experiences with Arthron for Live Surgery Transmission in Brazilian Telemedicine University Network**

Tatiana A Tavares, Gustavo Motta,  
Guido Souza, Erick Melo.

**Usability Testing for e-Health Application: A Case Study for SANA/ Open MRS**

Claudia Renata Mont'Alvão,  
Felipe Pierantoni, Carlos Alberto Pereira de Lucena.

**Telemedicine and Design: Relationships that Create Opportunities**

Carlos Alberto Pereira de Lucena,  
Claudia Renata Mont'Alvão,  
Felipe Pierantoni, Leonardo Frajhof.

**A Mobile Application Flow Representation for Mutual Understanding of IT and Healthcare Professionals**

Yusuf Nasuh Erturan, Semih Bilgen,  
Gul Tokdemir, Nergiz Ercil Cagiltay,  
Ekrem Yildiz, Esra Ozcebe.

**Usability Evaluation on a Voluntary Patient Safety Reporting System: Understanding the Variance Between Predicted and Observed Time Values by Retrospective Think-aloud Protocols**

Lei Hua, Yang Gong.

**New Technology and User Experience for Next Educational Environment**

Chair(s): Takashi Mitsuishi,  
Hitoshi Sasaki, Takahiko Mendori.

**Design and Evaluation of Training System for Numerical Calculation Using Questions in SPI2**

Shin'ichi Tsumori, Kazunori Nishino.

**A Server-based System Supporting Motor Learning through Real-time and Reflective Learning Activities**

Naka Gotoda, Yoshihisa Sakurai,  
Kenji Matsuura, Koji Nakagawa,  
Chikara Miyaji.

**Nature Sound Ensemble Learning in Narrative-Episode Creation with Pictures**

Kosuke Takano, Shiori Sasaki.

**A Proposal of the System Model for Nursing Skill Learning Based on Cognition and Technique**

Yukie Majima, Yasuko Maekawa,  
Masato Soga, Masayuki Sakoda.

**Zoom Interface with Dynamic Thumbnails Providing Learners with Companionship through Videostreaming**

Takumi Yamaguchi, Haruya Shiba,  
Masanobu Yoshida, Yusuke Nishiuchi,  
Hironobu Satoh, Takahiko Mendori.

**Study on Effects of Text Decoration for a Text Based Communication Tool in Education**  
Masateru Hishina, Katsuaki Miike,  
Nobutake Asaba, Satoru Murakami,  
Yuichi Ohkawa, Takashi Mitsuishi.

**Private Cloud Cooperation Framework for Reducing the Earthquake Damage on e-Learning Environment**

Satoshi Togawa, Kazuhide Kanenishi.

**Interacting with the web - I**  
Chair(s): To be announced

**Centrality of Visual Aesthetics in the Online Context: An Assessment and Empirical Evidence**

Supavich Pengnate,  
Rathindra Sarathy, Todd Arnold.

**The Effects of Negative Interaction Feedback in A Web Navigation Assistant**

Marcelo G. Armentano, Analia A. Amandi.

**Investigating the Effects of Font Styles on Perceived Visual Aesthetics of Website Interface Design**

Ahamed Altaboli.

**Automatic Layout Generation for Digital Photo Albums: A User Study**

Francine Bergmann, Isabel Manssour,  
Milene S Silveira, João Oliveira.

**A Web Browsing Method on Handheld Touch Screen Devices for Preventing from Tapping Unintended Links**

Yu Shibuya, Hikaru Kawakatsu,  
Kazuyoshi Murata.

**SWord: A Concept Application for Mitigating Internet Terminology Anxiety**

Santosh Kumar Kalwar,  
Kari Heikkinen, Jari Porras.

**An Ontology-based Interaction Concept for Social-aware Applications**

Alexandra Funke, Sören Brunk,  
Romina Kuehn, Thomas Schlegel.



## HIMI

Human Interface and the Management of Information

**Adaptive and User Guiding Information Service and Interface - II**

Chair(s): Hanmin Jung.

**BARMOTIN A Voice Controlled Mobile Tourism Information Network for Barbados**

David Byer, Colin Depradine.

**Pathway Construction and Extension using Natural Language Processing**

Hong-Woo Chun, Sung-Jae Jung, Mi-Nyeong Hwang, Chang-Hoo Jeong, Sa-Kwang Song, Seungwoo Lee, Sung-Pil Choi, Hanmin Jung.

**On Services and Insights of Technology Intelligence System**

Seungwoo Lee, Minhee Cho, Sa-Kwang Song, Hanmin Jung.

**Power & Energy Management: A User-Centered System-of-Systems Engineering Approach**

Tareq Ahram, Waldemar Karwowski, Ben Amaba, Paul Fechtelkotter.

**Social Experiment on Advisory Recommender System for Energy-Saving**

Hiroki Shigeyoshi, Ken'iti Tamano, Ryosuke Saga, Hiroshi Tsuji, Shuki Inoue, Tsuyoshi Ueno.

**BookAidee: Managing evacuees from natural disaster by RFID tagged library books**

Markus Liuska, Emmi Makkonen, Itiro Sio.

**Developing a real time passenger information system for rural areas**

Konstantinos Papangelis, Somayajulu Sripada, David Corsar, Nagendra Velaga, Peter Edwards, John Nelson.

**HCI Studies in Management Information Systems (I)**

Chair(s): Fiona Fui-Hoon Nah.

**Psychophysiological Assessment Tools for Evaluation of Learning Technologies**

Richard Hall, Nick Lockwood, Hong Sheng.

**Exploring User Feedback of a E-Learning System: A Text Mining Approach**

Wen-Bin Yu, Ronaldo Luna.

**Eyes Don't Lie: Understanding Users' First Impressions on Websites Using Eye Tracking**

Hong Sheng, Nick Lockwood, Sirjana Dahal.

**Cloud Computing and the Internet of Things: Technology Innovation in Automobile Service**

Erwa Qin, Yoanna Long, Chenghong Zhang, Lihua Huang.

**Unified Modeling Language: The Teen Years and Growing Pains**

John Erickson, Keng Siau.

**Gamification of Education Using Computer Games**

Fiona Fui-Hoon Nah, Venkata Rajasekhar Telaprolu, Shashank Rallapalli, Pavani Rallapalli Venkata.

**User-oriented technologies and services**

Chair(s): Hiroyuki Miki.

**Reconsidering the Notion of User Experience for Human-Centered Design**

Hiroyuki Miki.

**Application of the Ethno-Cognitive Interview and Analysis Method for the Smart Communication Design**

Ayako Yajima, Haruo Hira, Toshiki Yamaoka.

**A Study for Personal Use of the Interactive Large Public Display**

Shigeyoshi Iizuka, Wataru Naito, Kentaro Go.

**Qualitative Study for Designing Peripheral Communication between Hospitalized Children and Their Family Members**

Yosuke Kinoue, Chika Ojima, Yuri Sakurai.

**The Urgent Communication System for Deaf and Language Dysfunction People**

Naotsune Hosono, Fumihito Miyajima, Toshiyuki Inaba, Masaru Nishijima, Michio Suzuki, Hiroyuki Miki, Yutaka Tomita.

**A Dialog Based Speech User Interface of a Makeup Support System for Visually Impaired Persons**

Makoto J. Hirayama, Naomi Kuraya, Yushi Komachi.

**Acceptance of Telemedical Treatments – a Medical Professional Point of View**

Martina Ziefle, Lars Klack, Wiktoria Wilkowska, Andreas Holzinger.

## EPCE

continues...

Engineering Psychology and Cognitive Ergonomics

**Cognitive issues in Aviation**

Chair(s): To be announced

**How Can a Future Safety Net Successfully Detect Conflicting ATC Clearances – Yet Remain Inconspicuous to the Tower Runway Controller? First Results from a SESAR Exercise at Hamburg Airport**

Marcus Biella, Karsten Straube, Marcus Helms, Stephen Straub, Benjamin Weiß, Felix Schmitt, Heribert Lafferton, Stéphane Dubuisson, Roger Lane.

**Discriminability of Flight Maneuvers and Risk of False Decisions Derived from Dual Choice Decision Errors in a Videopanorama-based Remote Tower Work Position**

Norbert Fuerstenau, Maik Friedrich, Monika Mittendorf, Markus Schmidt, Michael Rudolph.

**A Fixed-Based Flight Simulator Study: The Interdependence of Flight Control Performance and Gaze Efficiency**

Lewis L Chuang, Frank Nieuwenhuizen, Heinrich Bülthoff.

**Pilot Operating Characteristics Analysis of Long Landing based on Flight QAR Data**

Wang Lei, Wu Changxu, Sun Ruishan.

**A Coherent Assessment of Visual Ergonomics in Flight Deck Impacted by Color and Luminance**

Ye Zhou, Wei Zhang, Baofeng Li, Jinhai Yu, Zhi Ma.

**The Glare Evaluation Method Using Digital Camera for Civil Airplane Flight Deck**

Zhi Ma, Wei Zhang, Ye Zhou, Jinhai Yu, Baofeng Li.

WEDNESDAY 13:30 - 15:30

# Parallel Sessions

## EPCE

### Cognitive aspects of HCI and usability

Chair(s): To be announced

### Cognitive factors in learning

Chair(s): To be announced

### Error Analysis for Tablet User Interface Transfers Based on Operational Knowledge Interference

Kazutoyo Takata, Koji Morikawa, Tsukasa Hirashima.

### Comprehension of Vibrotactile Route Guidance Cues

Andre Garcia, Jesse Eisert, Carryl Baldwin, Victor S. Finomore.

### Data Transmission Latency and Sense of Control

Bruno Berberian, Patrick Le Blaye, Christian Schulte, Nawfel Kinani, Pern Ren SIM.

### Image Quality Assessment using the SSIM and the Just Noticeable Difference Paradigm

Jeremy R Flynn, Steve Ward, Julian Abich IV, David Poole.

### Using Cognitive Work Analysis to Drive Usability Evaluations in Complex Systems

Aren C. Hunter, Tania E Randall.

### Automatic Classification of Eye Blink Types using a Frame-splitting Method

Kiyohiko Abe, Hironobu Sato, Shogo Matsuno, Shoichi Ohi, Minoru Ohyama.

### The Use of Timed Directional Link Analysis to Improve User Interaction During Universal Remote Control Setup Procedures

Robert J Youmans, Bridget Lewis, Ivonne Figueroa, Jesus Perez.

### Impact of Different Course Contents on Working Memory of Elementary School Students

Tai-Yen Hsu, Fang-Ling Lin, Chih-Lin Chang, Hsien-Te Peng.

### The Effects of User Involvement in Online Games, Game-Playing Time and Display Duration on Working Memory

Fang-Ling Lin, Chih-Lin Chang, Tai-Yen Hsu, Tung-Shen Wu.

### The roles of anxiety and motivation in Taiwanese college students' English learning

Yi-an Hou, Yen-ju Hou, Hsueh-yu Cheng.

### Evaluating Two Modes of Observational Learning in Cognitive-Spatial Task Training

Nirit Gavish, Michal Shelef.

### Multitasking: Digital Natives' Interaction with New Media

Tuba Uğraş, Sevinç Gülseçen.

### Taiwanese EFLs' metacognitive awareness of reading strategy and reading comprehension

Yen-ju Hou.

## UAHCI

### LEDA: Ludic Engagement Designs for ALL, ArtAbilitation + GameAbilitation

Chair(s): Anthony L Brooks.

### Human, Computer and Environment - II

Chair(s): Jerzy Charytonowicz.

### Ludic Engagement Designs: Creating Spaces for Playful Learning

Eva Petersson Brooks.

### Approaches to e-Learning

Susanne Akrawi Hartvig, Eva Petersson Brooks.

### Evaluating Therapeutic Engagement and Expressive Communication in Immersive Multimedia Environments

Ceri Williams.

### The Effects of Mirroring in a Playful Virtual Environment: A Comparative Study with Children and Adults Having Impairments

Nanna Borum, Line Gad Christiansen, Henrik Jepsen, Kasper Kristensen, Jacob Lam, David Lindholm, Eva Petersson Brooks, Anthony L Brooks.

### Educational Inclusiveness through Ludic Engagement and Digital Creativity

Rachel McCrindle.

### Human Computer Confluence in Rehabilitation: Digital Media Plasticity and Human Performance Plasticity

Anthony L Brooks.

### Engaging people with intellectual disabilities through games based learning and related technologies

David Brown, Penny Standen, Maria Saridaki, Nick Shopland, Elina Roinioti, Lindsay Evett, Simon Grantham, Pauline Smith.

### The Role of Women and Men in Shaping of Old and Modern Households

Przemyslaw Nowakowski.

### Shaping an Integrating Kitchen Space with Gesture-based Control System

Agata Bonenberg.

### The Impact of Visual Impressions on Human Work Environment – Based on the Example of Industrial Design

Wojciech Bonenberg.

### The Meaning of Human-Computer Interaction in the process of obtaining information about best practice of sustainable in Canada

Anna Bac.

### Heuristic Methods Aiding Ergonomic Design

Marcin Butlewski.

### The Role of Ergonomics in Reducing the Digital Divide Phenomenon in Poland

Marcin Butlewski, Edwin Tytyk.

Universal Access in Human-Computer Interaction

WEDNESDAY 13:30 - 15:30

## VAMR

Virtual, Augmented and Mixed Reality

**3D environments**  
Chair(s): To be announced

**Development of Multiview Image Generation Simulator for Depth Map Quantization**  
Minyoung Kim, Ki-Young Seo, Seokhwan Kim, Kyoung Shin Park, Yongjoo Cho.

**Authoring System using Panoramas of Real World**  
Hee Jae Kim, Jong Weon Lee.

**Legibility of Letters in Reality, 2D and 3D Projection**  
Elisabeth Dittrich, Stefan Brandenburg, Boris Beckmann-Dobrev.

**Parameter Comparison of Assessing Visual Fatigue Induced by Stereoscopic Video Services**  
Kimiko Kawashima, Jun Okamoto, Kazuo Ishikawa, Kazuno Negishi.

**Real-time Stereo Rendering Technique for Virtual Reality System based on the Interactions with Human View and Hand Gestures**  
Viet Tran Hoang, Anh Nguyen Hoang, Dongho Kim.

**The Virtual Dressing Room: A Perspective on Recent Developments**  
Michael B Holte.

## CCD

Cross-Cultural Design

**Social networking and online behavior analysis**  
Chair(s): Xianghong Sun.

**Predicting Mental Health Status on Social Media - A Preliminary Study on Microblog**  
Bibo Hao, Lin Li, Ang Li, Tingshao Zhu.

**What's Your Point? How Chinese and Americans Achieve Their Conversational Aims in Cross-Cultural and Gender Interactions in CMC.**  
Nancy Marksburly, Qiping Zhang.

**Two Sites, Two Voices: Linguistic Differences between Facebook Status Updates and Tweets**  
Han Lin, Lin Qiu.

**An Analysis of Microblogging Behavior on Sina Weibo: Personality, Network Size and Demographics**  
Lingyu Wang, Weina Qu, Xianghong Sun.

**Do we need a new Internet for elderly people? A cross-cultural investigation**  
Maxie Lutze, Stefan Brandenburg.

**A Study of Cross-Culture for a Suitable Information Feeding in Online Social Networks**  
Arunee Ratikan, Mikifumi Shikida.

**Cross-cultural design of IT products and services**  
Chair(s): Tom Plocher, P. L. Patrick Rau.

**A Log Analyzer of Public Transit Guidance Service to Improve a Route Bus Service**  
Genki Kenjo, Masaki Ito, Takao Kawamura, Kazunori Sugahara.

**How to Make Friends in Social network service A Comparison between Chinese and German**  
Zhe Chen, P. L. Patrick Rau, Bertram Frank, Faranda Ignazio, Jay Zhou, Jamali Seyedasjed, Yong Xiang.

**A Human Factors Evaluation of the Spatial Gesture Interface for In-Vehicle Information Systems**  
Yishuo Liu, Zhihao Lu, Pilsung Choe.

**From Global Terminology to Local Terminology: A Review on Cross-Cultural Interface Design Solutions**  
Elke Duncker, Javed A Sheikh, Bob Fields.

**Technology-Based Medical Interpretation for Cross-Language Communication: In Person, Telephone, and Videoconference Interpretation and Their Comparative Impact On Limited English Proficiency (LEP) Patient and Doctor**  
Margaret McLaughlin, Yujung Nam, Win May, Lourdes Baezconde-Garbanati, Panayiotis Georgiou, Zheng Ahn.

**Integration of Characteristics of Culture into Product Design: A Perspective from Symbolic Interactions**  
Yu-Hsiu Hung, Wei-Ting Li, Yi Sheng Goh.

## OCSC

Online Communities and Social Computing

**Social Games and entertainment**  
Chair(s): To be announced

**Communication and Avatar Representation during Role-Playing in Second Life Virtual World**  
Tugba Tokel, Esra Cevizci.

**The Effect of Leaderboard Rankings on Players' Perception of Gaming Fun**  
Charles A Butler.

**Metaheuristic Entry Points for Harnessing Human Computation in Mainstream Games**  
Peter Jamieson, Lindsay D. Grace, Jack Hall, Aditya Wibowo.

**Well-being's Predictive Value: A Gamified Approach to Managing Smart Communities**  
Margeret Hall, Simon Caton, Christof Weinhardt.

# Parallel Sessions

WEDNESDAY 13:30 - 15:30

**AC**

**Human-Systems Integration R&D Agenda 2050**  
Chair(s): Kay Stanney.

**Panel Discussion**

*Augmented Cognition*

**DHM**

**Anthropometric data analysis and application**  
Chair(s): Zhizhong Li, Jianwei Niu.

**Evaluation of Muscle Fatigue Based on Surface Electromyography and Subjective Assessment**  
Qianxiang Zhou, Fang Xie, Zhongqi Liu.

**The control method of Manual-Control Rendezvous and Docking**  
Ting Jiang, Chunhui Wang.

**Higher Order Statistics Analyses based on the Mathematical Model of Surface Electromyography**  
Yan Zhao, Dongxu Li, Jian Zhang.

**Model Reconstruction of Human Buttocks and the Shape Clustering**  
Wang Lijing, Xueli He.

**An Interface Design Method for E-commerce Sites' Homepage considering Users' Emotions**  
Fu Guo, Yaqin Cao, Meng Wang, Yi Ding, Weilin Liu.

**Oxygenation and blood volume in skeletal muscle in response to external force**  
Hao Li, Chunhui Wang, Zheng Wang.

*Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management*

**DUXU**

**Design, Ergonomics, and Usability - II**  
Chair(s): Marcelo Soares, Carla Galvão Spinillo.

**Interaction and materiality - I**  
Chair(s): Teng-Wen Chang.

**Interactive Doodles: a Comparative Analysis of the Usability and Playability of Google Trademark Games between 2010 and 2012**  
Breno Carvalho, Marcelo Soares, Andre Neves, Rodrigo Medeiros.

**Evaluating interaction with websites: case study of a government website of the Brazilian Ministry of Labor and Employment**  
Luis C Paschoarelli, Fabiane Fernandes, José Silva.

**Beyond Comprehension: A Usability Study on User Instruction Manual for Stove with Steam Function**  
Carla Galvão Spinillo, Kelli Smythe.

**Ergonomic Evaluation of Websites Focusing on the Human-Computer Interface so as to Improve Access to the Web Especially by People with Visual Disabilities**  
Andre R Melo, Marcelo Soares, Fabio Campos, Walter Correia.

**Customization of Wheelchairs Seats Through Intervention In Support Materials**  
Elisa Beretta, Fabio Silva, Wilson Kindlein Júnior, Liane Roldo.

**Is Reality Real? Thoughts and Conjectures About Culture, Self, Intersubjectivity and Parallel Worlds in Digital Technologies**  
Ana Carol P. França, Marcelo Soares, Luciano Meira.

**InTouch: Crossing Social Interaction with Perception**  
Rung-Huei Liang, Wei-Ming Chung, Hsin-Liu Kao, Tsen-Ying Lin.

**A Service Design on Driving like Living**  
Hung-Pin Hsu.

**An Empirical Study of the Characteristics of Interactive Projection Systems in Multi-media Exhibits**  
Ting-Han Chen, Shiau-Yuan Du.

**Texture and Relative Movement in Moving Image**  
Yen-Ting Cho.

**dJOE: Design Jigsaw On site a Computational Interface of Displacing Ideas in the Design Productive Process**  
Chia Hui Nico Lo, Ih-Cheng Lai, Teng-Wen Chang.

**Paradoxes In Design - As a Tool for Thought**  
Pei-Ying Lin.

*Design, User Experience, and Usability*



## DUXU

**Explore User Experiences through Object to Space**  
Chair(s): Eui-Chul Jung.

**Gamification @ Work**  
Chair(s): Janaki Kumar.

**eMobility - The customer's perspective**  
Chair(s): Roman Vilimek.

**Hypertext in Mutation: The Mapping of a Mythos**  
Tara Ogaick, WonJoon Chung.

**Context as a System, Product as a Component, and the Relationship as Experience**  
WonJoon Chung, Sara Fortier.

**Musical Experience Development Model Based On Service Design Thinking**  
Sunyoung C Kim, Eui-Chul Jung.

**How To Observe, Share and Apply in Design Process? Focusing on International Design Workshops as a Case Study**  
Nam-Gyu Kang, Hidetsugu Suto.

**Multi-touch based standard UI design of car navigation system for providing information of surrounding areas**  
Jung-Min Choi.

**Studies on the Design Marketing Strategies in the Experiential Economy through the Case Study of 'the Starbucks Company'**  
Yung Joo Jang, Eui-Chul Jung.

**A Study of the Satisfaction Level of User Experience in Digital Media Space Accordance with Differences in Flow Characteristic**  
Youngtae Kim, Eui-Chul Jung.

**Gamification: When it works, when it doesn't**  
Erika Webb.

**Gamification at Work: Designing Engaging Business Software**  
Janaki Kumar.

**Case Study: Identifying Gamification Opportunities in Sales Applications**  
Joelle Carignan, Sally Lawler Kennedy.

**How Gamification and Behavioral Science Can Drive Social Change One Employee at a Time**  
Susan Hunt Stevens.

**Applying Gamification in Customer Service application to Improve Agent's Efficiency and Satisfaction.**  
Prerna Makanawala, Eliad Goldwasser, Jaideep Godara, Hang Le.

**Bridging the Gap Between Consumer and Enterprise Applications through Gamification**  
Tim C Thianthai, Eric Zhou.

**Exploring Electric Driving Pleasure - The BMW EV Pilot Projects**  
Jens Ramsbrock, Roman Vilimek, Julian Weber.

**Analyses of Interactions Between Current EV Drivers and the General Public Helps to Identify Likely New Adaptors (and Non-Adaptors) of EVs.**  
Mark Burgess, Margaret Harris, Naomi King, Sarah Mansbridge.

**Social Media in the Product Development Process of the Automotive Industry: A New Approach**  
Andreas Klein, Götz Spiegel.

**Adaptations in Driving Efficiency with Electric Vehicles**  
Magnus Helmbrecht, Klaus Bengler, Roman Vilimek.

**The Timeframe of Adaptation to Electric Vehicle Range**  
Stefan Pichelmann, Thomas Franke, Josef Krems.

**Mobile App Support For EV Drivers: A Review of Today's Marketplace and Future Directions**  
Tai Stillwater, Justin Woodjack, Michael Nicholas.

**Connecting Electric Vehicles and Green Energy**  
Peter Dempster.

## DAPI

**Aesthetics in Interaction**  
Chair(s): Matthias Rauterberg.

Distributed, Ambient and Pervasive Interactions

**Aesthetics and Design for Group Music Improvisation**  
Mathias Funk, Bart Hengeveld, Joep Frens, Matthias Rauterberg.

**Experience the World with Archetypal Symbols: A New Form of Aesthetics**  
Huang-Ming Chang, Leonid Ivonin, Marta Diaz, Andreu Catala, Wei Chen, Matthias Rauterberg.

**Attractiveness of an Interactive Public Art Installation**  
Jun Hu, Duy Le, Mathias Funk, Feng Wang, Matthias Rauterberg.

**Smart Technology In The Field of Interior Design**  
Ela T. Poursani.

# Parallel Sessions

## HCI

Human-Computer Interaction

<p><b>Games and Usability</b> Chair(s): Ute Klotz.</p>	<p><b>User Experience for Creating Vision</b> Chair(s): Kazuhiko Yamazaki.</p>	<p><b>Designing and Developing for the Smart-Device World</b> Chair(s): Stephen Kimani, Shah Rukh Humayoun.</p>	<p><b>HCI advances in Health Care Systems</b> Chair(s): Joyram Chakraborty.</p>
<p><b>Navigation Experiences - A Case Study of Riders Accessing an Orientation Game via Smartphone</b> Annika Worpenberg, Barbara Grueter.</p> <p><b>A Biofeedback Game for Training Arousal Regulation during a Stressful Task: The Space Investor</b> Olle Hilborn, Henrik Cederholm, Jeanette Eriksson, Craig Lindley.</p> <p><b>Design Guidelines for Audio Games</b> Franco E Garcia, Vânia Paula de Almeida Neris.</p> <p><b>Designing Serious Videogames through Concept Maps</b> Jaime Sanchez, Matias Espinoza.</p> <p><b>Assessing the Impact of Latency and Jitter on the Perceived Quality of Call of Duty Modern Warfare 2</b> Rahul Amin, France L Jackson, Juan Gilbert, James Martin, Terry Shaw.</p> <p><b>The development interactive toy for preschool child by cause and effect relationship</b> Yinghsiu HUANG, Maggie Sheu.</p>	<p><b>Case Study for Experience Vision - Application for PC -</b> Kanakano Ariya.</p> <p><b>Structured Scenario-Based Design Method for Experience Vision</b> Yoshihiro Ueda, Kentaro Go, Katsumi Takahashi, Seiji Hayakawa, Kazuhiko Yamazaki, Koji Yanagida.</p> <p><b>User Research for Experience Vision</b> Seiji Hayakawa, Kazuhiko Yamazaki, Koji Yanagida, Kentaro Go, Katsumi Takahashi, Yoshihiro Ueda.</p> <p><b>Visualization and Evaluation for Experience Vision</b> Katsumi Takahashi, Kazuhiko Yamazaki, Seiji Hayakawa, Koji Yanagida, Kentaro Go, Yoshihiro Ueda.</p> <p><b>Method Format for Experience Vision</b> Koji Yanagida, Yoshihiro Ueda, Kentaro Go, Katsumi Takahashi, Seiji Hayakawa, Kazuhiko Yamazaki.</p> <p><b>Case Study for Experience Vision- Designing Notebook PC</b> Der-Jang Yu, Ming-Chuen Chuang, Steven Tseng.</p> <p><b>Proposal for Experience Vision</b> Kazuhiko Yamazaki, Kentaro Go, Seiji Hayakawa, Yoshihiro Ueda, Koji Yanagida, Katsumi Takahashi.</p> <p><b>USE: User Strategic Experience</b> Kevin Clark.</p>	<p><b>My-World-in-My-Tablet: an Architecture for People with Physical Impairment</b> Mario Caruso, Febo Cincotti, Francesco Leotta, Massimo Mecella, Angela Riccio, Francesca Schettini, Luca Simone, Tiziana Catarci.</p> <p><b>Developing Mobile Apps Using Cross-Platform Frameworks: A Case Study</b> Shah Rukh Humayoun, Stefan Ehrhart, Achim Ebert.</p> <p><b>A Framework for Community-Oriented Mobile Interaction Design in Emerging Regions</b> Monica Sebillio, Genny Tortora, Giuliana Vitiello, Pasquale Di Giovanni, Marco Romano.</p> <p><b>Supportive User Interfaces for MOCOCO (Mobile, Contextualized and Collaborative) Applications</b> Bertrand David, René Chalon, Florent Delomier.</p> <p><b>The Ecological AUI (Auditory User Interface) Design and Evaluation of User Acceptance for Various Tasks on Smartphones</b> Myounghoon Jeon, Ju-Hwan Lee.</p> <p><b>Sensor-based Adaptation of User Interface on Android Phones</b> Tor-Morten Gronli, Gheorghita Ghinea, Jarle Hansen.</p>	<p><b>Designing, Implementing and Testing a Mobile Application to Assist with Pediatric-to-Adult Health Care Transition</b> Jeremy A Dixon, Josh Dehlinger, Shannan Dixon.</p> <p><b>SP-CIP: A Secure and Privacy Aware Patient Centric Information Portal</b> Subrata Acharya.</p> <p><b>Achieving Electronic Health Record Access from the Cloud</b> Brian Coats, Subrata Acharya.</p> <p><b>Cross Cultural Design Considerations in HealthCare</b> Joyram Chakraborty.</p> <p><b>Discussion of Some Challenges Concerning Biomedical Ontologies</b> Osama B. Rabie, Anthony Norcio.</p> <p><b>Healthcare Interoperability: CDA Documents Consolidation Using Transport Record Summary (TRS) Construction</b> Philip DePalo, Kyung Eun Park, Yeong-Tae Song.</p>

WEDNESDAY 16:00 - 18:00



## HIMI

Human Interface and the Management of Information

### HCI Studies in Management Information Systems (II)

Chair(s): Fiona Fui-Hoon Nah.

### Usability of Performance Dashboards, Usefulness of Operational and Tactical Support, and Quality of Strategic Support: A Research Framework

Bih-Ru Lea, Fiona Fui-Hoon Nah.

### Designing Effective User Interfaces for Crowdsourcing: An Exploratory Study

Robbie T Nakatsu, Elissa Grossman.

### Timing and Basis of Online Product Recommendation: The Preference Inconsistency Paradox

Amy Shi, Chuan-Hoo Tan, Choon Ling Sia.

### Are HCI Issues a Big Factor in Supply Chain Mobile Apps?

Barry Flachsbart, Cassandra Elrod, Michael G Hilgers.

### Enhancing Information Systems Users' Knowledge and Skills Transference through Self-regulation Techniques

Brenda Eschenbrenner.

### Development of a System for Communicating Human Factors Readiness

Matthew R. Johnston, Katie Del Giudice, Kelly S. Hale, Brent Winslow.

### Embodied Interaction and Communication

Chair(s): Tomio Watanabe.

### Design of Space for Expression Media with the Use of Fog

Shiroh Itai, Yuji Endo, Yoshiyuki Miwa.

### Bodily Expression Media by Dual Domain Design of Shadow

Naruhiro Hayashi, Yoshiyuki Miwa, Shiroh Itai, Hiroko Nish.

### ARM-COMS: Arm-supported embodied communication monitor system

Teruaki Ito, Tomio Watanabe.

### Evaluation of Superimposed Self-Character Based on the Detection of Talkers' Face Angles in Video Communication

Yutaka Ishii, Tomio Watanabe.

### Effects of a Communication with Make-Believe Play in a Real-Space Sharing Edutainment System

Hiroki Kanegae, Masaru Yamane, Michiya Yamamoto, Tomio Watanabe.

### Consideration of the Effect of Gesture Exaggeration in Web3D Communication using 3D Agent

Toshiya Naka, Toru Ishida.

### Relative Position Calibration between Two Haptic Devices Based on Minimum Variance Estimation

Masanao KOEDA, Yuki KONBU, Hiroshi Noborio.

### The Design, Development, and Application of Simulation Systems to Meet Training Needs

Chair(s): Nickolas Macchiarella.

### Burglary Crime Analysis Using Logistic Regression

Daniel Antolos, Dahai Liu, Andrei Ludu, Dennis A Vincenzi.

### Designing Simulation to Meet UAS Training Needs

Dennis A Vincenzi, Brent Terwilliger, David Ison.

### Developing a High-Fidelity Simulation and Training to Improve Coordination between Aerospace Specializations

Michael B. Hein, Paul Carlson, Paul Craig, Rick Moffett, Glenn Littlepage, Andrea Georgiou.

### Safety Culture: An Examination of the Relationship Between a Safety Management System and Pilot Judgment Using Simulation in Aeronautics

Stuart Campbell.

### Articulating an Experimental Model for the Study of Game-Based Learning

Christina Frederick-Recascino, Dahai Liu, Shawn Doherty, Jason Kring, Devin Liskey.

### Improving User Performance in Conditional Probability Problems with Computer-Generated Diagrams

Vincent J Kellen, Susy Chan, Xiaowen Fang.

## UAHCI

continues...

Universal Access in Human-Computer Interaction

### eInclusion - Policies, Programs, Best Practices ... and Lessons Learnt

Chair(s): Ana Isabel B. B. Paraguay.

### Best Practice for Efficient Development of Inclusive ICT

Till Halbach Rössvoll, Kristin Skeide Fuglerud.

### Good Practice in Developing Interfaces Using Responsive Web Design

Afonso Alban, Ana Carolina Bertoletti De Marchi.

### ICT Accessibility Criteria in Public Procurement in OECD Countries – The Current Situation

Gunela Astbrink, William Tibben.

### Gathering the Users' Needs in the Development of Assistive Technology: a Blind Navigation System Use Case

Hugo Paredes, Hugo Fernandes, Paulo Martins, João Barroso.

### Universal Access to Interaction as Revealed by UAHCI Words

Maria Cecília Calani Baranauskas, Julian Esteban E. Gutierrez Posada.

# Parallel Sessions

## UAHCI

<p><b>Inclusive Technologies</b> Chair(s): Simeon Keates.</p>	<p><b>Creativity, Mobile Multimedia Systems, Human and Social Factors in Software: Communicability Excellence for All</b> Chair(s): Francisco Cipolla-Ficarra.</p>
<p><b>Mobile Technology and E-Inclusion</b> John Isaacs, Santiago Martinez, Ken C Scott-Brown, Allan Milne, Aled Evans, Daniel Gilmour.</p> <p><b>Design Principles of Open Innovation Concept- Universal Design Viewpoint</b> Moyen Mohammad Mustaqim, Tobias Nystrom.</p> <p><b>The Relationship between Touchscreen Sizes of Smartphones and Hand Dimensions</b> Yu-Cheng Lin.</p> <p><b>Photography as a Research Method in Collecting Information from Elderly Respondents in Senior Housing Design</b> David Ming-Da Lee, Robert CC Chen, Tsai-Ju Lee.</p> <p><b>Prototype of a Virtual User Modeling Software Framework for Inclusive Design of Consumer Products and User Interfaces</b> Svetlana Matiouk, Markus Modzelewski, Yehya Mohamad, Michael Lawo, Pierre Kirisci, Patrick Klein, Antoinette Fennell.</p> <p><b>Using Human Factors Standards to Support User Experience and Agile Design</b> Martin C Maguire.</p> <p><b>Designing Sustainable IT System - from the Perspective of Universal Design Principles</b> Moyen Mohammad Mustaqim, Tobias Nystrom.</p>	<p><b>Creativity, Mobile Multimedia Systems, Human and Social Factors in Software: Communicability Excellence for All</b> Francisco Cipolla-Ficarra, Alejandra Quiroga, Valeria M. Ficarra.</p> <p><b>Touching Buildings - A Tangible Interface for Architecture Visualization</b> Andreas Kratky, Tiffany Chen.</p> <p><b>Web Attacks for Local and International Business</b> Francisco Cipolla-Ficarra, Maria Villarreal, Miguel Cipolla-Ficarra.</p> <p><b>User Centered Design and Human Factors for Tablet PC</b> Anneliese Anneliese.Peitz.</p> <p><b>Towards an Information Architecture Model for Robotics 3D Vision</b> Jutta Rudel, Anneliese Anneliese. Peitz.</p> <p><b>An Ontology-based Architecture for Natural Language Access to Relational Databases</b> Lawrence Muchemi Githiari, Fred Popowich.</p> <p><b>Adopting Open Protocols to Increase the Impact on Digital Repositories</b> Marcos Sfair Sunye, Walter Shima, Ligia Setenareski.</p>

## CCD

### Cross-Cultural Design

<p><b>HCI-based welfare system design: Studies from two Asian countries</b> Chair(s): Dyi-Yih Michael Lin, Chikamune Wada.</p>	<p><b>Design and Research in Multinational Companies</b> Chair(s): Paul Fu.</p>
<p><b>Mixed Factorial Analysis of In-Vehicle Information Systems: Age, Driving Behavior, and Task Performance</b> Yung-Ching Liu, Chin-Heng Ho.</p> <p><b>A Study of the Effects of Display Atmospheric and Control Mode of 3D Virtual Store on Consumer Behavior in the Elderly</b> Cheng-Li Liu, Shiaw-Tsyr Uang.</p> <p><b>Design and Assessing the Usability of an Interactive Digital Game in Assisting the Older Adult's Prescriptive Medication Behavior</b> Dyi-Yih Michael Lin, Liang-Chun Wu.</p> <p><b>Improvement Research of Shoe-type Measurement Device for A Walking Rehabilitation Support System</b> Chikamune Wada, Daisuke Takigawa, Futoshi Wada, Kenji Hachisuka, Takafumi Ienaga, Yoshihiko Kimuro.</p> <p><b>A Study of a Human Interface Device Controlled by Formant Frequencies for the Disabled</b> Norihiko Uemi.</p> <p><b>Designing a metal hydride actuator with human-compatible softness and high power-to-weight ratio for future quality-of-life technologies</b> Shuichi Ino, Mitsuru Sato, Minako Hosono, Chikamune Wada, Shinichi Yoshimura, Kazuhiko Yamashita, Takashi Izumi.</p> <p><b>Toward a Virtual Companion for the Elderly: Exploring the Behaviors that Potentially Achieve Rapport in Human Communication</b> Sayumi Shibusawa, Hung-Hsuan Huang, Yugo Hayashi, Kyoji Kawagoe.</p>	<p><b>Cloud Computing Adoption Journey within Organizations</b> Seema Swamy.</p> <p><b>Developing Customer Experience Ecosystem - Driving Business Results by Integrating Multiple Touch Points</b> Frank Guo.</p> <p><b>Behavior Study of Traveling Chinese Businesspersons</b> Yanxia Yang, Grace Deng.</p> <p><b>Implement User-Centered Design in Internationally Distributed Design Teams</b> Paul Fu, Stephanie Chan.</p> <p><b>Social Media's Impact on Teenagers</b> Rahul Vasanth, Seema Swamy.</p>

WEDNESDAY 16:00 - 18:00



**OCSC**

**User behaviour in social communities - II**  
Chair(s): To be announced

**Motivations of Facebook Users for Responding to Posts on a Community Page**  
Fei-Hui Huang.

**What Motivates People Use Social Tagging**  
Ning Sa, Xiaojun Yuan.

**User-centred Investigation of Social Commerce Design**  
Zhao Huang, Morad Benyoucef.

**Supporting Distributed Search in Virtual Worlds**  
Hiep P Luong, Dipesh Gautam, John Gauch, Susan Gauch, Jacob G Hendricks.

**A LivingLab Approach to Involve Elderly in the Design of SmartTV Applications Offering Communication Services**  
Malek Alaoui, Myriam Lewkowicz.

**Building and Sustaining a Lifelong Adult Learning Network.**  
Ken N Eustace.

**The Effects of Navigation Support and Group Structure on Collaborative Online Shopping**  
Yihong Cheng, Yanzhen Yue, Zhenhui (Jack) Jiang, Hyung Jin Kim.

Online Communities and Social Computing

**AC**

**New tools, techniques, and applications**  
Chair(s): Santosh Mathan.

**Soft, Embeddable, Dry EEG Sensors for Real World Applications**  
Gene F Davis, Catherine McConnell, Djordje Popovic, Chris Berka, Stephanie Korszen.

**Novel Tools for Driving Fatigue Prediction: (1) Dry EEG Sensor and (2) Eye Tracker**  
Frederick L. K. Tey, Sheng Tong Lin, Ying Ying Tan, Xiao Ping Li, Andrea Phillipou, Larry Abel.

**Robust Classification in RSVP Keyboard**  
Matthew Higger, Murat Akcakaya, Umut Orhan, Deniz Erdogan.

**A Practical Mobile Dry EEG System for Human Computer Interfaces**  
Yu M Chi, Yijun Wang, Yu-Te Wang, Tzzy-Ping Jung, Trevor Kerth, Yuchen Cao.

**A Novel HCI System based on Real-time fMRI Using Motor Imagery Interaction**  
Xiaofei Li, Lele Xu, Li Yao, Xiaojie Zhao.

**Real-time Vigilance Estimation Using Mobile Wireless Mindo EEG Device with Spring-loaded Sensors**  
Li-Wei Ko, Chun-Hsiang Chuang, Chih-Sheng Huang, Yen-Hsuan Chen, Shao-Wei Lu, Lun-De Liao, Wan-Ting Chang, Chin-Teng Lin.

**Bio-reckoning: Perceptual User Interface Design for Military Training**  
Tami Griffith, Deanna Rumble, Pankaj Mahajan, Cali M. Fidopiastis.

**Removal of Ocular Artifacts from EEG using Learned Templates**  
Max Quinn, Santosh Mathan, Misha Pavel.

Augmented Cognition

**DHM**

**Product Fit**  
Chair(s): Ravindra S. Goonetilleke.

**A Sustainable Human Centered Design Framework Based on Human Factors**  
Onan Demirel, Vincent Duffy.

**The Causal Analysis of Requested Alterations for Pressure Garments**  
Chia-Fen Chi, Chih-Hsiang Lin, Hung-Wei Cheng.

**Extending Global Education through Remote Laboratory Access**  
Uwe Reischl.

**How could this have happened? Unintentional Injuries of Young Children at Home**  
Rani Lueder.

**Setting that Mouse for Tracking Tasks**  
Ransalu Senanayake, Ravindra S. Goonetilleke.

**Application and Future Developments of ema in Digital Production Planning and Ergonomics**  
Benjamin Illmann, Lars Fritzsche, Wolfgang Leidholdt, Sebastian Bauer, Markus Dietrich, Adrian Moreno.

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

**DUXU**

**Interaction and materiality - II**  
Chair(s): Teng-Wen Chang.

**Proactive Home Furnishings: Inspiring From Interactive Art for Designing Functional Aesthetics in a Space**  
Scottie Chih-Chieh Huang.

**The cross-disciplinary education experience of human interface design**  
Chung-Wen Hung, Teng-Wen Chang, Lung-Chu Lu.

**The Interactive Media between Human and the Sacred: An Example for Taiwanese Spiritual Practice**  
Pi-Fen Wang.

**Designing for a Thumb: An Ideal Mobile Touchscreen Interface for Chinese Users**  
Qian Fei.

**Desirability of a Teaching and Learning Tool for Thai Dance Body Motion**  
Worawat Choensawat, Kingarn Sookhanaphibarn, Chommanad Kijkhun, Kozaburo Hachimura.

**LOCATION, LOCATION, LOCATION: ABOUT HOME NETWORKING DEVICES' LOCATIONS & FEATURES**  
Abbas Moallem.

Design, User Experience, and Usability

continues...

WEDNESDAY 16:00 - 18:00

# Parallel Sessions

## DUXU

<p><b>SciFi and HCI: Trends and Issues in Movies and Television</b> Chair(s): Masaaki Kurosu.</p>	<p><b>Product Design</b> Chair(s): To be announced</p>	<p><b>Shopping and Banking</b> Chair(s): To be announced</p>	<p><b>Designing for the web user experience</b> Chair(s): To be announced</p>
<p><b>User-Experience and Science-Fiction in Chinese, Indian, and Japanese Films</b> Aaron Marcus.</p> <p><b>Sci-Fi Movies and the Pessimistic View for the Future Controlled Society of Totalitarianism</b> Masaaki Kurosu.</p> <p><b>Future Fashion - at the Interface</b> Patricia J. Flanagan, Katia Fabiola Canepa Vega.</p> <p><b>Of Hoverboards and Hypertext</b> Daniel Yule, Jamie Blustein.</p>	<p><b>An Experimental Study for Applying Generative Design to Electronic Consumer Products</b> Ming-Huang Lin, Lin_Chien Lee.</p> <p><b>TRIGGER : Maximizing Functional Effect of Using Products</b> Min KyungBo, Eui-Chul Jung.</p> <p><b>A Proposal of Design Method of Obtaining the Construction Items of Mental Models in Product Design</b> Naoya Okazawa, Toshiki Yamaoka.</p> <p><b>Designing a Product Satisfaction Model Using Customer Segmentation and Information Consolidation</b> Meng-Dar Shieh.</p> <p><b>Design of Experience: Measuring the Co-production with the Consumer Engagement during the Product Development Process</b> Sabrina T Oliveira, Virginia Kistmann, Adriano Heemann, Maria Lucia L. R. Okimoto.</p> <p><b>Evaluation of A New Cockpit Color Concept Under Mesopic Lighting for Urban Driving</b> Martin Götze, Antonia S. Conti, Andreas Keinath, Tarek Said, Klaus Bengler.</p>	<p><b>Interactive Shopping Experience through Immersive Store Environments</b> Kunal Mankodiya, Rolando Martins, Jonathan Francis, Elmer Garduno, Rajeev Gandhi, Priya Narasimhan.</p> <p><b>Design Guidelines for Coffee Vending Machines</b> Tim Schneidermeier, Manuel Burghardt, Christian Wolff.</p> <p><b>Designing Ludic Engagement in an interactive Virtual Dressing Room system – A comparative study</b> Yi Gao, Eva Petersson Brooks.</p> <p><b>The Mobile Drive-thru service by a Fast food restaurant App</b> Joongsup Lee.</p> <p><b>A Study on Time Differences Between Actual Advertisement Viewing and Retrospective Perception Using Differing Design Layouts</b> Miao-Hsien Chuang, Chiwu Huang.</p>	<p><b>Re-Thinking Bookmark Management – Less Choice is more Efficient</b> Siu-Tsen Shen, Stephen D Prior.</p> <p><b>Towards Determinants of User-Intuitive Web Interface Signs</b> Muhammad Nazrul Islam.</p> <p><b>Geospatial Web Interfaces, why Are They so «Complicated»?</b> Erick Lopez-Ornelas, Rocio Abascal-Mena, J. Sergio Zepeda-Hernandez.</p> <p><b>Usability of Virtual Worlds</b> Haind Lu, Tobias Brockmann, Stefan Stieglitz.</p> <p><b>Analysis of Query Entries of a Job Search Engine</b> Yeolib Kim.</p> <p><b>Usability design and testing of an interface for search and retrieval of social web data</b> Dimitris Spiliotopoulos, Ruben Boumeester, Georgios Kouroupetroglou, Pepi Stavropoulou, Dimitrios Tsonos.</p>

WEDNESDAY 16:00 - 18:00



## DUXU

### Design, User Experience and Usability in Tourism-related Applications

Chair(s): Lorenzo Cantoni.

### Globalization and Localization of DUXU

Chair(s): Rüdiger Heimgärtner, Emilie Gould.

### Examining User Experience of Cruise Online Search Funnel

Asta Adukaite, Alessandro Inversini, Lorenzo Cantoni.

### Meta-design Approach for Mobile Platforms Supporting Creative Tourism Experiences

Iis P Tussyadiah.

### The Effect of Feedback within Social Media in Tourism Experiences

Jeongmi (Jamie) Kim, Dan Fesenmaier, Steven Johnson.

### The Travel Machine: Mobile UX Design that Combines Information Design with Persuasion Design

Aaron Marcus, Theresa Karolina Schieder, Lorenzo Cantoni.

### Fulfilled and Missed Requirements for Online Reservation Systems: An Empirical Investigation of Austrian and Swiss Hotels

Gerhard F. Knolmayer, Viola Sini, Polina Chelnokova.

### Sharing Life Experiences with Friends Based on Individual's Locality

Mohsin Ali Memon, Jiro Tanaka.

### Lessons Learned During a HCI Design Process in Intercultural Context

Alkesh Solanki, Rüdiger Heimgärtner.

### Lessons from Intercultural Project Management for the Intercultural HCI Design Process

Yvonne G. Schoper, Rüdiger Heimgärtner.

### Arabic Website Design: User Evaluation from a Cultural Perspective

Nouf Khashman, Andrew Large.

### Intercultural Design for Use – Extending Usage-Centered Design by Cultural Aspects

Helmut Windl, Rüdiger Heimgärtner.

### User Experience on Product Detail Display Page at Tmall.com

Jie Gao, Yujing Zeng, Xiaopeng Guo, Zhenghua Zhang.

### Dot, Line, Network: Helping Individuals Make Sense of «New Data»

Emilie Gould.

## DAPI

### Models for Spatial and Embodied Interaction

Chair(s): Rainer Groh, Dietrich Kammer, Jan Wojdziak.

### Understanding the influence of viewpoint and image geometry in linear perspective paintings to enhance embodied interaction

Franziska Hannss, Rainer Groh.

### A User-Centered-Design Perspective on Systems to Support Co-located Design Collaboration

Javier Quevedo-Fernández, Derya Ozelik Buskermolen, Jean-Bernard Martens.

### MTIS: A Multi-Touch Text Input System

Michael Schmidt, Anja Fibich, Gerhard Weber.

### Improving motive-based search: Utilization of vague feelings and ideas in the process of information seeking

Mandy Keck, Martin Herrmann, Andreas Both, Ricardo Gaertner, Rainer Groh.

### Atmospheres and Socio-Spatial Patterns: Designing Hyperspaces for Knowledge Work

Jörg Noennig, Lars Schlenker.

### Parametric Ideation: Interactive Modeling of Cognitive Processes

Jörg Noennig, Sebastian Wiesenhütter.

Distributed, Ambient and Pervasive Interactions

## HAS

### The Soft Foundations of Cybersecurity Science

Chair(s): Theo Tryfonas, Bryan Cline.

### Factors Influencing the Adoption of Encryption to Secure Data in the Cloud

Ken E. Stavinoha.

### Strategic Stakeholder Interaction Analysis of Cloud-based Mobile Applications Use of Privacy-Sensitive End Users

Kalliopi Anastasopoulou, Theo Tryfonas, Spyros Kokolakis.

### Modeling Security Policy and the Effect for End-Users

Kevin Jones, Kizito Salako.

### Constructing Positive Influences for User Security Decisions to Counter Corporate or State Sponsored Computer Espionage Threats

Martyn Styles.

### High-Level Design for a Secure Mobile Device Management System

Keunwoo Rhee, Sun-Ki Eun, Mi-Ri Joo, Jihoon Jeong, Dongho Won.

### Recognition of Human Identity by Detection of User Activity

Giuseppe Scardino, Ignazio Infantino, Filippo Vella.

### A Privacy-level Model of User-Centric Cyber-Physical Systems

Nikolaos E. Petroulakis, Ioannis Askoxylakis, Apostolos Traganitis, George Spanoudakis.

Human Aspects of Information Security, Privacy and Trust



## HCI

Human-Computer Interaction

**Computational Intelligence for Signal and Image Processing -III**  
Chair(s): Ping Guo, Fuqing Duan.

**HCI in aviation**  
Chair(s): To be announced

**Cultural and Sociotechnical perspectives in HCI**  
Chair(s): Jose Abdelnour-Nocera, Rüdiger Heimgärtner.

**Aging Computer Users**  
Chair(s): Christopher M. Schlick, Nicole Jochems.

**Alterations in Resting-state after Motor Imagery Training: A Pilot Investigation with Eigenvector Centrality Mapping**  
Rushao Zhang, Hang Zhang, Lele Xu, Mingqi Hui, Zhiying Long, Yijun Liu, Li Yao.

**Catadioptric camera calibration using RANSAC**  
Rong Liu.

**Camera calibration with 1D objects based on the heteroscedastic error-in-variables model**  
Hui Zhang.

**Momentary Phase of Ongoing EEG Oscillations Reflects the Optimal Brain State for Stimulus Presentation**  
Cai Zhang.

**Kernel Fuzzy Similarity Measure-Based Spectral Clustering for Image Segmentation**  
Yifang Yang, Yuping Wang, Yuming Cheung.

**Semantic Annotation Method of Clothing Image**  
Lu Zhaolao, Mingquan Zhou, Wang Xuesong, Fu Yan, Tan Xiaohui.

**Fast Dynamic Channel Allocation Algorithm for TD-HSPA System**  
Haidong Li, Hailin Liu, Xueyi Liang.

**Human Centered Design Approach to Integrate Touch Screen in Future Aircraft Cockpits**  
Jerome Barbe, Marion Wolff, Regis Mollard.

**AHPM as a Proposal to Improve Interaction with Air Traffic Controllers**  
Leonardo L. B. V. Cruciol, Li Weigang.

**Supervisory Control Interface Design for Unmanned Aerial Vehicles through GEDIS-UAV**  
Salvador D Lorite, Adolfo Muñoz, Josep Tornero, Pedro Ponsa, Enric Pastor.

**Adaptive Consoles for Supervisory Control of Multiple Unmanned Aerial Vehicles**  
Christian Fuchs, Sérgio Ferreira, João Sousa, Gil Gonçalves.

**Target Orientation Effects on Movement Time in Rapid Aiming Tasks**  
Yugang Zhang, Bifeng Song, Wensheng Min.

**Developing a Concept Interface Design of ATM Systems Based on Human-Centred Design Processes**  
Satoru Inoue, Hajime Hirako, Toshiya Sasaki, Hisae Aoyama, Yutaka Fukuda, Kazuhiko Yamazaki.

**Young Egyptians Use of social Networks and the January 2011 Revolution**  
Ghada Refaat El Said.

**Localization Beyond National Characteristics: The Impact of Language on Users' Performance with Different Menu Structures**  
Christian Sturm, Gerhard Strube, Sara Gouda.

**Reconfiguring the Corporate and Commons: Mobile and Online Activism as a Form of Socio-technical Design**  
Constance Kampf.

**The Effects of (Social) Media on Revolutions – Perspectives from Egypt and the Arab Spring**  
Christian Sturm, Hossam Amer.

**Participatory Action Research in Software Development: Indigenous Knowledge Management Systems Case Study**  
Siang-Ting Siew, Alvin W. Yeo, Tariq Zaman.

**A Cross-Cultural Evaluation of HCI Student Performance - Reflections for the Curriculum**  
Jose Abdelnour-Nocera, Ann Austin, Mario Michaelides, Sunila Modi.

**A Framework to Support Social-Collaborative Personalized e-Learning**  
Maria De Marsico, Andrea Sterbini, Marco Temperini.

**Icon Design for Older Users of Project Management Software**  
Christina Bröhl, Jennifer Bützler, Nicole Jochems, Christopher M. Schlick.

**From Living Space to Urban Quarter: Acceptance of ICT Monitoring Solutions in an Ageing Society**  
Simon Himmel, Martina Ziefle, Katrin Arning.

**Ageing and Innovation**  
Matthias Goebel.

**Interaction of the Elderly Viewer with Additional Multimedia Content to Support the Appreciation of Television Programs**  
Kamila Rios Hora Rodrigues, Vânia Paula de Almeida Neris, Cesar Augusto Camillo Teixeira.

THURSDAY 8:00 - 10:00



# Parallel Sessions

## HCI

### Motion, Gesture and Expression recognition - I

Chair(s): To be announced

### A Developer-Oriented Visual Model for Upper-Body Gesture Characterization

Simon Ruffieux, Denis Lalanne, Omar Abou Khaled, Elena Mugellini.

### Context-based Bounding Volume Morphing in Pointing Gesture Application

Andreas Braun, Arthur Fischer, Alexander Marinc, Carsten Stocklów, Martin Majewski.

### Robust Hand Tracking in Realtime Using a Single Head-Mounted RGB Camera

Jan Hendrik Hammer, Jürgen Beyerer.

### Tracking People with Active Cameras

Alparslan O. Yildiz, Noriko Takemura, Yoshio Iwai, Kosuke Sato.

### Audio-based Pre-classification for Semi-automatic Facial Expression Coding

Ronald Böck, Kerstin Limbrecht-Ecklundt, Ingo Siegert, Steffen Walter, Andreas Wendemuth.

### Depth Camera based Real-time Fingertip Detection using Multi-view Projection

Weixin Yang, Zhengyang Zhong, Xin Zhang, Lianwen Jin, Chenlin Xiong, Pengwei Wang.

### Recognition of Multi-Touch Drawn Sketches

Michael Schmidt, Gerhard Weber.

## HIMI

### HCI Studies in Management Information Systems (III)

Chair(s): Scott McCoy.

### Enabling Access to Healthy Food Alternatives for Low-Income Families: The Role of Mobile Technology

Andrea Everard, Brian Jones, Scott McCoy.

### Assessing the Effects of MOBILE OS Design on Single-step Navigation and Task Performance

Brian Jones, Nathan Johnson.

### Understanding the Impact Congruent Images & News Articles Have on Mood and Attitude

Eleanor T. Loiacono, Miaokun Lin.

### Young Adult Health Promotion: Supporting Research Design with Eye-Tracking Methodologies

Soussan Djamasbi, Vance Wilson.

### Search Results Pages and Competition for Attention Theory: An Exploratory Eye-Tracking Study

Soussan Djamasbi, Adrienne Hall-Phillips, Ruijiao (Rachel) Yang.

### The Effects of Website Familiarity on Website Quality and Intention to Use

Scott McCoy, Eleanor T. Loiacono, Gregory D Moody, Cristóbal Fernández Robin.

### Security, But at What Cost? An Examination of Security Notifications within a Mobile Application

Gregory D Moody, Dezhi Wu.

### Relationality Design and Relationality-oriented Systems Design - I

Chair(s): Katsunori Shimohara.

### A Study of the Crossroad Game for Improving the Teamwork of Students

Hidetsugu Suto, Ruediger Oehlmann.

### Persuasive Narrative via Digital Storytelling

Kaoru Sumi, Mizue Nagata.

### Finding a Prototype Form of Sustainable Strategies for the Iterated Prisoners Dilemma

Mieko Tanaka-Yamawaki, Ryota Itoi.

### Estimation of the Facial Impression from Individual Facial Features for Constructing the Makeup Support System

Ayumi Honda, Chika Oshima, Koichi Nakayama.

### Detection of Division of Labor in Multiparty Collaboration

Noriko Suzuki, Tosirou Kamiya, Ichiro Umata, Sadanori Ito, Shoichiro Iwasawa, Mamiko Sakata, Katsunori Shimohara.

### A Model of Living Organisms to Integrate Multiple Relationship Network Descriptions

Tetsuya Maeshiro.

### Interlocked Surfaces: A Dynamic Multi-Device Collaboration System

Hiroyuki Kamo, Jiro Tanaka.

### Tactile and haptic interaction in HCI

Chair(s): Kentaro Kotani, Miwa Nakanishi.

### Evaluation of Somatosensory Evoked Responses when Multiple Tactile Information was Given to the Palm

Akihito Jinnai, Asuka Otsuka, Seiji Nakagawa, Kentaro Kotani, Takafumi Asao, Satoshi Suzuki.

### Tactile Vibration of Personal Digital Assistants for Conveying Feelings

Atsushi Nakamura, Miwa Nakanishi.

### Analysis of spatio-temporal memory on tactile stimuli by using air-jet for development of noncontact tactile display

Kentaro Kotani, Nobuki Kido, Satoshi Suzuki, Takafumi Asao.

### Characteristics of touch panel operation with non-dominant hand in car driving context

Takashi Toriizuka, Yoshinori Horie, Masaya Sugimoto.

### Development of Dual Tactor Capability for a Soldier Multisensory Navigation and Communication System

Linda R. Elliott, Bruce Mortimer, Roger Cholewiak, Greg Mort, Gary Zets, Rodney Pittman.

### Study on Haptic Interaction with Maps

Daiji Kobayashi, Anna Suzuki, Nanami Yoneya.

### Correction Method Based on KI-VPA Model for Changes in Vibratory Perception Caused by Adaptation

Yuki Mori, Takayuki Tanaka, Shun'ichi Kaneko.

Human Interface and the Management of Information

THURSDAY 8:00 - 10:00



THURSDAY 8:00 - 10:00

Engineering Psychology and Cognitive Ergonomics

## EPCE

### HCI Aspects of Optimal Healing Environments

Chair(s): Herbert Plischke, John A. Ives.

### Web-based architecture for at-home health systems

Tiffany Chua, Mark Bachman.

### Using Light Guiding to Structure Everyday Life

Guido Kempter, Walter Ritter, Markus Canazei.

### Novel Chromatic Pupillometer: Portable Pupillometry Diagnostic System

Peyton Paulick, Philipp Novotny, Mark Bachman, Herbert Plischke.

### Creating User-Friendly Healing Environments with Adaptable Lighting for Senior Citizens

Christoph Nedopil, Cornelia S.M. Schaubert, Sebastian Glende.

### CogWatch - Automated Assistance and Rehabilitation of Stroke-induced Action Disorders in the Home Environment

Joachim Hermsdörfer, Marta Bienkiewicz, José M. Cogollor, Martin Russel, Emilie Jean-Baptiste, Manish Parekh, Alan M. Wing, Manuel Ferre, Charmayne ML Hughes.

## UAHCI

Universal Access in Human-Computer Interaction

### Ergonomics in Architecture

Chair(s): Jerzy Charytonowicz.

### Facade Retention Accomplishments in View of Ergonomic Design

Jerzy Charytonowicz, Maciej Skowronski.

### Dwelling Houses of Building Cooperative Schlesische Heimstätte in Wrocław (Former Breslau) and in Silesia in 1919-1941 as A Precursor of Modern Ergonomics in Architecture

Jadwiga Urbanik.

### Spatial Transformations of Architect's Workplace due to Development of Computer Aided Design

Elzbieta Trocka-Leszczynska, Joanna Jablonska.

### Optimum Building Shapes for Energy Saving

Andrzej Skowronski.

### Religious and Cultural Aspects in Shaping the Public Space of Hygiene and Sanitation Activities

Anna Jaglarz.

### Design of Modern Hotels – Humanization of the Residential Environment

Elzbieta Trocka-Leszczynska, Joanna Jablonska.

### Interaction Models and Techniques for Ageing and Impairment - I

Chair(s): Patrick Langdon.

### Effect of Impairment on Upper Limb Performance in an Ageing Sample Population

Newton Howard, Ross Pollock, Joe Prinold, Joydeep Sinha, Di Newham, Jeroen Bergmann.

### Inclusive Design and the Bottom Line: How Can Its Value Be Proven To Decision Makers?

Anna Mieczkowski, Sue Hessey, P. John Clarkson.

### A Conceptual Client-Designer Framework: Inspiring the Development of Inclusive Design Interactive Techniques

Emilene Zitkus, Patrick Langdon, P. John Clarkson.

### Designing ethnographic encounters for enriched HCI

Jo-Anne Bichard, Catherine Greene, Gail Ramster, Tom Staples.

### Designing Intrinsically Motivating User Interfaces for the Ageing Population

Tanya Goldhaber, Patrick Langdon, P. John Clarkson.

### User Target Intention Recognition from Cursor Position using Kalman Filter

Gökçen Aydemir, Patrick Langdon, Simon Godsill.

### Older Adults' Perceptions and Use of Technology: A Novel Approach

Cara Fausset, Linda Harley, Sarah Farmer, Brad Fain.

### Multimodal Interfaces: Designing Across Boundaries - I

Chair(s): Luisa Paraguai, Ana Isabel B. B. Paraguay.

### BioCyberUrban parQ: an ubiquitous and pervasive computing system for environmental integration

Suzete Venturelli, Francisco de P. Barretto, André Bassani De Freitas.

### Multimedia Information Delivery on Mobile Cultural Applications

Heloisa Candello.

### Universal Access: the "Universal" is Not as it Seems

Helia Vannucchi, Alexandre Torrezam.

### Experimental Art with Brain Controlled Interfaces

Tania Fraga, Mauro Pichiliani, Donizetti Louro.

### Dead-Until-Touched: How Digital Icons Can Transform the Way We Interact With Information

Isabel Cristina G. Froes.

### Including Uncertainty Treatment on the Accessibility Assessment of DOSVOX system

Maria Isabel Farias Carneiro, José Eustáquio Rangel de Queiroz, Joseana Macêdo Fachine.

### A Compendium for the Assorted Challenges Encountered in Different Stages of Sign Language Recognition

Ketki Vijay Paranjape, Nilakshi Suhas Naphade, Suparna Chandrashe Chafekar, Ketaki Dhananjay Deshpande, Prasad R Jayashree.

# Parallel Sessions

## VAMR

Virtual, Augmented and Mixed Reality

### Design and development support environments

Chair(s): To be announced

### The Virtual Reality Applied in Construction Machinery Industry

Yun-feng Wu, Ying Zhang, Jun-wu Shen, Tao Peng.

### Enhancing Metric Perception with RGB-D Camera

Daiki Handa, Hirotake Ishii, Hiroshi Shimoda.

### Augmented Reality interactive system to support space planning activities

Guido Re, Giandomenico Caruso, Monica Bordegoni.

### Natural Feature Tracking Augmented Reality for on-site Assembly Assistance Systems

Rafael Radkowski, James Oliver.

### Integrated Platform for an Augmented Environment with Heterogeneous Multimodal Displays

Jaedong Lee, Sangyong Lee, Gerard Jounghyun Kim.

### Ultra Low Cost Eye Gaze Tracking for Virtual Environments

Matthew E Swarts, Jin Noh.

### Health and Rehabilitation Applications

Chair(s): To be announced

### Human-Computer Confluence for Rehabilitation Purposes after Stroke

Rupert Ortner, David Ram, Alexander Kollreider, Harald Pitsch, Joanna Wojtowicz, Guenter Edlinger.

### A low cost virtual reality system for rehabilitation of upper limb

Pawel Budziszewski.

### Theory-Guided Virtual Reality Psychotherapies: Going Beyond CBT-Based Approaches

Sheryl Brahnham.

### Super Pop VR(TM): an Adaptable Virtual Reality Game for Upper-Body Rehabilitation

Sergio García-Vergara, Yu-Ping Chen, Ayanna Howard.

### Projected AR-based Interactive CPR Simulator

Nohyoung Park, Yeram Kwon, Sungwon Lee, Woontack Woo, Jihoon Jeong.

### Development of the Home Arm Movement Stroke Training Environment for Rehabilitation (HAMSTER) and Evaluation by Clinicians

Elizabeth B Brokaw, Bambi Brewer.

## CCD

Cross-Cultural Design

### Culture and user experience

Chair(s): Pilsung Choe.

### Modeling of a Human Decision-making Process with Prospect Theory

Dongmin Shin, Hokyong Ryu, Namhun Kim, Jieun Kim.

### Communication and Social Network Requirements of Chinese Elderly People for Mobile Services

Lu Jia, Pilsung Choe.

### RFID-Based Road Guiding Cane System for the Visually Impaired

Chen Liao, Pilsung Choe, Tianying Wu, Yue Tong, Chenxu Dai, Yishuo Liu.

### Improving the User Interface for Reading News Articles through Smartphones in Persian Language

Sanaz Motamedi, Mehdi Hasheminezhad, Pilsung Choe.

### User Experience with Chinese Handwriting Input on Touch-Screen Mobile Phones

Qin Gao, Bin Zhu, P. L. Patrick Rau, Shilpa Vyas, Cuiling Chen, Hui Li.

### Re-engaging with Cultural Engagement: Innovative Product Design of Cultural Field Experience

Tsen-Yao Chang, Fang-Wu Tung.

## AC

continues...

Augmented Cognition

### Neurophysiological Measures for Assessment in Education and Training

Chair(s): Roy Stripling.

### QEEG Biomarkers: Assessment and Selection of Special Operators, and Improving Individual Performance

Donald R DuRousseau.

### Brain Activity Based Assessment

Roy Stripling, Grace Chang.

### Neurophysiological Predictors of Team Performance

Robin Johnson, Chris Berka, David Waldman, Pierre Balthazard, Pless Nicola, Thomas Maak.

### Quantifying resilience to enhance individualized training

Brent Winslow, Meredith B Carroll, David Jones, Frank Hannigan, Kelly S. Hale, Kay Stanney, Peter Squire.

### How Tasks Help Shape the Neurodynamic Rhythms and Organizations of Teams

Ronald Stevens, Trysha Galloway, Gwendolyn Campbell, Chris Berka, Pierre Balthazard.

### Enhancing HMD-based F-35 Training through Integration of Eye Tracking and Electroencephalography Technology

Meredith B Carroll, Glenn Surpris, Shayna D Strally, Matt Archer, Frank Hannigan, Kelly S. Hale, Wink Bennett.

THURSDAY 8:00 - 10:00



THURSDAY 8:00 - 10:00

## AC

### A Translational Approach to Neurotechnology Development

Chair(s): Kaleb McDowell, Anthony J Ries.

### A Novel Method for Single-trial Classification in the Face of Temporal Variability

Amar R Marathe, Anthony J Ries, Kaleb McDowell.

### Optimal Feature Selection for Artifact Classification in EEG Time Series

Vernon Lawhern, W. David Hairston, Kay Robbins.

### Translation of EEG-based Performance Prediction Models to Rapid Serial Visual Presentation Tasks

Jonathan Touryan, Greg Apker, Scott Kerick, Brent Lance, Anthony J Ries, Kaleb McDowell.

### A Real-World Neuroimaging System to Evaluate Stress

Bret Kelliher, Tracy Jill Doty, W. David Hairston, Jonroy Canady, Keith Whitaker, Chin-Teng Lin, Tzzy-Ping Jung, Kaleb McDowell.

### A Translational Approach to Neurotechnology Development

Kaleb McDowell, Anthony J Ries.

### Combined Linear Regression and Quadratic Classification Approach for an EEG-Based Prediction of Driver Performance

Greg Apker, Brent Lance, Scott Kerick, Kaleb McDowell.

### Integration of Automated Neural Processing into an Army-relevant Multitasking Simulation Environment

Jonathan Touryan, Anthony J Ries, Paul Weber, Laurie Gibson.

## DHM

### Human Factors in Healthcare - I

Chair(s): Vincent Duffy.

### Implementing Scenarios as an Evaluation Method of the Patient-Physician Interaction in Decision Aids

Curtis Lauterbach, Jeremiah Still.

### Using digital interactive television to promote healthcare and wellness inclusive services

André Baptista, Iolanda Figueira Veríssimo, Célia Quico, Mário Cardoso, Manuel José Damásio, Ágata Sequeira.

### Usability Problems in Patient-and Clinician-Oriented Health Information Systems: What are they and How do they differ?

Dinara Saparova, Josipa Basic, Yunhui Lu, Francis Kibaru, Yanfei Ma, Borchuluun Yadamsuren.

### Adaptive User-centered Design for Safety and Comfort of Physical Human Nursing - care Robot Interaction

Minghui Sun, Hiromichi Nakashima, Shinya Hirano, Kazuya Matsuo, Ming Ding, Chang'an Jiang, Toshiharu Mukai.

### Supporting a participant-centric management of obesity via a self-improving health game

Philippe J Giabbanelli, Penny Deck, Lisa Andres, Thecla Schiphorst, Diane Finegood.

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

## DUXU

### Children Interactive Learning Experience

Chair(s): Maysoun F. Abulkhair.

### Gestural Interface Selection: Choosing Specific Gesture Patterns for Children Aged Two to Four Years for iPad Applications

Nor Azah Abdul Aziz.

### A Digital Storytelling Tool for Arab Children

Zahra Al-Musawi, Asmaa Alsumait.

### Interactive System for Solving Children Communication Disorder

Wafaa Shalash, Malak Bas-sam, Ghada Shawely.

### YUSR: Speech Recognition Software for Dyslexics

Mounira Taileb, Reem Al Saggaf, Amal Al Ghamdi, Maha Al Zebaidi, Sultana Al Sahafi.

### Towards an Arabic Language Augmentative and Alternative Communication Application for Autism

Bayan I Al-Arifi, Arwa Al-Rubaian, Gadah Al-Ofisan, Norah Al-Romi, Areej Al-Wabil.

### A Novel Reading Technique Application: Exploring Arabic Children Experience

Maram Alhafzy, Ebtesam Alomari, Hind Mahdy, Maysoun F. Abulkhair.

### Improving Autistic Children's Social Skills using Virtual Reality

Omaima Bamasak, Roa'a Braik, Hadeel Al-Tayari, Shatha Al-Harbi, Ghadeer Al-Semairi, Malak Abu-Hnaidi.

Design, User Experience, and Usability

### User experience in knowledge management

Chair(s): To be announced

### User-Centered Evaluation of a Discovery Layer System with Google Scholar

Tao Zhang.

### Effects of Domain Knowledge on User Performance and Perception in a Knowledge Domain Visualization System

Xiaojun Yuan, Chaomei Chen, Xiangmin Zhang, Josh Avery, Tao Xu.

### Investigating the Effect of Visualization on User Performance of Information Systems

Xiaojun Yuan.

### Designing Discovery Experience for Big Data Interaction: A Case of Web-Based Knowledge Mining and Interactive Visualization Platform

Qing Liu, Mihaela Vorvoreanu, Krishna Madhavan, Ann McKenna.

### Scaffolding Computer Supported Argumentation Processes through Mini Map based Interaction Techniques

Nguyen-Thinh Le, Sabine Niebuhr, David Drexler, Niels Pinkwart.

### ARS Module of Contents Management System using Cell Phones

Toshikazu Iitaka.



# Parallel Sessions

## DUXU

### Architecture and models for user experience design

Chair(s): To be announced

### Understand System's Relative Effectiveness Using Adapted Confusion Matrix

Nan Jiang, Haibin Liu.

### Human in the loop: a model to integrate interaction issues in complex simulations

Stefano Filippi, Daniela Barattin, Francesco Ferrise, Monica Bordegoni, Umberto Cugini.

### Activity-based Context-Aware Model

Yuanyuan Chen, Zhengjie Liu, Juhani Vainio.

### Modelling User Behaviour and Experience – the R2D2 Networks Approach

Amela Karahasanović, Asbjørn Følstad.

### Visualizing Information Associated with Architectural Design Variations and Simulations

David N. Aurelio.

### System for Evaluating Usability and User Experience by Analyzing Repeated Patterns

YOUNGBIN KIM, Shin Jin Kang, Chang Hun Kim.

### Designing iDTV Applications from Participatory Use of Patterns

Samuel B Buchdid, Roberto Pereira, Maria Cecilia C. Baranauskas.

## DAPI

### Interaction in Ambient Intelligence

Chair(s): To be announced

Distributed, Ambient and Pervasive Interactions

### Subtle, Natural and Socially Acceptable Interaction Techniques for Ringertypes Finger-Ring Shaped User Interfaces

Mikko J Rissanen, Samantha Vu, Owen Noel Newto Fernando, Natalie Pang, Schubert Foo.

### Proxemic Interaction Applied to Public Screen in Lab

Huiliang Jin, Tao Xu, Bertrand David, René Chalon.

### How to Click in Mid-Air

Florian Van de Camp, Alexander Schick, Rainer Stiefelhagen.

### A Taxonomy-Based Approach Towards NUI Interaction Design

Florian Klomp maker, Volker Paelke, Holger Fischer.

### Enabling Interactive Surfaces by Using Mobile Device and Conductive Ink Drawing

Chiu Shu-Chuan, Chiang Chen-Wei, Kiyoshi Tomimatsu.

### Comparative Evaluation among Diverse Interaction Techniques in Three Dimensional Environments

Giannis Drossis, Dimitris Grammenos, Maria Bouhli, Ilia Adami, Constantine Stephanidis.

## HAS

### Passwords, Captcha and User Identification

Chair(s): Steven Furnell.

Human Aspects of Information Security, Privacy and Trust

### Multicriteria Optimization to Select Images as Passwords in Recognition Based Graphical Authentication Systems

Soumyadeb Chowdhury, Ron Poet, Lewis Mackenzie.

### Gamified CAPTCHA

Junya Kani, Masakatsu Nishigaki.

### „The Four Most-used passwords are Love, Sex, Secret, and God“: Password Security and Training in Different User Groups

Birgy Lorenz, Kaido Kikkas, Aare Klooster.

### Evaluating the Usability of System-Generated and User-Generated Passwords of Approximately Equal Security

Sourav Bhuyan, Joel Greenstein, Kevin Juang.

### Inconspicuous Personal Computer Protection with Touch-mouse

Ming-Chun Huang, Wenyao Xu, Jason Liu, Yi Su, Lei He, Majid Sarrafzadeh.

### Learning a Policy for Gesture-Based Active Multi-touch Authentication

Raquel Torres Peralta, Antons Rebguns, Ian Fasel, Kobus Barnard.

### Investigating an Intrusion Prevention System For Brain-Computer Interfaces

Saul D Costa, Dale Stevens, Jeremy A Hansen.

THURSDAY 8:00 - 10:00



## HCI

Human-Computer Interaction

<p><b>Capturing the context of use</b> Chair(s): To be announced</p>	<p><b>Gamification: How to motivate your users with game mechanics</b> Chair(s): Erika Webb.</p>	<p><b>Affective Interaction</b> Chair(s): Min Cheol Whang, Chang S. Nam.</p>	<p><b>Gaze-based interaction</b> Chair(s): To be announced</p>
<p><b>Using the Common Industry Format to Document the Context of Use</b> Nigel Bevan.</p> <p><b>Analyzing varying environmental contexts in public transport</b> Stephan Hörold, Cindy Mayas, Heidi Krömker.</p> <p><b>Applying Contextual Design to Multiple Teams in Emergency Management</b> Tania E Randall, Jacqelyn Crebolder, Gerard Torenvliet, Jeremy Leal.</p> <p><b>Principled Ways of Finding, Analysing and Planning for Communicative Overhead in Interaction Technology for Fashion Industry</b> Jason S. Yang, Sean Rintel, Stephen Viller.</p> <p><b>An Exploratory Study to Understand Knowledge-sharing in Data-intensive Science</b> Jongsoo Park, Joe Gabbard.</p> <p><b>Combinatorial Task Planning Using Hierarchical Reinforcement Learning</b> Dan Zong.</p> <p><b>Unifying Conceptual and Spatial Relationships between Objects in HCI</b> David W Blezinger, Ava Fatah gen. Schieck, Christoph Hoelscher.</p>	<p><b>The Motivational GPS: Would a Rat Press a Lever to Get a Badge?</b> Kes Sampanthar.</p> <p><b>Building Internal Enthusiasm for Gamification in Your Organization</b> Erika Webb, Andrea Cantu.</p> <p><b>Best Practices for Using Enterprise Gamification to Engage Employees and Customers</b> Marta Rauch.</p> <p><b>Gamifying Support</b> Chad Sampanes.</p> <p><b>The Business Love Triangle-Smartphones, Gamification, and Social Collaboration</b> Michele Snyder, Lynn Rampoldi-Hnilo.</p>	<p><b>Vision Based Body Dither Measurement for Estimating Human Emotion Parameters</b> Sangin Park, Deajune Ko, Min Cheol Whang, Eui Chul Lee.</p> <p><b>Extreme Motion Based Interaction for Enhancing Mobile Game Experience</b> Youngwon Kim, Jong-gil Ahn, Gerard Jounghyun Kim.</p> <p><b>Emotion Sharing with the Emotional Digital Picture Frame</b> Kyoung Shin Park, Yongjoo Cho, Minyoung Kim, Ki-Young Seo, Dongkeun Kim.</p> <p><b>Brain Function Connectivity Analysis for Recognizing Different Relation of Social Emotion in Virtual Reality</b> Jonghwa Kim, Sangmin Ann, Sangin Park, Dongkeun Kim, Min Cheol Whang.</p> <p><b>Context-Aware Multimodal Sharing of Emotions</b> Maurizio Caon, Leonardo Angelini, Yong Yue, Omar Abou Khaled, Elena Mugellini.</p> <p><b>Affect-based Retrieval of Landscape Images using Probabilistic Affective Model</b> Yunhee Shin, Eun Yi Kim, Tae-Eung Sung.</p>	<p><b>Study on Cursor Shape Suitable for Eye-gaze Input System</b> Atsuo Murata, Raku Uetsugi, Takehito Hayami.</p> <p><b>Proposal of Estimation Method of Stable Fixation Points for Eye-gaze Input Interface</b> Atsuo Murata, Takehito Hayami, Keita Ochi.</p> <p><b>Study on Character Input Methods Using Eye-gaze Input Interface</b> Atsuo Murata, Kazuya Hayashi, Makoto Moriwaka, Takehito Hayami.</p> <p><b>Experimental Study toward Modeling of the Uncanny Valley Based on Eye Movements on Human/Non-Human Faces</b> Yoshimasa Tawatsuji, Kazuaki Kojima, Tatsunori Matsui.</p> <p><b>Head-Free, Remote Gaze Detection System Based on Pupil-Corneal Reflection Method with Using Two Video Cameras - One-Point and Nonlinear Calibrations -</b> Yoshinobu Ebisawa, Kiyotaka Fukumoto.</p> <p><b>Sentimental Eyes!</b> Amitava Das, Björn Gambäck.</p> <p><b>Study of Eye-glance Input Interface</b> Dekun Gao, Naoaki Itakura, Tota Mizuno, Kazuyuki Mito.</p>

THURSDAY 10:30 - 12:30

# Parallel Sessions

## HIMI

Human Interface and the Management of Information

### Relationality Design and Relationality-oriented Systems Design - II

Chair(s): Katsunori Shimohara.

### Modeling a human's learning processes to support continuous learning on human computer interaction

Kouki Takemori, Tomohiro Yamaguchi, Kazuki Sasaji, Keiki Takadama.

### Incentive Structure of Participation in Community Activity

Yurika Shiozu, Katsuhiko Yonezaki, Katsunori Shimohara.

### Factor Models for Promoting Flow by Game Players' Skill Level

Mamiko Sakata, Tsubasa Yamashita, Masashi Okubo.

### Towards Understanding of Relationship among Pareto Optimal Solutions in Multi-Dimensional Space via Interactive System

Keiki Takadama, Yuya Sawadaishi, Tomohiro Harada, Yoshihiro Ichikawa, Keiji Sato, Kiyohiko Hattori, Hiroyoki Sato, Tomohiro Yamaguchi.

### Digital War Room for Design Requirements for Collocated Group Work Spaces

Mika P. Nieminen, Mari Tyllinen, Mikael Runonen.

### CoPI: A Web-based Collaborative Planning Interface Platform

Mohammad K Hadhrawi, Mariam Nouh, Anas Alfaris, Abel Sanchez.

### Freiform: a SmartPen based Approach for creating Interactive Paper Prototypes for collecting data

Marcel Klomann, Jan-Torsten Milde.

### Improvement in Learning and Educational Environments using ICT

Chair(s): Takahito Tomoto, Takako Akakura.

### Learning by Problem-Posing with Online Connected Media Tablets

Sho Yamamoto, Takehiro Kanbe, Yuta Yoshida, Kazushige Maeda, Tsukasa Hirashima.

### Instantaneous Assessment of Learners' Comprehension for Lecture by using Kit-Build Concept Map System

Kan Yoshida, Takuya Osada, Kota Sugihara, Yoshiaki Nino, Masakuni Shida, Tsukasa Hirashima.

### Video Feedback System for Teaching Improvement Using Students' Sequential and Overall Teaching Evaluations

Yusuke Kometani, Takahito Tomoto, Takehiro Furuta, Takako Akakura.

### Development of a Computer Programming Learning Support System Based on Reading Computer program

Haruki Kanamori, Takahito Tomoto, Takako Akakura.

### Development and Evaluation of a Mobile Search System for Science Experiments to Connect School Knowledge to Common Knowledge

Takahito Tomoto, Tomoya Horiguchi, Tsukasa Hirashima.

### An Experimental Environment for Analyzing Collaborative Learning Interaction

Yuki Hayashi, Yuji Ogawa, Yukiko Nakano.

### Human Factors in Collaborative Safe Driving

Chair(s): Makoto Itoh.

### Comparison of Cognitively Impaired, Healthy Non-Professional and Healthy Professional Driver Behavior on a Small and Low-Fidelity Driving Simulator

Makoto Itoh, Masashi Kawase, Keita Matsuzaki, Katsumi Yamamoto, Shin'ichi Yokoyama, Masaaki Okada.

### Human Behavior of Prioritizing Right-Turning Vehicles and Traffic Flow at Intersections

Hironori Suzuki, Yoshitaka Marumo, Tsuyoshi Katayama, Yuuki Yazawa.

### Approach to Haptic Guidance Control in Steering Operation based on Cooperative States between Driver and Control System

Takahiro Wada, Ryota Nishimura, Seiji Sugiyama.

### Influence of Deceleration Intention Indicating System of Forward Vehicle on Driver Behavior

Yuichi Saito, Shin Kato, Makoto Itoh, Toshiyuki Inagaki.

### Autonomous Locomotion Based on Interpersonal Contexts of Pedestrian Areas for Intelligent Powered Wheelchair

Takuma ITO, Minoru Kamata.

### Proposal of Non-dimensional Parameter Indices to Evaluate Safe Driving Behavior

Toshihiro Hiraoka, Shota Takada, Hiroshi Kawakami.

### Acceptable System Error of Collision Avoidance System Based on the Integrated Error of Driver and System

Keisuke Suzuki, Makoto Mochizuki.

## EPCE

Engineering Psychology and Cognitive Ergonomics

### Cognitive Aspects in complex visual environments

Chair(s): To be announced

### Towards a Model for Predicting Intention in 3D Moving-Target Selection Tasks

Juan Sebastián Casallas, James Oliver, Jonathan Kelly, Frédéric Merienne, Samir Garbaya.

### Symbology development for a 3D conformal synthetic vision helmet-mounted display for helicopter operations in degraded visual environment

Patrizia Knabl, Helmut Többen.

### Visuospatial Processing and Learning Effects in Virtual Reality Based Mental Rotation and Navigational Tasks

Thomas D. Parsons, Christopher G. Courtney, Michael Dawson, Albert "Skip" Rizzo, Brian J. Arizmendi.

### Design and Implementation of a Cognitive Simulation Model for Robotic Assembly Cells

Marco Faber, Sinem Kuz, Marcel Ph. Mayer, Christopher M. Schlick.

### The Role of Specular Reflection in the Perception of Transparent Surfaces - The Influence on User Safety

Marcin M Brzezicki.

### Effects of Object Category and Graphic Representations on Recognition Accuracy

Chun-Cheng Hsu, Regina W.Y. Wang.

### The Research of Collision Detection Perception in 3D Scenarios

Yiyuan Zheng.

THURSDAY 10:30 - 12:30



## UAHCI

Universal Access in Human-Computer Interaction

### Universal Access: Interaction Science - I

Chair(s): Gisela Susanne Bahr.

### Interaction Science and the Aging User: Techniques to Assist in Design and Evaluation

Sandy Marshall.

### Tilt-based Support for Multimodal Text Entry on Touchscreen Smartphones: Using Pitch and Roll

Sandi Ljubic, Mihael Kukec, Vlado Glavinic.

### An Approach to Universal Interaction on the Case of Knowledge Transfer

Saša Mladenović, Andrina Granić, Goran Zaharija.

### Rational Interfaces for Effective Security Software: Polite Interaction Guidelines for Secondary Tasks

Gisela Susanne Bahr, William Allen III.

### Musically Inspired Computer Interfaces: Reaction Time and Memory Enhancements in Visuo-Spatial Timelines (ViST) for Graphic User Interfaces

Gisela Susanne Bahr, Melissa Walwanis, Beth Atkinson.

### Universal Access: a Concept to be Adapted to Technological Development and Societal Change

Laura Burzagli, Pier Luigi Emiliani.

### Build up virtual environments using gestures

Alexander Marinc, Carsten Stockl ow, Andreas Braun.

### Interaction Models and Techniques for Ageing and Impairment - II

Chair(s): Patrick Langdon.

### Improvements in Interface Design through Implicit Modeling

Patrick K. A. Wollner, Ian Hosking, Patrick Langdon, P. John Clarkson.

### Volunteer Website for the Older Adult

Melissa L McDonald.

### Elderly's Barriers and Requirements for Interactive TV

Mai Baunstrup, Lars Bo Larsen.

### Exploring prior experience and the effects of age on product interaction and learning

Christopher R Wilkinson, Patrick Langdon, P. John Clarkson.

### A Survey on Technology Exposure and Range of Abilities of Elderly And Disabled Users In India

Pradipta Biswas, Patrick Langdon.

### Age-Related Differences in Factors Contributing to Affective Experiences among Japanese Adults

Qin Tang, Wendy Rogers, Hiroyuki Umemuro.

### Multimodal Interfaces: Designing Across Boundaries - II

Chair(s): Ana Isabel B. B. Paraguay, Luisa Paraguai.

### Odours and spatialities: designing sensory experiences

Luisa Paraguai.

### Beyond Rationality: Affect as a Function of User Interfaces

Bernardo Santos Schorr, Rejane Spitz.

### Designing Wearable Bio-interfaces: a Transdisciplinary Articulation between Design and Neuroscience

Rachel Zuanon.

### To Embody the N-Body: Spatial Perception Utilized in Large-Scale Visualizations

Julieta C Aguilera-Rodr guez.

### «Multicultural/Cross-Cultural Emotional Design»: The usage of Pictographs to Design Emotional Interactive Environments.

Haytham Nawar, Hala A. Gabr.

### Using Pupil Size Variation during Visual Emotional Stimulation in Measuring Affective States of Non-Communicative Individuals

Dania Al-Omar, Areej Al-Wabil, Manar Hosny Fawsi.

### Multimodal Synthesizer for Russian and Czech Sign Languages and Audio-Visual Speech

Alexey A. Karpov, Zdenek Krnoul, Milos Zelezny, Andrey Ronzhin.

## VAMR

Virtual, Augmented and Mixed Reality

### Social and Visual Technologies: New Trends in the Improvement of University Education

Chair(s): David Fonseca.

### Teaching 3D arts Using Game Engines for Engineering and Architecture

Jaume Duran, Sergi Villagrasa.

### A Mobile Personal Learning Environment Approach

Francisco Jos e Garc a-Pe alvo, Miguel  ngel Conde, Alberto Del Pozo.

### Real-time Dynamic Lighting Control of an AR Model Based on a Data-Glove with Accelerometers and NI-DAQ

Isidro Navarro, Alex Rodiera.

### Geo-Elearning. Geolocated Teaching in Urban Environments through Mobile Devices. A Case Study and Work in Process.

Ernesto Redondo, Albert Sanchez, David Fonseca, Alberto Peredo.

### DCS 3D operators in industrial environments - New HCI Paradigm for the Industry

Manuel P rez-Cota, Miguel Ram n Gonz lez-Castro.

### The building as the interface. Architectural design for education in virtual worlds.

Luis A Hernandez Iba ez, Viviana Barneche Naya.



# Parallel Sessions

## CCD

Cross-Cultural Design

### Design for Feeling

Chair(s): Rungtai Lin, John Kreifeldt.

### Designing "Hometown Feeling" into Products

Chiu-Wei Chien, Si-Jing Chen, Jun-Liang Chen.

### Analysis of Cognition Difference of Visual and Imagine Haptic Inputs on Product Texture

Hui-Yun Yen, Christopher LIN, Rungtai Lin.

### The Influence of the Nature of Need for Touch, Handcraft Material and Material Color on the Motivation of Touch

Si-Jing Chen, Chih-Long Lin, Chiu-Wei Chien.

### Affective Fusion of PAD-based Tactile Sense: A Case Study of Teacups

Jui-Ping Ma, Mei-Ting Lin, Rungtai Lin.

### An Exploration on Tactile Styles of Products

Yung Ting Chen, Ming-Chuen Chuang.

### The Cognitive Difference of Visual and Imaged Tactile Sense of Product Forms

Mei-Ting Lin, Jui-Ping Ma, Chih-Long Lin.

### Some Thoughts on Haptic Aesthetics for Design Transmodal Aesthetics

John Kreifeldt.

### Cultural Differences in Human Computer Interaction

Chair(s): Rüdiger Heimgärtner, Na Chen.

### Influence of Organizational Culture and Communication on the Successful Implementation of Information Technology in Hospitals

Shuyan Xie, Markus Helfert, Artur Lugmayr, Rüdiger Heimgärtner, Andreas Holzinger.

### The Acceptance and Adoption of Smartphone Use among Chinese College Students

Dan Pan, Na Chen, P. L. Patrick Rau.

### Comparison of Trust on Group Buying Websites between American and Chinese Young Adults

Na Chen, P. L. Patrick Rau, Dominik Kolz.

### A Cross-Cultural Study of User Experience of Video on Demand on Mobile Devices

Na Sun, Dominik Frey, Robert Jin, Hui Huang, Zhe Chen, P. L. Patrick Rau.

### Lessons Learned from Projects in Japan and Korea Relevant for Intercultural HCI Development

Martin Blankl, Peter Biersack, Rüdiger Heimgärtner.

### A Cross-Cultural Comparison of UI Components Preference between Chinese and Czech users

Jan Brejcha, Gong Hong Yin, Han Li, Zhengjie Liu.

### Characteristics of UI English: From Non-native's Viewpoint

Ryutaro Nishino, Kayoko Nohara.

## OCSC

Online Communities and Social Computing

### User eXperience+: Shared Experience Design for Online Communities and Social Computing

Chair(s): Habib M. Fardoun, Niki Lambropoulos.

### Experiences by using AFFINE for Building Collaborative Applications for Online Communities

Mohamed Bourimi, Dogan Kesdogan.

### Improvement of Students Curricula in Educational Environments by means of Online Communities and Social Networks

Habib M. Fardoun, Antonio Paules Ciprés, Abdulrahman H. Altalhi.

### Being Example: A Different Kind Of Leadership, Looking For Exemplary Behaviors

Sebastián Romero López, Habib M. Fardoun, Abdulfattah S. Mashat.

### Using Facebook for Collaborative Academic Activities in Education

Habib M. Fardoun, Bassam Zafar, Antonio Paules Ciprés.

### Context Management for RFID-based Distributed Interaction Spaces

Jose Antonio Gallud, Ricardo Tesoriero, Pedro G. Villanueva, Félix Albertos, Antonio Hernández, Víctor M. R. Penichet.

### Towards Visual Configuration Support For Interdependent Security Goals

Fatih Karatas, Mohamed Bourimi, Dogan Kesdogan.

### Composites Ideas in COMPOOL Immersion: A Semantics Engineering Innovation Network Community Platform

Niki Lambropoulos, Panayota Tsotra, Ilias Kotinas, Iosif Mporas.

## AC

Augmented Cognition

### Augmenting Human Capabilities on Training Ranges: Towards the Smart Instrumented Training Ranges of the Future

Chair(s): Amela Sadagic.

### Real-time Workload Assessment as a Foundation for Human Performance Augmentation

Kevin T Durkee, Alexandra Geyer, Scott Pappada, Andres Ortiz, Scott Galster.

### Automated Camera Selection and Control for Better Training Support

Adrian D Ilie, Gregory Welch.

### Visual Analysis and Filtering to Augment Cognition

Mathias Kölsch, Juan Wachs, Amela Sadagic.

### A Hierarchical Behavior Analysis Approach for Automated Trainee Performance Evaluation in Training Ranges

Saad Khan, Hui Cheng, Rakesh (Teddy) Kumar.

### Next Generation of Physical Training Environments: Bringing in Sensor Systems and Virtual Reality Technologies

Amela Sadagic.

THURSDAY 10:30 - 12:30



## DHM

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

### Human Factors in Healthcare - II

Chair(s): Vincent Duffy.

### Human Models for a comprehensive analysis of mobile Human-Computer-Interaction

Chair(s): Thomas Alexander.

### Explicit Tracking in the diagnostic process for hand dermatological practices

Luca Mazzola, Sara Marceglio, Stefano Bonacina, Francesco Pinciroli, Fabio Ayala, Ornella De Pita, Paolo Pigatto.

### A Comparative Analysis of the Educational Effectiveness of Leaflet and Website for Low-literate Patients – A Case Study of Immigrant Mothers in Taipei

Yah-Ling Hung, Kai-Ren Chen, Catherine Stones, Tom Cassidy.

### Ontology Based System Architecture to Predict the Risk of Hypertension in Related Diseases

Puliprathu Cherian Sherimon, P.V. Vinu, Reshmy Krishnan, Youseff Takroni.

### Facilitators' Intervention Variance and Outcome Influence When Using Video Games with Fibromyalgia Patients

Anthony L Brooks, Eva Petersson Brooks.

### Plantar Pressure Gradient Angles to Evaluate Risk of Diabetic Foot Ulcer

Chi-Wen Lung, Ben-Yi Liao, Yih-Kuen Jan.

### Automatic 3D reconstruction of transfemoral residual limb from MRI images

Giorgio Colombo, Giancarlo Facoetti, Caterina Rizzi, Andrea Vitali, Alessandro Zanello.

### Using Anthropomorphism to Improve the Human-Machine Interaction in Industrial Environments (Part I)

Sinem Kuz, Marcel Ph. Mayer, Simon Müller, Christopher M. Schlick.

### Using Anthropomorphism to Improve the Human-Machine Interaction in Industrial Environments (Part 2)

Marcel Ph. Mayer, Sinem Kuz, Christopher M. Schlick.

### Considering Ergonomic Aspects of Head-Mounted Displays for Applications in Industrial Manufacturing

Sabine Theis, Thomas Alexander, Marcel Ph. Mayer, Matthias Wille.

### Towards Anthropomorphic Movements for Industrial Robots

Christian Brecher, Simon Müller, Sinem Kuz, Wolfram Lohse.

### The Effects of Touch Screen Virtual Keyboard Key Sizes on Typing Performance, Typing Biomechanics and Muscle Activity

Jeong Ho Kim, Lovenoor Aulck, Ornwipa Thamsuwam, Michael Bartha, Christy Harper, Peter Johnson.

### Usability of Portable Fire Extinguisher: Perspectives of Ergonomics and Intuitive Use

Maria Lucia L. R. Okimoto, Maicon B. Puppi, Sabrina T Oliveira, Vanessa D de Macedo.

## DUXU

Design, User Experience, and Usability

### Designing Experiences for Facilitating Positive Behavior Change (I)

Chair(s): Marc Fabri, Marientina Gotsis.

### Design, Ergonomics, and Usability - III

Chair(s): Marcelo Soares.

### Changing Eating Behaviours through a Cooking-Based Website for the Whole Family

Marc Fabri, Andrew Wall, Pip Trevorrow.

### Game-based Interactive Media in Behavioral Medicine: Creating Serious Affective-Cognitive-Environmental-Social Integration Experiences

Alasdair G Thin, Marientina Gotsis.

### Well-being on the Go: an IoT Vending Machine Service for the Promotion of Healthy Behaviors and Lifestyles

Sauro Vicini, Sara Bellini, Alice Rosi, Alberto Sanna.

### Engineering AwarenessTM: An e-Service Design Approach for Behavioral Change in Healthcare and Well-being

Alberto Sanna, Sauro Vicini, Sara Bellini, Ilaria Baroni, Alice Rosi.

### Designing Supportive Mobile Technology for Stable Diabetes

Katherine Blondon, Predrag Klasnja.

### An Applied Ergonomics Study on IT User Interaction in A Large Hydroelectric Company in The Northeast of Brazil

Marcelo Soares, Fabio Campos, Walter Correia, Andre Neves, Joao Corte, Saul Mendonca.

### Legibility in Children's Reading: The Methodological Development of an Experiment for Reading Printed and Digital Texts

Daniel Lourenço, Solange Coutinho.

### Virtual Reality Applied to the Study of the Interaction between the User and the Built Space: A Literature Review

Alexana Vilar Soares Calado, Marcelo Soares, Fabio Campos, Walter Correia.

### Virtual Reality Immersion: An important tool for Diagnostic Analysis and Rehabilitation of People with Disabilities

Helda Barros, Marcelo Soares, Epiácio L. Rolim Filho, Walter Correia, Fabio Campos.

### PALMA: usability testing of an application for adult literacy in Brazil

Francimar FRM Maciel.

### A Color Model in the Usability of Computer Interface Applied to Users with Low Vision

Cinthia C. Kulpa, Fábio Teixeira, Régio Da Silva.

# Parallel Sessions

## DUXU

<p><b>Disaster Information and management</b> Chair(s): Maysoon F. Abulkhair.</p>	<p><b>Exploring the Turkish UX Design and Research Landscape</b> Chair(s): Kerem Rızvanoğlu.</p>	<p><b>Usability in the Real World: Everyday Experiences</b> Chair(s): Arne Berger, Tim Schneidermeier.</p>
<p><b>Safety of Natural Disasters</b> Lamiaa Fattouh Ibrahim, Reem Albatati, Samah Batweel, Rudainah Shilli, Mai Bakeer, Tsneem Abo al Iaban.</p> <p><b>Heuristic Evaluation of iCalamityGuide Application</b> Aaron Marcus, Scott Abromowitz, Maysoon F. Abulkhair.</p> <p><b>Efficient Information Representation Method for Driver-centered AR-HUD system</b> Hye Sun Park, Kyong-Ho Kim.</p> <p><b>Join the Ride! User Requirements and Interface Design Guidelines for a Commuter Carpooling Platform</b> Katrín Arning, Martina Ziefle, Heike Muehlhans.</p> <p><b>Feed-in Tariff Personal Carbon Allowance: A Case Study of Psychological Change</b> Takayoshi Kitamura, Asao Takamatsu, Hirotake Ishii, Hiroshi Shimoda.</p>	<p><b>Effects of In-car Navigation Systems on User Perception of Spatial Environment</b> Mehmet Göktürk, Ali Pakkan.</p> <p><b>User Experience Transformation in Telco Companies: Turkcell Case</b> Cem Sakarya, Seda Alpkaya.</p> <p><b>Developing ISO9241-151 Product Certification Process: Challenges</b> Kürşat Çağiltay, Ozge Alacam, Nihan Ocak, Feride Erdal.</p> <p><b>A New Framework for Increasing User Engagement in Mobile Applications Using Machine Learning Techniques</b> Merve Gençer, Gökhan Bilgin, Özgür Zan, Tansel Voyvodaoglu.</p> <p><b>M-Commerce Usability: An Explorative study on Turkish Private Shopping Apps and Mobile sites</b> Özgürol Öztürk, Kerem Rızvanoğlu.</p> <p><b>Selection and Implementation of Navigation and Information Search Strategies in Bank Web Sites: Turkish Case</b> Kerem Rızvanoğlu, Özgürol Öztürk.</p> <p><b>A Method for Teaching Affordance for User Experience Design in Interactive Media Design Education</b> Evren Yantaç.</p>	<p><b>Human-Centered Communication Planning: A Conceptual Approach</b> Tim Schneidermeier, Florian Maier, Johannes Schrickler.</p> <p><b>Usagame – A New Methodology to Support User Centered Design of Touchscreen Applications</b> Pedro Vinagre, Isabel L. Nunes.</p> <p><b>Towards a Holistic Tool for the Selection and Validation of Usability Method Sets Supporting Human-Centred Design</b> Holger Fischer, Benjamin Strenge, Karsten Nebe.</p> <p><b>Remote usability evaluation using eye tracking enhanced with intelligent data analysis</b> Piotr Chynał, Janusz Sobocki, Jerzy Szymański.</p> <p><b>Development of a General Internet Attitude Scale</b> Mary C. Joyce, Jurek Kirakowski.</p> <p><b>Shifting the Focus: An Objective Look at Design Fixation</b> Melissa A. Smith, Robert J Youmans, Brooke G. Bellows, Matthew S. Peterson.</p> <p><b>What's Important in Designing for Everyday Life, Seriously? (Discovering Service Opportunities Based On Fundamental User Values)</b> Joonhwan Kim.</p>

# Parallel Sessions

## HCI

Human-Computer Interaction

<p><b>Multimodal and Multicultural Communicative Agents (MMMCA)</b> Chair(s): Kristiina Jokinen, David Novick, David Traum.</p>	<p><b>Socio-cultural Aspects in Monolingual and Multilingual Human-Computer Interaction</b> Chair(s): Christina Alexandris.</p>	<p><b>TLC: Technology for Living and Caring</b> Chair(s): Mark Bachman, Tsai-Hsuan Tsai.</p>	<p><b>Kawaii, Kansei and affective value creation</b> Chair(s): Michiko Ohkura.</p>
<p><b>Linguistic Processing of Implied Information and Connotative Features in Multilingual HCI Applications</b> Christina Alexandris, Ioanna Malagardi.</p> <p><b>From Multicultural Agents to Culture-aware Robots</b> Matthias Rehm.</p> <p><b>Grounding and Turn-Taking in Multiparty Multimodal Conversation</b> David Novick, Ivan Gris.</p> <p><b>A Cross-cultural study of playing simple economic games online with humans and virtual humans</b> Elnaz Nouri, David Traum.</p> <p><b>Modeling Situation-Dependent Nonverbal Expressions for a Pair of Embodied Agent in a Dialogue Based On Conversations in TV Programs</b> Keita Okuuchi, Koh Kakusho, Takatsugu Kojima, Daisuke Katagami.</p> <p><b>STRANGERS AND FRIENDS Adapting the Conversational Style of an Artificial Agent</b> Nikita Mattar, Ipke Wachsmuth.</p> <p><b>Perception and BDI Reasoning Based Agent Model for Human Behavior Simulation in Complex System</b> Jaekoo Joo.</p>	<p><b>The Impact of Explanation Dialogues on Human-Computer Trust</b> Florian Nothdurft, Tobias Heinroth, Wolfgang Minker.</p> <p><b>Multimodal Feedback in First Encounter Interactions</b> Kristiina Jokinen.</p> <p><b>Controlling Interaction in Multilingual Conversation</b> Christina Alexandris.</p> <p><b>Socio-Cultural Rhythms of the Human Interface</b> Satinder Gill.</p> <p><b>Robust Multi-Modal Speech Recognition in Two Languages Utilizing Video and Distance Information from the Kinect</b> Georgios Galatas, Gerasimos Potamianos, Filia Makedon.</p>	<p><b>Human Adequate Lighting in Optimal Healing Environments - Measuring Non-Visual Light Effects of a LED Light Source According to German Draft Pre-Standard DIN SPEC 5031-100:2012</b> Herbert Plischke, Christoph Schierz, Peyton Paulick, Niko Kohls.</p> <p><b>The Solid Angle of Light Sources and Its Impact on the Suppression of Melatonin in Humans</b> Philipp Novotny, Peyton Paulick, Markus Schwarz, Herbert Plischke.</p> <p><b>Development of a Virtual Keyboard System using a Bio-signal Interface and Preliminary Usability Test</b> Kwang-Ok An, Da-Hey Kim, JongBae Kim.</p> <p><b>Engagingdesign - Methods for Collective Creativity</b> Paul Chamberlain, Claire Craig.</p> <p><b>A Dynamic Fitting Room Based on Microsoft Kinect and Augmented Reality Technologies</b> Hsien-Tsung Chang, Yu-Wen Li, Huan-Ting Chen, Tsung-Tien Chien, Shih-Yi Feng.</p> <p><b>Memotree: Using Online Social Networking to Strengthen Family Communication</b> Tsai-Hsuan Tsai, Yi-Lun Ho, Hsien-Tsung Chang, Yu-Wen Li.</p> <p><b>Digital Menu Boards as Influencer for Healthy Eating</b> Anicia Peters, Brian Mennecke.</p>	<p><b>A Study on Combinative Value Creation in Songs Selection</b> Hiroko Shoji, Jun Okawa, Ken Kaji, Ogino Akihiro.</p> <p><b>3D Softness Model of Baby Diaper</b> Yoshiko Nakao, Noriko Nakagawa, Koichi Morimoto, Zhiwu Liang.</p> <p><b>System of Generating Japanese Sound Symbolic Expressions Using Genetic Algorithm</b> Yuichiro Shimizu, Tetsuaki Nakamura, Maki Sakamoto.</p> <p><b>The Feeling of Kawaii is a Function of Interaction</b> Hisao Shiizuka.</p> <p><b>Basic Study on Kawaii Feeling of Material Perception</b> Michiko Ohkura, Tsuyoshi Komatsu.</p> <p><b>Study of Kawaii-ness in Motion -Physical Properties of Kawaii Motion of Roomba-</b> Shohei SUGANO, Yutaka Miyaji, Ken TOMIYAMA.</p>

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## HCI

### Consumer behaviour and persuasive interaction

Chair(s): To be announced

### Analysis of Customer Preference through Unforced Natural Passive Observation

Terumasa Tajima, Yusuke Iida, Toshikazu Kato.

### suGATALOG: Fashion Coordination System that Supports Users to Choose Everyday Fashion with Clothed Pictures

Ayaka Sato, Keita Watanabe, Michiaki Yasumura, Jun Rekimoto.

### It Was Nice With The Brick so I Will Now Click: The Effects of Offline and Online Experience, Perceived Benefits, and Trust on Dutch Consumers' Online Repeat Purchase Intention

Ardion D. Beldad, Mariel Segers.

### Responses Analysis of Visual and Linguistic Information on Digital Signage Using fNIRS

Satoru Iteya, Atsushi Maki, Toshikazu Kato.

### Design and Evaluation of Eco-feedback Interfaces to Support Location-based Services for Individual Energy Awareness and Conservation

Yang Ting Shen, Po-Chun Chen, Taysheng Jeng.

### Empowering Young Adolescents to Choose the Healthy Lifestyle: A Persuasive Intervention Using Mobile Phones

Lies Kroes, Suleman Shahid.

### Towards a Next Generation Universally Accessible 'Online Shopping-for-apparel' System

Kasper Kristensen, Nanna Borum, Line Gad Christiansen, Henrik Jepsen, Jacob Lam, Anthony L Brooks, Eva Petersson Brooks.

## HIMI

### Technologies for learning and teaching

Chair(s): To be announced

### A Hybrid Model For An E-learning System which Develops Metacognitive Skills at Students

Maria Canter.

### Application to Help Learn the Process of Transforming Mathematical Expressions with a Focus on Study Logs

Takayuki Watabe, Yoshinori Miyazaki, Yoshiki Hayashi.

### Social Networking and Culturally Situated Design Teaching Tools: Providing a Collaborative Environment for K-12

Albanie Bolton, Cheryl Seals.

### New Potential of E-learning by Re-utilizing Open Content Online -TED NOTE: English Learning System as an Auto-assignment Generator-

Ai Nakajima, Kiyoshi Tomimatsu.

### Quantitative Models and Software Architecture, Facing Student Desertion and Permanence

Jesus Alfonso Perez Gama, Andrey Ali Alvarez Gaitan, Martha Isabel Roza Arteaga, Roger Smith Londoño Buritica, Juan Carlos Rincon Serrato, Alexis Mena Mena, Lina Maria Perilla Cubides, Alejandro Marulanda Quinche.

### NFC provided user friendliness for technologically advanced services

Anders Andersen, Randi Karlsen, Arne Munch-Ellingsen.

### Management of Information for Decisions

Chair(s): Yumi Asahi.

### Prediction of the Concern of People using CGM

Yusuke Ueda, Yumi Asahi.

### User Needs Search Using Text Mining

Yukiko Takahashi, Yumi Asahi.

### The Study to Clarify The Type of "Otome-game" User

Misaki Tanikawa, Yumi Asahi.

### Analysis of Purchasing Behavior Focusing on the Passage of Time at a Group Buying Site of Coupon

Takuto Kobayashi, Toshikazu Yamaguchi, Yumi Asahi.

### Human Factors in Supply Chain Management - Decision Making in Complex Logistic Scenarios

Philipp Brauner, Simone Runge, Marcel Groten, Günther Schuh, Martina Ziefle.

### Sales Strategy Mining System with Visualization of Action History

Haruhi Satonaka, Wataru Sunayama.

### Rapid Computational Socio-Cultural Network Analysis and Decision Support Systems

Tareq Ahram, Waldemar Karwowski.

### Design and Evaluation of Human Interface

Chair(s): Masaru Noda.

### Determination of Alarm Setpoint for Alarm System Rationalization using Performance Evaluation

Naoki Kimura, Takashi HAMAGUCHI, Kazuhiro TAKEDA, Masaru Noda.

### Pilot experiments in education for safe bicycle riding to evaluate actual cycling behaviors when entering an intersection

Hiroaki Kosaka, Masaru Noda.

### Performance Monitoring of Industrial Plant Alarm Systems by Statistical Analysis of Plant Operation Data

Masaru Noda.

### Empirical Evaluation of Multimodal Input Interactions

Sanjay Ghosh, Anirudha Joshi, Sanjay Tripathi.

### Usability Evaluation of Comprehension Performance and Subjective Assessment on Mobile Text Advertising

Ya-Li Lin, Chih-Hsiang Lai.

### Survey and Expert Evaluation for e-Banking

Basil Soufi.

### GUI Efficiency Comparison Between Windows and Mac

Eric A. McCary, Jingyuan Zhang.

Human Interface and the Management of Information

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# Parallel Sessions

## EPCE

Engineering Psychology and Cognitive Ergonomics

**Cognitive issues at work**  
Chair(s): To be announced

**Empirical Insights on Operators' Procedure Following Behavior in Nuclear Power Plants**  
Huafei Liao, Michael Hildebrandt.

**Estimation of Operator Input and Output Workload in Complex Human-Machine-Systems for Usability Issues with iFlow**  
Stefan Pfeffer, Patrick Decker, Thomas Maier, Eric Stricker.

**Evaluation of Advanced Multi-Modal Command and Control Communication Management Suite**  
Victor S. Finomore, Adam Sitz, Kelly Satterfield, Courtney Castle, Elizabeth Blair.

**Developing Metacognitive Model for Team-based Dynamic Environment Using Fuzzy Cognitive Mapping**  
Jung Hyup Kim, Gretchen Macht, Ling Rothrock, David Nembhard.

**A Detection Method of Temporary Rest State while Performing Mental Works by Measuring Physiological Indices**  
Shutaro Kunimasa, Kazune Miyagi, Hirotake Ishii, Hiroshi Shimoda.

**An Intellectual Productivity Evaluation Tool based on Work Concentration**  
Hiroshi Shimoda, Kotaro Oishi, Kazune Miyagi, Kosuke Uchiyama, Hirotake Ishii, Fumiaki Obayashi, Mikio Iwakawa.

## UAHCI

Universal Access in Human-Computer Interaction

**Universal Access: Interaction Science - II**  
Chair(s): Gisela Susanne Bahr.

**Secure, Usable Biometric Authentication Systems**  
Liam M Mayron, Yasser Hausawi, Gisela Susanne Bahr.

**Interviewer Agent for Cognitive Task Analysis**  
Taro Kanno, Masahiro Uetsuhara, Kazuo Furuta.

**The future of universal access? Merging computing, design and engineering**  
Simeon Keates, David Bradley, Andrew Sapeluk.

**WorkSense: an Interactive Space Design for Future Workplace**  
Hsuan-Cheng Lin, Taysheng Jeng.

**What is Age's Affect in Collaborative Environments**  
Kieran Jordine, Dale-Marie Wilson, Raghavi Sakpal.

**A Passive Brain-Computer Interface for Supporting Gaze-Based Human-Machine Interaction**  
Janna Protzak, Klas Ihme, Thorsten O. Zander.

**OnScreenDualScribe: A Computer Operation Tool for Users with a Neuromuscular Disease**  
Torsten Felzer, I. Scott MacKenzie, Stephan Rinderknecht.

**Accessibility of Documents - I**  
Chair(s): Georgios Kouroupetroglou.

**Design and Development of Accessible Educational and Teaching Material for Deaf Students in Greece**  
Vassilis Kourbetis.

**Design and Developing Methodology for 8-dot Braille Code Systems**  
Hernisa Kacorri, Georgios Kouroupetroglou.

**Regression Modeling of Reader's Emotions Induced by Font Based Text Signals**  
Dimitrios Tsonos, Georgios Kouroupetroglou, Despina Deligiorgi.

**Improving the Accessibility of Digital Documents for Blind Users: Contributions of the Textual Architecture Model**  
Laurent Sorin, Mustapha Mojahid, Nathalie Aussenac-Gilles, Julie Lemarié.

**Improving Communication of Visual Signals by Text-to-Speech Software**  
Robert F. Lorch, Jr, Julie Lemarié.

**Comparison of the Effectiveness of different Accessibility Plugins based on Important Accessibility Criteria**  
Alireza Darvishy, Hans-Peter Hutter.

**Towards Designing Audio Assistance for Comprehending Haptic Graphs: A Multimodal Perspective**  
Ozge Alacam, Christopher Habel, Cengiz Acarturk.

**Design Access in Interaction and Human Factors**  
Chair(s): Fong-Gong Wu.

**Integrating The Image Identifiable Principle of Human Cognition and Computer Vision to Develop A New Pattern Recognition Design System for Smart Home**  
Pin-Chin Wang, Wan-Ting Tseng, Chun-Min Cheng, Yi-Hsuan Sung, Yi-Chun Chou, Fong-Gong Wu.

**The Survey of Usability Evaluation in Social Network Sites' Reply Mechanism**  
Tsung-Han Tsai, Fong-Gong Wu, Yu-Hsiu Hung.

**Cognitive-based Approach for Assessing Accessibility of e-Government Websites**  
Khulud Aljarallah, Robert CC Chen, Omar AlShathry.

**The Effects of Projector Arrangement on Children Physical Activity**  
Loan Tu Quynh Ngo, Fong-Gong Wu.

**A Study of Cognitive Behavior in Relation to the Elderly Visual Experiences**  
Delai Men, Xiaoping Hu, Wen Cing-Yan Nivala, Robert CC Chen.

**Demands and Needs of Elderly Chinese People for Garment**  
Xiaoping Hu, Xia Feng, Delai Men, Robert CC Chen.

**Cognitive Factors Involved in the Ability to Manipulate a Digital Camera**  
Keisuke Ishihara, Toshihisa Doi, Sou Yanagimogo, Toshiki Yamaoka.

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## VAMR

Virtual, Augmented and Mixed Reality

### Visualization Techniques for Human-Automation Interaction

Chair(s): Jessie YC Chen.

### Using a Predictive Model to Improve Operator Performance on a Supervisory Control System

Gregory Trafton.

### Proactive Supervisory Decision Support from Trend-Based Monitoring of Autonomous and Automated Systems: a Tale of Two Domains

Harvey S. Smallman, Maia B. Cook.

### Assessing Interfaces Supporting Situational Awareness in Multi-agent Command and Control Tasks

Donald Kalar, Collin Green.

### Multiple Remotely Piloted Aircraft Control: Visualization and Control of Future Path

Gloria Calhoun, Heath Ruff, Chad Breeden, Joshua Hamell, Mark Draper, Christopher Miller.

### Interactive Virtual Reality Shopping and the Impact in Luxury Brands

Samar Altarteer, Vassilis Charissis, David K. Harrison, Warren Chan.

### The Visual, the Auditory and the Haptic - A User Study on Combining Modalities in Virtual Worlds

Julia Fröhlich, Ipke Wachsmuth.

### GUI design solution for a monocular, see-through head-mounted display based on users' eye movement characteristics

Takahiro Uchiyama, Kazuhiro Tanuma, Yusuke Fukuda, Miwa Nakanishi.

## CCD

Cross-Cultural Design

### Design for urban experience and social innovation

Chair(s): Zhiyong Fu.

### Original-Ecology Sounds of Cities' Impression

Lie Zhang, Jin Huang.

### GeoCity Beijing: Platform of Eco-City Information Visualization and Interactive Narrative

Ken Tsui, Zhiyong Fu, Shen Li, Junjie Yu.

### The innovative PSS design of Urban Transportation based on Sharing Style

Xin Liu, Yankai Zhao.

### Defining cross-culture theoretical framework of user interface

Ping Liu, Chun Keung.

### Urban Phenomenology: Incorporating Dynamic Frames of Reference in the Design of Urban OS

Christopher Grant Kirwan.

### Designing urban experience for Beijing in the context of smart city

Zhiyong Fu.

### SoLoMo User Experience Study Using a Pivoted Parallel Coordinates

Xiaohua Sun, Jie Qiu, Lei Zhang.

## AC

Augmented Cognition

### Augmented Cognition in High Risk Environments

Chair(s): Huafei Liao.

### Integration of Psychognitive States to Broaden Augmented Cognition Frameworks

Karmen Guevara.

### Adult Neurogenesis: Implications on Human and Computational Decision Making

Craig Vineyard, Stephen Verzi, Thomas Caudell, Michael Bernard, James Aimone.

### Developing Methodology for Experimentation using a Nuclear Power Plant Simulator

Lauren Reinerman-Jones, Svyatoslav Guznov, Joseph Mercado, Amy D'Agostino.

### Cognitive-Affective Interactions in Strategic Decision Making

Yanlong Sun, Hongbin Wang.

### EEG-based Reward System for Response Control in Stop-signal Task

Li-Wei Ko, Yu-Ting Liu.

### Novel Approaches in Augmented Cognition

Chair(s): To be announced

### The Effects of Spatial Attention on Face Processing: An ERPs Study

Liang Zhang, Kan Zhang.

### Evaluating classifiers for Emotion Recognition using EEG

Ahmad Tauseef Sohaib, Shah Nawaz Qureshi, Johan Hagelbäck, Olle Hilborn, Petar Jerčić.

### Improvement of Sensory Stabilization and Repeatability of Vibration Interface for Distance Presentation

Yuki Sampei, Takayuki Tanaka, Yuki Mori, Shun'ichi Kaneko.

### A Study on Application of RB-ARQ Considering Probability of Occurrence and Transition Probability for P300 Speller

Eri Samizo, Tomohiro Yoshikawa, Takeshi Furuhashi.

### Using the EEG Error Potential to Identify Interface Design Flaws

Jeff Escalante, Serena Butcher, Mark R Costa, Leanne Hirshfield.

### Effect of Light Priming and Encouraging Feedback on the behavioral and Neural Responses in a General Knowledge Task

Andreea-Ioana Sburlea, Tsvetomira Tsoneva, Gary N Garcia-Molina.

### An Effective ERP Model for Brain Computer Interface

Mariko Funada, Yoshihide Igarashi, Tadashi Funada, Miki Shibukawa.

THURSDAY 13:30 - 15:30

# Parallel Sessions

## DHM

### New Development in the Human-Centered Design in Transportation

Chair(s): Eliza Y Du.

### Human-Centered Design of a Pre-Collision System

Hirofumi Aoki, Hiroyuki Takahashi, Satoshi Udaka, Toshinori Okita, Hiroyasu Ichida, Masami Aga.

### Proposal of Automotive 8-directional Warning System that makes use of Tactile Apparent Movement

Atsuo Murata, Susumu Kemori, Makoto Moriwaka, Takehito Hayami.

### Effectiveness of Automotive Warning System presented with Multiple Sensory Modalities

Atsuo Murata, Michihiro Kanbayashi, Takehito Hayami.

### Prediction of Drowsy Driving using Behavioral Measures of Drivers -Change of Neck Bending Angle and the Sitting Pressure Distribution-

Atsuo Murata, Taiga Koriyama, Takuya Endoh, Takehito Hayami.

### Towards Early Status Warning for Driver's Fatigue Based on Cognitive Behavior Models\*

Yanfei Liu, Yu Zhang, Junsong Li, Jing Sun, Feng Fu, Jiangsheng Gui.

### Personality and attitude as predictors of risky driving behaviors: Evidence from Beijing drivers

Jun Kong, Kan Zhang, Xuefeng Chen.

## DUXU

### Designing Experiences for Facilitating Positive Behavior Change (II)

Chair(s): Marc Fabri, Marientina Gotsis.

### Positive Design: New Challenges, Opportunities, and Responsibilities for Design

Anna E Pohlmeier.

### Avatar Interfaces for Biobehavioral Feedback

Tylar Murray, Delquawn Hardy, Donna Spruijt-Metz, Eric Hekler, Andrew Raij.

### Increasing Trust in Personal Informatics Tools

Luis G Jaimes, Tylar Murray, Andrew Raij.

### The Innovation Machine: Mobile UX Design Combining Information and Persuasion Design to Change Behavior

Aaron Marcus, Megan Chiou, Chirag Narula, Allan Yu.

### Setting Conditions for Learning. Mediated Play and Socio-Material Dialogue

Emanuela Marchetti, Eva Petersson Brooks.

### Running to Behaviour Change

Pip Trevorrow, Marc Fabri.

### Ergonomics in Design of Information Systems - I

Chair(s): Francisco Santos Rebelo.

### Strategy for the Development of a Walk-In-Place Interface for Virtual Reality

Luís Teixeira, Emília Duarte, Elisangela Vilar, Paulo Noriega, Francisco Santos Rebelo, Fernando Moreira da Silva.

### Main Usability Issues in Using Virtual Environments for Older Population Warning Studies

Lara Maia Reis, Emília Duarte, Francisco Santos Rebelo.

### Sense of presence in a VR-based study on behavioral compliance with warnings

Emília Duarte, Francisco Santos Rebelo, Luís Teixeira, Elisangela Vilar, Julia Teles, Paulo Noriega.

### Using Virtual Reality to Examine Hazard Perception in Package Design

Hande AYANOGLU, Francisco Santos Rebelo, Emília Duarte, Paulo Noriega, Luís Teixeira.

### Evaluating Emotional Responses to Interior Design of Hospital Room: A Study Using Virtual Reality

Susana Dinis, Emília Duarte, Paulo Noriega, Luís Teixeira, Elisangela Vilar, Francisco Santos Rebelo.

### Interaction and Control in Second-screen Interactive TV Scenarios

Alexandre Fleury, Lars Bo Larsen.

### Agile User Experience Design

Chair(s): Sisira Adikari.

### Understanding the UX Designer's Role within Agile Teams

Tiago Silva, Milene S Silveira, Claudia de O. Melo, Luiz Claudio Parzianello.

### Keeping User Centred Design (UCD) Alive and Well in your Organisation: Taking an Agile Approach

Colette Raison, Snezna Schmidt.

### Reframed Contexts: Design Thinking for Agile User Experience Design

Sisira Adikari, Craig McDonald, John Campbell.

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

Design, User Experience, and Usability

THURSDAY 13:30 - 15:30



## DUXU

### Semiotics, Language, Interaction

Chair(s): Jan Brejcha.

### Cross-Cultural UX in the Life Science Industry

Chair(s): Brigitte Herrmann.

### Semiotics of Void and Information Representation

Kumiko Tanaka-Ishii.

### Metacommunication and Semiotic Engineering: Insights from a Study With Mediated HCI

Ingrid T Monteiro, Clarisse Sieckenius De Souza, Carla Leitão.

### Techno-imagination and Implicit Knowledge

Jiri Bystricky.

### On the Poetry of Design

Arash Faroughi, Roozbeh Faroughi.

### The Lack of Subjective Experience in Hybrid Intelligent Agents in Interactive Storytelling

Oliver Guy, Ronan Champagnat.

### Semiotic Analysis for Gestural and Emotional Human-Computer Interaction

Roman Danylak.

### Social Movement Information Design and A Curriculum of Proper Knowledge Consumption

Gabriel Y Schaffzin.

### Web-Portal Solution for Supporting In-country Reviews

Michael Oettli, Tasos Panagis.

### German Chinese Business Communication

Maren Kropfeld.

### A Component-Based Evaluation Protocol for Clinical Decision Support Interfaces

Alessandro Febretti, Karen Dunn Lopez, Janet Stifter, Andrew Johnson, Gail Keenan, Diana Wilkie.

### Improving Management of Medical Equipment

Yu Hao, Yida Gong, Young Mi (Christina) Choi.

### Addressing Human Computer Interaction Issues of Electronic Health Record (EHR) in Clinical Encounters

Martina A Clarke, Linsey Steege, Joi Moore, Jeffery Belden, Richelle Koopman, Min Kim.

### Development and Evaluation of a Contradiction-oriented Method for the Treatment of Use-based and Technical Risks Exemplified by Medical Devices

Simon Plogmann, Armin Janss, Arne Jansen, Klaus Radermacher.

## DAPI

### Smart cities, building and places

Chair(s): Zhang Xiong.

Distributed, Ambient and Pervasive Interactions

### A Novel Taxi Dispatch System for Smart City

Qingnan Zou, Guangtao Xue, Yuan Luo, Jiadi Yu, Hongzi Zhu.

### Marker-Free Indoor Localization and Tracking of Multiple Users in Smart Environments using a Camera-Based Approach

Andreas Braun, Tim Dutz, Michael Alekseew, Philipp Schillinger, Alexander Marinc.

### Empowering People through Mobile Devices for Smarter Places

Federico Devigili, Daniele Magliocchetti, Giuseppe Conti, Raffaele De Amicis.

### Do Strollers in Town Needs Recommendation?: on Preferences of Recommender in Location-Based Services

Kenro Aihara.

### VIA - Visualizing Individual Actions to Develop a Sustainable Community Culture through Cycling

Benjamin Watson, David Berube, Nickolay Hristov, Carol Strohecker, Scott Betz, Louise Allen, Matthew Burczyk, Amber Howard, William Anthony McGee, Matthew Gymer, Daniel Canas, Mark Kirstner.

# Parallel Sessions

## HCI

Human-Computer Interaction

<p><b>Learning environments</b> Chair(s): To be announced</p>	<p><b>Advanced mobile interaction</b> Chair(s): To be announced</p>	<p><b>HCI in critical contexts</b> Chair(s): Philippe Palanque.</p>	<p><b>Human Aspects of Enterprise Information Systems</b> Chair(s): Xiaowen Fang, Fan Zhao.</p>
<p><b>Evaluation of Computer Algebra Systems Using Fuzzy AHP at the Universities of Cyprus</b> Ilham Huseyinov, Feride S. Tabak.</p> <p><b>Refining Rules Learning Using Evolutionary PD</b> Afdallyna Harun, Steve Benford, Claire O'Malley, Nor Laila Md. Noor.</p> <p><b>A Teacher Model to Speed Up the Process of Building Courses</b> Carla Limongelli, Matteo Lombardi, Alessandro Marani, Filippo Sciarrone.</p> <p><b>A Comparative Evaluation of Podcasting-based and Mobile-based Material Distribution Systems in Foreign Language Teaching</b> Yuichi Ono, Manabu Ishihara, Mitsuo Yamashiro.</p> <p><b>Recommendation of Collaborative Activities in e-Learning Environments</b> Veronica Rossano, Teresa Roselli, Maria Laterza, Pierpaola Di Bitonto.</p> <p><b>E-learning: The Power Source of Transforming the Learning Experience in an ODL Landscape</b> Blessing Thuthuka Mbatha, Mbali Mbatha.</p>	<p><b>A Mobile Brain-computer Interface for Freely Moving Humans</b> Yuan-Pin Lin, Yijun Wang, Chun-Shu Wei, Tzyy-Ping Jung.</p> <p><b>Undo/Redo by Trajectory</b> Tatsuhito Oe, Buntarou Shizuki, Jiro Tanaka.</p> <p><b>Multi-User Interaction with Shadows</b> Tomomi Gotoh, Takahiro Kida, Munehiro Takimoto, Yasushi Kambayashi.</p> <p><b>An Interaction Concept for Public Displays and Mobile Devices in Public Transport</b> Romina Kühn, Diana Lemme, Thomas Schlegel.</p> <p><b>A Pedestrian Navigation Method for User's Safe and Easy Wayfinding</b> Hiroschi Furukawa, Yutaka Nakamura.</p> <p><b>A multi-modal interaction framework for multitasking in a mobile environment</b> JUNGYOON YANG.</p> <p><b>User Experience in Public Information Service Design for Smart Life</b> Qiong Wu, Guanshang Wu, Xin Tong.</p>	<p><b>V&amp;V of Lexical, Syntactic and Semantic Properties for Interactive Systems Through Model Checking of Formal Description of Dialog</b> Guillaume Brat, Célia Martinie, Philippe Palanque.</p> <p><b>Characterizing Incidents Reporting Systems across Applications Domains</b> Marco Winckler, Cédric Bach, Regina Bernhaupt.</p> <p><b>A Situation Awareness Assistant for Human Deep Space Exploration</b> Guy Andre Boy, Donald Platt.</p> <p><b>Tuning an HCI Curriculum for Master Students to Address Interactive Critical Systems Aspects</b> Michel Galindo, Célia Martinie, Philippe Palanque, Marco Winckler, Peter Forbrig.</p> <p><b>Linking Context to Evaluation in the Design of Safety Critical Interfaces</b> Mike Feary, Dorrit Billman, Xiuli Chen, Andrew Howes, Richard Lewis, Lance Sherry, Satinder Singh.</p> <p><b>The Implementation of Multi-touch Table to Support the Military Decision Making through Critical Success Factors (CSFs)</b> Norshahriah Abdul Wahab, Halimah Badioze Zaman.</p> <p><b>Design and Interface Considerations for Web-Enabled Data Management in Civil Infrastructure Health Monitoring</b> David E Kosnik, Lawrence J. Henschen.</p>	<p><b>Semantically Integrated Business Applications for Enterprise Information Systems</b> Patricia Kraft, Rainer Thome.</p> <p><b>Interaction between Enterprise Resource Planning Systems and Organizational Culture</b> Carlotta P M Herberhold.</p> <p><b>Reverse Business Innovations - The Impact of ERP Software Upgrades on Organizations</b> Stefanie Rauff, Andreas Hufgard.</p> <p><b>Repository-based Implementation of Information Pyramid: A Study Based on an ERP Case Study</b> Hans-Jürgen Scheruhn, Daniel Ackermann, Roman Braun, Ulrich Förster.</p> <p><b>Electronic Health Records: A Case Study of an Implementation</b> Guillaume Cusseau, Jon Grinsell, Christopher Wenzel, Fan Zhao.</p> <p><b>Continuing On-Premise or Adopt On-Demand? An Empirical Study of ERP Adoption in SMEs</b> Fan Zhao, Elias Kirche.</p> <p><b>Human Total Ownership Cost: A Universal Framework for Human Performance Cost Components</b> Waldemar Karwowski, Tareq Ahram.</p>

THURSDAY 16:00 - 18:00



## HCI

### Culture, art, music and creativity

Chair(s): To be announced

#### Audio-Visual Documentation Method for Digital Storytelling for a Multimedia Art Project

Chui Yin Wong, Chee Weng Khong, Kimberly Chu, Muhammad Asyraf Mhd Pauzi, Man Leong Wong.

#### A Method for Discussing Musical Expression between Music Ensemble Players using A Web-Based System

Takehiko Sakamoto, Shin Takahashi, Jiro Tanaka.

#### Enhancing Human Computer Interaction with Episodic Memory in a Virtual Guide

Felix Rabe, Ipke Wachsmuth.

#### Enhanced 3D Sketch System Incorporating "Life-size" and "Operability" Functions

Shun'ichi Tano, Naofumi Kanayama, Xinpeng Huang, Junko Ichino, Tomonori Hashiyama, Mitsuru Iwata.

#### Eloe: Application of Brain-Computer Interfaces in Visual Creativity

Maxim Safioulline.

## HIMI

### Information search

Chair(s): To be announced

#### Can a Clipboard Improve User Interaction and User Experience in Web-based Image Search?

Leon Kastler, Ansgar Scherp.

#### Trailblazing Information: An Exploratory Search User Interface

Marcus Nitsche, Andreas Nürnberger.

#### Research on Website Usage Behavior Through Information Search Perspective: A

#### Comparison of Experiential and Goal-Directed Behaviors

Juihsiang Lee, Manlai You.

#### A Novel Human-Computer Interface for Browsing Web Data by Leaping Up Web Pages

Che-Lun Hung, Cheng Chin, Chen-Chun Lai, Ho Cheung Cheung.

#### QUEST: Querying complex Information by Direct Manipulation

Marcus Nitsche, Andreas Nürnberger.

#### Finders, keepers, losers, seekers: A study of academics' research-related personal information collections

Mashaël Yacoub Alomar, Andrew Cox.

### New perspectives on service engineering

Chair(s): Hirohiko Mori, Sakae Yamamoto.

#### Evaluation of System Engineers' Intellectual Productivity - Focusing on Coding Procedures in Application Development Tools -

Ryo Hirano, Yohei Nakamura, Miwa Nakanishi.

#### Searching blogsites with product reviews

Hironori Kuwata, Makoto Oka, Hirohiko Mori.

#### Modeling of Music Recommendation Methods to Promote the User's Singing Motivation -For Next-Generation Japanese Karaoke Systems

Satoshi Isogai, Miwa Nakanishi.

#### Challenges for incorporating "quality in use" in embedded system development

Nowky Hirasawa.

#### Service Evaluation Method for Managing Uncertainty

Koji Kimita, Yusuke Kurita, Kentaro Watanabe, Takeshi Tateyama, Yoshiki Shimomura.

#### A Method for Service Failure Effects Analysis based on Customer Satisfaction

Yusuke Kurita, Koji Kimita, Kentaro Watanabe, Yoshiki Shimomura.

#### An automatic classification of Product review Into given viewpoints

Yuki Tachizawa, Makoto Oka, Hirohiko Mori.

### Digital Museum

Chair(s): Michitaka Hirose.

#### Mixed Reality Digital Museum Project

Tomohiro Tanikawa, Takuji Narumi, Michitaka Hirose.

#### Digital Railway Museum: An Approach to Introduction of Digital Exhibition Systems at the Railway Museum

Takuji Narumi, Torahiko Kasai, Takumi Honda, Kunio Aoki, Tomohiro Tanikawa, Michitaka Hirose.

#### Train Ride Simulation using Assist Strap Device

Takashi Sasaki, Koichi Hirota, Tomohiro Amemiya, Yasushi Ikei.

#### A Method of Viewing 3D Horror Contents for Amplifying Horror Experience

Omori Nao, Masato Tsutsui, Ryoko Ueoka.

#### Augmented Reality System for Measuring and Learning Tacit Artisan Skills

Atsushi Hiyama, Hiroyuki Onimaru, Mariko Miyashita, Eikan Ebuchi, Masazumi Seki, Michitaka Hirose.

#### Virtual Experience System for a Digital Museum

Yasushi Ikei, Koji Abe, Yukinori Masuda, Yujiro Okuya, Tomohiro Amemiya, Koichi Hirota.

Human Interface and the Management of Information

# Parallel Sessions

## EPCE

Engineering Psychology and Cognitive Ergonomics

### Human Factors in Flight Operations

Chair(s): Wen-Chin Li.

### Distributed Cognition in Flight Operations

Don Harris.

### The Application of Human Factors Analysis and Classification System (HFACS) to Investigate Human Errors in Helicopter Accidents

Chia-Fen Chi, Shao-Yu Liu, Wen-Chin Li.

### The Analysis of Safety Recommendation and Human Error Prevention Strategies in Flight Operations

Jeng-Chung Chen, Chia-Fen Chi, Wen-Chin Li.

### The Investigation of Visual Attention and Workload by Experts and Novices in the Cockpit

Wen-Chin Li, Fa-Chung Chiu, Ying-shin Kuo, Ka-Jay Wu.

### The Use of Eye Tracking in the Study of Airline Cabin Safety Communication

Yueh-Ling Hsu, Wen-Chin Li, Ching-Hui Tang.

### New Technologies for FRMS

Min Luo, Mei Rong, Jing Li, Wen Dong Hu, Chang Hua Sun.

### Affective priming with subliminal auditory stimulus exposure

Juan Liu, Yan Ge, Xianghong Sun.

## UAHCI

Universal Access in Human-Computer Interaction

### Accessibility of Documents - II

Chair(s): Georgios Kouroupetroglou.

### Usability of Web Search Interfaces for Blind Users - A Review of Digital Academic Library User Interfaces

Tapio M Haanperä, Marko H.T. Nieminen.

### WebSight: The Use of the Grid-Based Interface to Convey Layout of Web-Pages in a Non-Visual Environment

Hesham M. Kamel, Halil Erhan.

### Evaluating Facial Expressions in American Sign Language Animations for Accessible Online Information

Hernisa Kacorri, Pengfei Lu, Matt Huenerfauth.

### Providing an Accessible Track Changes Feature for Persons Who Are Blind

John G Schoeberlein, Yuanqiong Wang.

### User Perception Knowledge for Socially-aware Web Document Accessibility

Dimitris Spiliotopoulos, Pepi Stavropoulou, Georgios Kouroupetroglou, Dimitrios Tsonos.

### Image Quality Assessment for the Visually Impaired

Tatiana Koshkina, Eric Dinet, Hubert Konik.

### Designing Accessible Visualizations: The case of designing a weather map for blind users

Dustin D Carroll, Suranjan Chakraborty, Jonathan Lazar.

### Ambient Assisted Living

Chair(s): To be announced

### Resource Management for multimodal and multilingual adaptation of user interfaces in Ambient Assisted Living environments

Carsten Stocklów, Tjark Vandommele, Tim Dutz, Andrej Grguric, Arjan Kuijper.

### Ambient Assisted Living Development in East Slovakia

Dusan SIMSIK, Alena Galajdova, Daniel Siman, Daniela Onofrejova.

### Can Ubiquitous Devices Utilising Reminiscence Therapy be Used to Promote Well-being in Dementia Patients? An Exploratory Study

Claire Ancient, Alice K Good, Clare Wilson, Tineke Fitch.

### User Interfaces for Older Adults

Christopher Mayer, Martin Morandell, Matthias Gira, Miroslav Sili, Martin Petzold, Sascha Fagel, Christian Schüler, Jan Bobeth, Susanne Schmehl.

### Conversational System Encouraging Communication of the Aged by Method of Reminiscence and Quantification of Active Participation

Tetsuaki Okada, Misato Nihei, Takuya Narita, Minoru Kamata.

### Back on Track: Lost and Found on Public Transport

Stefan P Carmien, Michael Obach.

### Collective Intelligence: impact on e-inclusion

Chair(s): Pier Luigi Emiliani, Laura Burzagli.

### E-inclusion as the Next Challenge for Sustainable Consumption

Amon Rapp, Alessandro Marcengo, Marina Geymonat, Rossana Simeoni, Luca Console.

### Impact of Universal Design in Combination with Assistive Technologies to Community Based Disaster Preparedness Development: a case study on Collective Intelligence

Hiroshi Kawamura.

### Addressing Learning Disabilities in Ambient Intelligence Educational Environments

Stavroula Ntoa, Margherita Antona, George Margetis, Constantine Stephanidis.

### The Evolving Global Public Inclusive Infrastructure (GPII)

Gregg Vanderheiden, Jutta Treviranus, Maria Gemou, Evangelos Bekiaris, Kasper Markus, Colin Clark, Antranig Basman.

### A Static and Dynamic Recommendations System for Best Practice Networks

Pierfrancesco Bellini, Ivan Bruno, Paolo Nesi, Michela Paolucci.

### Collective intelligence for eInclusion

Laura Burzagli, Pier Luigi Emiliani.

THURSDAY 16:00 - 18:00





## VAMR

Virtual, Augmented and Mixed Reality

### Emerging Trends in Virtual, Augmented and Mixed Reality

Chair(s): Stephanie Lackey, Sherry Ogreten.

### Mixed and Augmented Reality for Marine Corps Training

Richard Schaffer, Sean Cullen, Phe Meas, Kevin Dill.

### Establishing Workload Manipulations Utilizing a Simulated Environment

Julian Abich IV, Lauren Reinerman-Jones, Grant Taylor.

### Assessing Engagement in Simulation-Based Training Systems for Virtual Kinesic Cue Detection Training

Eric Ortiz, Crystal Maraj, Julie N Salcedo, Stephanie Lackey, Irwin L Hudson,.

### Effects of Visual Fidelity on Biometric Cue Detection in Virtual Combat Profiling Training

Julie N Salcedo, Crystal Maraj, Stephanie Lackey, Eric Ortiz, Irwin L Hudson,, Joy Martinez.

### The ART of CSI: An Augmented Reality Tool (ART) to Annotate Crime Scenes in Forensic Investigation

Jan Willem Streefkerk, Mark Houben, Pjotr Van Amerongen, Frank Ter Haar, Judith Dijk.

### Design of the Mobile Guide System with Augmented Reality and the Sense of Place The Application of Heritage Interpretation in Cultural Heritage

Yu-Lien Chang, Chao-Yang Pan, Kuo-EN Chang, H.-T. Hou.

### Embodiment and Embodied Cognition

Mark R Costa, Sung Yeun Kim, Frank Biocca.

## CCD

Cross-Cultural Design

### How Industry Policy Shaping UI/UX Research

Chair(s): Chaoyin Chi, Sheau-Farn Max Liang.

### A Policy or a Silent Revolution: Experience Sharing on Aligning UX Process with Product Development Process

Sean Chiu, Chen-Shuang Wei.

### Use Second Screen to Enhance TV Viewing Experiences

Yu-Ling Chuang, Chia-Wei Liao, Wen-Shiuan Chen, Wen-Tsung Chang, Shao-Hua Cheng, Yi-Chong Zeng, Kai-Hsuan Chan.

### Identifying Usability Problems in a Smart TV Music Service

Sheau-Farn Max Liang, Yi-Chung Kuo, Shu-Chin Chen.

### Enhancing People's Television Experience by Capturing, Memoing, Sharing, and Mixing

Tun-Hao You, Yi-Jui Wu, Cheng-Liang Lin, Yaliang Chuang.

### Designing Government Funded Religious E-Reader by Adopting User Experience Methods

Sheng Kai Tang, Wen Kang Chen, Chih Hao Tsai, Yi Ting Chen.

### Diversity in Unity - How Industry Policy Shaping UI/UX Research

Chaoyin Chi.

### Integrating Internationalization in the User-Centered Software Development Process

José A. Macías.

## OCSC

Online Communities and Social Computing

### Online Communities and Social Computing in Higher Education

Chair(s): Gabriele Meiselwitz.

### Teaching about the Impacts of Social Networks: An End of Life Perspective

James Braman, Giovanni Vincenti, Alfreda Dudley, Yuanqiong Wang, Karen Rodgers, Ursula Thomas.

### Project Awareness System -- Improving Collaboration through Visibility

Daniel Kadenbach, Carsten Kleiner.

### Readability Assessment of Policies and Procedures of Social Networking Sites

Gabriele Meiselwitz.

### Adult Learners and their use of Social Networking Sites

Yuanqiong Wang, Jessica Arfaa.

### WEB 2.0 Technologies Supporting Students and Scholars in Higher Education

Paula PM Miranda, Pedro Isaias, Carlos Costa, Sara Pifano.

### Influence of Monetary and Non-Monetary Incentives on Students' Behavior in Blended Learning Settings in Higher Education

Stefan Stieglitz, Annika Eschmeier, Michael Steiner.

## AC

Augmented Cognition

### Operational Neuroscience

Chair(s): Rodolphe J. Gentili.

### The Development and Application of a Novel Physiological Metric of Cognitive Workload

Jeremy Rietschel, Matthew Miller.

### DEVELOPMENT OF FATIGUE-ASSOCIATED MEASUREMENT TO DETERMINE FITNESS FOR DUTY AND MONITOR DRIVING PERFORMANCE

Ying Ying Tan, Frederick L. K. Tey, Sheng Tong Lin.

### Neural Oscillatory Signature of Original Problem Solving

Henk Haarmann, Polly O'Rourke, Timothy George, Alexei Smaliy, Kristin Grunewald, Joseph Dien.

### Brain Biomarkers of Neural Efficiency during Cognitive-Motor Performance:

Performing Under Pressure  
Michelle Costanzo, Bradley D. Hatfield.

### Understanding Brain Connectivity Patterns during Motor Performance under Social-Evaluative Competitive Pressure

Hyuk Oh, Rodolphe J. Gentili, Michelle Costanzo, Ronald Goodman, Li-Chuan Lo, Jeremy Rietschel, Mark Saffer, Bradley D. Hatfield.

### Human-Robotic Collaborative Intelligent Control for Reaching Performance

Rodolphe J. Gentili, Hyuk Oh, Isabelle Shuggi, Ronald Goodman, Jeremy Rietschel, Bradley D. Hatfield, James Reggia.

### Controlling Attention in the Face of Threat: A Method for Quantifying Endogenous Attentional Control

Bartlett Russell, Bradley D. Hatfield.

# Parallel Sessions

## DHM

### DHM in Aviation and Space

Chair(s): To be announced

### Attentional Biases During Steering Behavior

Hans-Joachim Bieg,  
Heinrich Bülthoff, Lewis L Chuang.

### Predicating the Safety of Airport Approaches Using a Cognitive Pilot Model

Changpeng Yang, Yin Tangwen,  
Shan Fu.

### Optimization for Lunar Mission Training Scheme Based on Anybody

Jing Zhang, Rong Zhou, Jingwen Li,  
Li Ding, Li Wang.

### Pilot Performance Models

Xiaoyan Zhang, Hongjun Xue.

### Simulation of Pushing the Push-pull Rod Action based on Human Body Dynamics

Zheng Yang, Yiyuan Zheng, Shan Fu.

## DUXU

### Ergonomics in Design of Information Systems - II

Chair(s): Francisco Santos Rebelo.

### User Experience Starts At The Keystroke Level: The Model of User Experience (MUX)

Stefan Brandenburg, Marlene Vogel,  
Uwe Drewitz.

### Assessing Designs of Interactive Voice Response Systems for Better Usability

Siddhartha Asthana,  
Pushpendra Singh, Amarjeet Singh.

### Ergonomics Aspects in Operators of the Electric Power Control and Operation Centers

Miguel Otávio Melo,  
Francisco Santos Rebelo, Luiz Bueno,  
Ana Almeida.

### The challenges and solutions for producing e-Learning contents

Carlos Ferreira, Geraldo Fernandes.

### Virtual environment to treat social anxiety

Ana Paula Cláudio, Maria  
Beatriz Carmo, Tânia Pinheiro,  
Francisco Esteves, Eder Lopes.

### Are Emergency Egress Signs Strong Enough to Overlap the Influence of the Environmental Variables?

Elisangela Vilar,  
Francisco Santos Rebelo,  
Paulo Noriega, Luís Teixeira,  
Emília Duarte, Ernesto Vilar Filgueiras.

### Beyond Flat Screens: Bringing Design Thinking to Life

Chair(s): Martin Osen, Roby Attisano.

### Merging Two Worlds Together

Alex Schieder.

### SustainDesign. A project with Young Creative People

Roby Attisano.

### Humor Illustration Design, a Summary of Illustrations, Designs, and Projects

Jochen Gasser.

### Minimal Yet Integral – Designing a Gestural Interface

Martin Osen.

### Interactive Visualization of Evolving Force-Directed Graphs

Walter Rafelsberger.

### An Individual Differences Approach to Design Fixation: Comparing Laboratory and Field Research

Brooke G. Bellows, Robert J Youmans,  
Jordan Higgins.

### How to Create a User Experience Story

Ioanna Michailidou, Constantin Von  
Saucken, Udo Lindemann.

### Developing Next Generation Crowd Sourced UAVs

Chair(s): Stephen D Prior.

### Applications of open source based UAV's in the fight against crime

Murray Spoelstra.

### AeroQuad - Development Challenges with Crowd Sourced UAV's.

Ted Carancho.

### HALO the Winning Entry to the DARPA UAVForge Challenge 2012

Stephen D Prior, Siu-Tsen Shen,  
Mehmet Ali Erbil, Mantas Brazinskas,  
Witold Mielniczek.

### Development of an Unconventional Unmanned Coaxial Rotorcraft: GremLion

Feng Lin, Kevin Ang, Fei Wang,  
Ben Chen, Tong Heng Lee,  
Beiqing Yang, Miaobo Dong,  
Xiangxu Dong, Jinqiang Cui, Swee  
King Phang, Biao Wang, Delin Luo,  
Shiyu Zhao, Mingfeng Yin, Kun Li,  
Kemao Peng, Guowei Cai.

### Extractor X - Autonomous Quad Tilt Rotor UAV

Joshua Chao.

### Evaluating a Web-based Tool for Crowdsourced Navigation Stress Tests

Florian Meier, Alexander Bazo,  
Manuel Burghardt, Christian Wolff.



**DUXU**

**Enterprise Software Product UI Design**  
Chair(s): Esin Kiris.

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**A User Experience Study of Airline Websites**  
Mahmut Ekşioğlu, Esin Kiris, Tuğba Çakır, Merve Güvendik, Efsane Koyutürk, Merve Yılmaz.

**Looking beyond the Single Pane of Glass: Visualization and Perspective in Enterprise Network**  
Maria C Velez-Rojas, Serge Mankovskii, Michael Roberts, Steven Greenspan, Esin Kiris.

**User-Centered Soft Innovation in Established Business Fields**  
Henning Breuer, Zeno Wolze, Elisabeth Umbach.

**The Adoption of Mobile Internet: Industry and Users Experiences**  
Manuel José Damásio, Inês Teixeira-Botelho, Sara Henriques, Patrícia Dias.

**Online Advertising as a New Story: Effects of User-driven Photo Advertisement in Social Media**  
Min Shin, Da Young Ju.

**DAPI**

**Pervasive Systems for Assistive Environments**  
Chair(s): Ilias Maglogiannis.

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**The role of emotion and mood in elderly's independent living**  
Panos D Bamidis.

**Fusion of Color and Depth Video for Human Behavior Recognition in an Assistive Environment**  
Dimitrios Kosmopoulos, Paul Doliotis, Vassilis Athitsos, Ilias Maglogiannis.

**Design and Evaluation of a Nonverbal Communication Platform Between Assistive Robots and their Users**  
Anthony Threatt, Keith Evan Green, Johnell O. Brooks, Jessica Merino, Ian D. Walker, Paul Yanik.

**SmartAssist: Open Infrastructure and Platform for AAL Services**  
Peter Rothenpieler, Darren Carlson, Andreas Schrader.

**Design Considerations for Leveraging Over-familiar Items for Elderly Health Monitors**  
Edward Wang, Samantha Ipser, Patrick Little, Noah Duncan, Benjamin Liu, Shinsaku Nakamura.

**Multi-person Identification And Localization For Ambient Assistive Living**  
Georgios Galatas, Shahina Ferdous, Filia Makedon.

**HAS**

**Security Behaviour**  
Chair(s): Kerry-Lynn Thomson.

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**A Study using TAM on the Recognition of Individuals' Privacy and the Acceptance of Risk - The Case of Japanese Internet users -**  
Ayako Komatsu.

**Health is Silver, Beauty is Golden? How the Usage Context Influences the Acceptance of an Invasive Technology**  
Johanna KLuge, Martina Ziefle.

**An Influence of Self-evaluated Gender Role on the Privacy Management Behavior in Online Social Networks**  
Kijung Lee, Il-Yeol Song.

**Perception of Risky Security Behaviour by Users: Survey of Current Approaches**  
Lynsay Shepherd, Jacqueline Archibald, Ian Ferguson.

**"Click me if you can!" – When do users follow a call to action in an online message?**  
Thomas Pfeiffer, Heike Theuerling, Michaela Kauer.

**Studying the Effect of Human Cognition on Text and Image Recognition CAPTCHA Mechanisms**  
Marios Belk, Panagiotis Germanakos, Christos Fidas, George Spanoudis, George Samaras.

Distributed, Ambient and Pervasive Interactions

Human Aspects of Information Security, Privacy and Trust

THURSDAY 16:00 - 18:00



## HCI

Human-Computer Interaction

**UX Engineering and UX Design**  
Chair(s): Masaaki Kurosu.

**Intelligent User Interfaces for Privacy-respecting, Personal Information Management across the Social Web**

Chair(s): Dieter Spath, Fabian Hermann.

**Speech and Dialogue Systems**

Chair(s): Ing-Marie Jonsson.

**Driving and interacting**

Chair(s): To be announced

**The Conceptual Model of Experience Engineering (XE)**  
Masaaki Kurosu.

**Usability in RFP's: The Current Practice and Outline for The Future**

Timo Jokela, Juha Laine, Marko H.T. Nieminen.

**User Perceived Value as Foundation for Designing Work-related Systems**

Mikael Runonen.

**Decision Space Visualization: Lessons Learned and Design Principles**

Jill Drury, Mark Pfaff, Gary Klein, Yikun Liu.

**Understanding User Experience and Artifact Development through Qualitative Investigation: Ethnographic Approach for Human-Centered Design**

Ayako Hashizume, Masaaki Kurosu.

**Human-Machine Interaction Evaluation Framework**

Hans Jander, Jens Alfredson.

**Trust and Privacy in the di.me Userware**

Marcel Heupel, Mohamed Bourimi, Dogan Kesdogan.

**SOCIETY: A Social Reading Application to Join Education and Social Network Experience**

Elena Guercio, Fabio Luciano Mondin, Maurizio Belluati, Lucia Longo.

**A Self-Evaluation Tool for Quantitative User Research Within the digital.me Project**

Andreas Schuller, Rafael Gimenez, Fabian Hermann.

**Interacting with a Context-Aware Personal Information Sharing System**

Simon Scerri, Andreas Schuller, Ismael Rivera, Judie Attard, Jeremy Debattista, Massimo Valla, Fabian Hermann, Siegfried Handschuh.

**Trustworthy and Inclusive Identity Management for Applications in Social Media**

Till Halbach Røssvoll, Lothar Fritsch.

**The di.me User Interface: Concepts for Sharing Personal Information via Multiple Identities in a Decentralized Social Network**

Fabian Hermann, Andreas Schuller, Simon Thiel, Christian Knecht, Simon Scerri.

**Identity Management through «Profiles» - Prototyping an Online Information Segregation Service**  
Julio Angulo, Erik Wästlund.

**Evaluation of WikiTalk – User Studies of Human-Robot Interaction**

Dimitra Anastasiou, Kristiina Jokinen, Graham Wilcock.

**Situated Multiparty Interaction between Humans and Agents**

Aasish Pappu, Ming Sun, Seshadri Sridharan, Alexander I Rudnicky.

**Iterative and User-centred Design and Development of Social Conversation with a Pedagogical Agent**

Annika Silververg.

**In-Car Information Systems: Matching and Mismatching Personality of Driver with Personality of Car Voice**

Ing-Marie Jonsson, Nils Dahlbäck.

**Emotion and Emotion Regulation Considerations for Speech-Based In-Vehicle Interfaces**

Helen Harris.

**A Knowledge Elicitation Study for Collaborative Dialogue Strategies Used to Handle Uncertainties in Speech Communication While Using GIS**

Hongmei Wang, Ava Gailliot, Douglas Hyden, Ryan Lietzenmayer.

**Investigating the Impact of Combining Speech and Earcons to Communicate Information in e-Government Interfaces**

Badr Mohammed Almutairi, Dimitrios Rigas.

**Auditory and Head-up Displays in Vehicles**

Christina Dicke, Grega Jakus, Jaka Sodnik.

**Reducing Speeding Behavior in Young Drivers Using a Persuasive Mobile Application**

Anne Bergmans, Suleman Shahid.

**Anti-Bump: A Bump/Pothole Monitoring and Broadcasting System for Driver Awareness**

Mohamed Ramadan Fekry, Aya Hamdy, Ayman M. Ezzat Atia.

**Proposal for Driver Distraction Indexes Using Biological Signals Including Eye Tracking**

Nobumichi Takahashi, Satoshi Inoue, Hironori Seki, Shuhei Ushio, Yukou Saito, Koyo Hasegawa, Michiko Ohkura.

**Ergonomics Design on Expert Convenience of Voice-based Interface for Vehicle's AV Systems**

Pei-Ying Ku, Sheue-Ling Hwang, Hsin-Chang Chang, Jian-Yung Hung, Chih-Chung Kuo.

**WheelSense: Enabling Tangible Gestures on the Steering Wheel for In-Car Natural Interaction**

Leonardo Angelini, Maurizio Caon, Francesco Carrino, Stefano Carrino, Denis Lalanne, Omar Abou Khaled, Elena Mugellini.

**Single-Handed Driving System with Kinect**

Jae Pyo Son, Arcot Sowmya.

FRIDAY 8:00 - 10:00



# Parallel Sessions

## HCI

### Novel text input methods

Chair(s): To be announced

### Collaborative Smart Virtual Keyboard with Word Predicting Function

Chau Thai Truong, Duy-Hung Nguyen-Huynh, Minh-Triet Tran, Anh-Duc Duong.

### Keyboard Clawing: Input Method by Clawing Key Tops

Toshifumi Kurosawa, Buntarou Shizuki, Jiro Tanaka.

### Long-Term Study of a Software Keyboard that Places Keys at Positions of Fingers and their Surroundings

Yuki Kuno, Buntarou Shizuki, Jiro Tanaka.

### Speech-based Text Correction Patterns in Noisy Environment

Ladislav Kunc, Tomas Macek, Martin Labsky, Jan Kleindienst.

## HIMI

### Automotive and Aviation

Chair(s): To be announced

### Lifecycle Support of Automotive Manufacturing Systems through a Next-Generation Operator Interface Implementation

Vishal Barot, Robert Harrison.

### What, Where, and When? Intelligent Presentation Management for Automotive Human Machine Interfaces and its Application

Sandro Castronovo, Angela Mahr, Christian Müller.

### Improving the Flexibility of In-Vehicle Infotainment Systems by the Smart Management of GUI-Application Binding related Information

Ran Zhang, Tobias Altmüller.

### Embedded systems: HMI concepts transferability between the aviation, automotive and maritime sectors

Stella I Nikolaou, Sara Silvagni, Cristina Martinez Gomez, Iraklis Lazakis, Tineke Bosma.

### A Semiotic Based Method for Evaluating Automated Cockpit Interfaces

Waldomiro S Moreira, Rodrigo Bonacin.

### Intuitive Gestures On Multi-Touch Displays for Reading Radiological Images

Susanne Bay, Philipp Brauner, Thomas Gossler, Martina Ziefle.

### Communication Enhancement

Chair(s): Yutaka Ishii, Tomohito Yamamoto.

### Estimation of Interruptibility during Office Work based on PC Activity and Conversation

Satoshi Hashimoto, Takahiro Tanaka, Kazuaki Aoki, Kinya Fujita.

### Web- and mobile-based environment for designing and presenting spatial audiovisual content

Mami Yamanaka, Makoto Uesaka, Yoshiteru Ito, Shigeyuki Horikawa, Hikari Shiozaki, Tomohito Yamamoto.

### Identification of Agency through Virtual Embodied Interaction

Takafumi Sakamoto, Yugo Takeuchi.

### Design Approach of Simulation Exercise with Use of Device and its Significance

Shigeru Wesugi.

### Proposal of Avatar Generating Method by Composition of the Portraits Made by Friends

Masashi Okubo, Satoshi Nobuta.

### Development of a Mobile Tablet PC with Gaze-Tracking Function

Michiya Yamamoto, Hironobu Nakagawa, Koichi Egawa, Takashi Nagamatsu.

### A New Presence Display System Using Physical Interface Running on IP-phones

Takeshi Sakurada, Yoichi Hagiwara.

### Customer value by human interface

Chair(s): Shin'ichi Fukuzumi.

### Effective practice of HCD by Usability Modeling and Standardization

Hideo Zempo.

### Environment-Centered Approach to ICT Service Design

Takehiko Ohno, Momoko Nakatani, Yurika Katagiri.

### Physiological Responses and Kansei Evaluation of Awareness

Keiko Kasamatsu, Hiroaki Kiso, Misako Yamagishi, Hideo Jingu, Shin'ichi Fukuzumi.

### Collaborative User Experience Design Methods for Enterprise System

Hiroko Yasu, Naoko Iwata, Izumi Kohno.

### Generalized Algorithm for Obtaining a Family of Evaluating Attributes' Sets Representing Customer's Preference

Takuya Mogawa, Fumiaki Saitoh, Syohei Ishizu.

### Towards An Ontological Interpretation on the i\* Modeling Language Extended With Security Concepts: a Bunge-Wand-Weber Model Perspective

Gen-Yih Liao, Po-Jui Liang, Li-Ting Huang.

Human Interface and the Management of Information

FRIDAY 8:00 - 10:00



## EPCE

**Human Factors and road safety**  
Chair(s): Paul Salmon.

**Human-Automation Integration Issues in Highly Automated Unmanned Vehicles**  
Chair(s): Axel Schulte.

**Actualising a safe transport system through a human factors systems approach**

Michael Lenné, Paul Salmon, Neville A. Stanton, Elizabeth Grey.

**The Safe System Approach - A Road Safety Strategy Based on Human Factors Principles**

Peter Larsson, Claes Tingvall.

**Awesome Foursome? The Compatibility of Driver, Cyclist, Motorcyclist, and Pedestrian Situation Awareness at Intersections**

Paul Salmon, Michael Lenné, Guy Walker, Ashleigh Filtness.

**Development of a Systems-based Human Factors Design Approach for Road Safety Applications**

Gemma J. M. Read, Paul Salmon, Michael Lenné.

**An Evaluation of the Interior Design of the Stockholm Bypass Tunnel - A Driving Simulator Study**

Ruggero L. Ceci, Christopher Patten, Selina Mardh.

**Combined Effect on Accident Risk of a Dual Task and Higher Driving Speed: A Simulator Study**

Evangelia Portouli, Vassilis Papakostopoulos, Dimitris Nathanael.

**An Evaluation of Cognitive Design Features of Traffic Signs in Turkey**

Mahmut Ekşioğlu, Onur Yıldırım, Yonca Kumsar, Doğukan Işık.

**Effects of Individual Differences on Human-Agent Teaming for Multi-Robot Control**

Jessie YC Chen, Stephanie Quinn, Julia Wright, Michael Barnes.

**«Person to Purpose» Manpower Architecture Applied to A Highly Autonomous UAS Cloud**

Jon T Platts, Scott Findlay, Andrew Berry, Helen Keirl.

**An Overview of Humans in Autonomy for Military Environments: Safety, Types of Autonomy, Agents, and User Interfaces**

Michael Barnes, Jessie YC Chen, Florian G Jentsch, Elizabeth Redden, Kenneth Light.

**Single-Seat Cockpit-based Management of Multiple UCAVs Using On-Board Cognitive Agents for Coordination in Manned-Unmanned Fighter Missions**

Stefan Gangl, Benjamin Lettl, Axel Schulte.

**Design of a guided missile operator assistant system for high-tempo intervention support**

Tobias Kloss, Axel Schulte.

**Enabling Dynamic Delegation Interactions with Multiple Unmanned Vehicles; Flexibility from Top to Bottom**

Christopher Miller, Mark Draper, Joshua Hamell, Gloria Calhoun, Timothy Barry, Heath Ruff.

**The Impact of Type and Level of Automation on Situation Awareness and Performance in Human-Robot Interaction**

David Schuster, Florian G Jentsch, Thomas Fincannon, Scott Ososky.

## UAHCI

**Design Access in Human Communication and Interaction**

Chair(s): Fong-Gong Wu.

**Multi-Modal, Multi-Party, and Multi-Brain Brain-Computer Interfacing**

Chair(s): Anton Nijholt, Brendan Z Allison.

**Motion Sensing Technology on Rehabilitation for Children with Physical Disabilities**

Chien-Yu Lin, Lin-Ming Chi, Shu-Hua Chen.

**Exploring psychophysical factors influencing visibility of virtual image display**

Shys-Fan Yang-Mao, Ming-Hui Lin, Yu-Ting Lin, Wen-Jun Zeng, Yueh-Yi Lai.

**Evaluation of Guideline System and Sign Design of Public Space in Taiwan Emergency Department**

Wan-Ting Tseng, Jin-Han Tseng, Hsin-Hsi Lai, Fong-Gong Wu.

**Gesture-based Interaction for Cultural Exhibitions - The Effect of Discrete Visual Feedback on the Usability of Gesture-based User Interfaces**

Tin-Kai Chen, Robert CC Chen, Fong-Gong Wu.

**Pupils' Satisfaction in Using Netbook**

Fong-Gong Wu, Chii-Zen Yu, Chiu-Min Yen.

**Design Research of Augmented Realty Plant to Depressurize on Office Ladies**

Jei-Chen Hsieh, Chang-Chan Huang, Hwa-San Kwan.

**A Method To Evaluate Disabled User Interaction: A Case Study With Down Syndrome Children**

Isys Macedo, Daniela G Trevisan.

**Investigation into a Mixed Hybrid using SSVEP and Eye Gaze for Optimising User Interaction within a Virtual Environment**

Paul McCullagh, Leo Galway, Gaye Lightbody.

**Effortless Passive BCIs for Healthy Users**

Anne-Marie Brouwer, Jan Van Erp, Dirk Heylen, Ole Jensen, Mannes Poel.

**Multi-modal Computer Interaction for Communication and Control Using EEG, EMG, EOG and Motion Sensors**

Guenter Edlinger, Christoph Kapeller, Arnau Espinosa, Sergi Torrellas, Felip Miralles, Christoph Guger.

**A Collaborative Brain-Computer Interface for Accelerating Human Decision Making**

Peng Yuan, Yijun Wang, Xiaorong Gao, Tzzy-Ping Jung, Shangkai Gao.

**Brain-computer Interfacing for Users with Cerebral Palsy: Challenges and Opportunities**

Ian Daly, Martin Billinger, Reinhold Scherer, Gernot Müller-Putz.

**Towards Implicit Control through Steady-State Somatosensory Evoked Potentials**

Thorsten O. Zander, Jonas Broenstrup, Elisa Klose, Robert Sonnenberg, Wouter Vos, Marc Grootjen.

**Multi-Brain Games: Cooperation and Competition**

Anton Nijholt, Hayrettin Gurkok.

# Parallel Sessions

## UAHCI

### Accessibility and Software Design for All

Chair(s): Hugo Paredes, Manuel Pérez-Cota.

### Using Mediating Metacommunication to Improve Accessibility to Deaf in Corporate Information Systems on the Web

Aline S Alves, Simone B. Leal Ferreira, Viviane Santos de Oliveira, Ingrid T Monteiro, Denis Silva da Silveira.

### Web Accessibility – From the Evaluation and Analysis to the Implementation – the anGov/PEPPOL Case

Ramiro Gonçalves, Jose L.B. Martins, Frederico Branco, João Barroso.

### Usability in a New DCS Interface - New Model of Viewing in Operator Displays

Manuel Pérez-Cota, Miguel Ramón González-Castro.

### Supporting Accessibility in Higher Education Information Systems

Arsénio Reis, João Barroso, Ramiro Gonçalves.

### Designing for Children with Autism Spectrum Disorders

Thais Castro, Alberto N. Castro Jr., David Lima, Keembéc Relvas, Marcos Paulo Siqueira.

### Early Accessibility Evaluation in Web Application Development

Helmut Vieritz, Daniel Schilberg, Sabina Jeschke.

### One-Handed Gesture Design for Browsing on Touch Phone

Fong-Gong Wu, JO-YU KUO.

## VAMR

### Computational Aspects of Mental Models of Human-Robot Teamwork

Chair(s): Christian Lebiere, Florian G Jentsch.

### What will you do next? A Cognitive Model for Understanding Others' Intentions based on Shared Representations

Haris Dindo, Antonio Chella.

### Human Considerations in the Application of Cognitive Decision Models for HRI

Scott Ososky, Florian G Jentsch, Elizabeth Phillips.

### Toward Task-Based Mental Models of Human-Robot Teaming: A Bayesian Approach

Michael Goodrich, Daqing Yi.

### Cognitive Models of Decision Making Processes for Human-Robot Interaction

Christian Lebiere, Florian G Jentsch, Scott Ososky.

### Computational Mechanisms for Mental Models in Human-Robot Interaction

Matthias Scheutz.

### Virtual and Augmented Reality HCI in Medicine

Chair(s): Vassilis Charissis.

### Gait Analysis Management and Diagnosis in a Prototype Virtual Reality Environment

Salsabeel AlFalah, David K. Harrison, Vassilis Charissis.

### The Design Considerations of a Virtual Reality Application for Heart Anatomy and Pathology Education

Victor Nyamse, Vassilis Charissis, David Moore, Caroline Parker, Soheeb Khan, Warren Chan.

### The Characterisation of a Virtual Reality System to Improve the Quality and to Reduce the Gap between Information Technology and Medical Education

Jannat Falah, David K. Harrison, Vassilis Charissis, Bruce Wood.

### Asynchronous Telemedicine Diagnosis of Musculoskeletal Injuries through a Prototype Interface in Virtual Reality Environment

Soheeb Khan, Vassilis Charissis, David K. Harrison, Sophia Sakellariou, Warren Chan.

### Developing A Theory-Informed Interactive Animation to Increase Physical Activity Among Young People With Asthma

Jennifer Murray, Brian Williams, Gaylor Hoskins, John McGhee, Dylan Gauld, Gordon Brown.

### Spatial Augmented Reality on Person: Exploring the Most Personal Medium

Adrian Johnson, Yu Sun.

## CCD

continues...

### Product & Service Innovation based on New Developments in Human Factors

Chair(s): Binbin Li.

### Service Design Research about Redesign Sedentary Office Guided by New Ergonomics Theory

Yingxue Zhao, Craig Vogel, Gerald Michaud, Steven Doehler.

### The Study of Modern Emergency Products under the Direction of New Ergonomics

Jianxin Cheng, Meiyu Zhou, Junnan Ye.

### An Empirical Research on Experience Evaluation and Image Promotion of Wuxi Fruit Brand: the Case of the Brand Package of Yangshan Shuimi Peaches

Wei Xiong, Liang Yin, Xinli Lin, Shengli Lu.

### Human Factors Design Research with Persona for Kids Furniture in Shanghai Middle-Class Family

Linong Dai, Boming Xu.

### From Logic of Things to Logic of Behaviors

Xiangyang Xin.

### An Empirical Research on Designing and Promoting the Brand Logo of Yangshan Shuimi Peaches Based on the Theory of Brand Experience

Liang Yin, Junmiao Wang, Ying Shan, Yi Jin, Zilin Sun, Weifeng Huang, Binbin Li.

### Service Based Design Solutions— A Case of Migrant Workers' Affective Links with their Families in Rural Areas of China

Jikun Liu, Qing Liu, Chenyu Zhao.

### Interaction Design Research of Home Integrated Ceiling Based on Neo-Ergonomics

Qing Ge, Yin Wang.

Virtual, Augmented and Mixed Reality

Cross-Cultural Design

## CCD

**Globally Distributed Work- the Interplay between the Social and the Technical**

Chair(s): Ye Li, Alexander Mädche.

**Extending Role of "I" Virtually – Identity Performance and their Influence on Individual Behaviour and Team Performance in Globally Distributed Work Virtual Teams**

K.B. Akhilesh, Sindhuja CV, Simran k Kahai.

**Mobile Application Development in FLOSS Platform: A Collaborative Network Approach**

Qiqi Jiang, Chuan-Hoo Tan, Kwok Kee Wei.

**Uncovering the Effects of Cultural Intelligence on Cross-Cultural Virtual Collaboration Processes**

Ye Li, Asgeir Skulason.

**On Relationship between Self-Constraint and Individual Behavior in Video-Mediated Multicultural Group Decision Making**

Hui Li, P. L. Patrick Rau, Xiaobo Zhao, Gavriel Salvendy.

**Trust and Coordination in Offshore Outsourcing: An Account of Intercultural Collaboration in a Danish and Indian IT Context**

Thomas Tøth.

**Supporting Globally Distributed Work - Cultural Adaptivity meets Groupware Tailorability**

Angela Hirlehei, Axel Hunger.

## DUXU

Design, User Experience, and Usability

**Cross-Cultural Interface Design**

Chair(s): Nouf Khashman, Emilie Gould.

**Two Solitudes Revisited: A Cross-cultural Exploration of Online Image Searchers' Behaviours**

Elaine Ménard, Nouf Khashman, Jonathan Dorey.

**Intercultural User Interface Design – Culture-Centered HCI Design – Cross-Cultural User Interface Design: Different Terminology or Different Approaches?**

Rüdiger Heimgärtner.

**Exploring Offline Browsing Patterns to Enhance the Online Environment**

Xiaopeng Guo, Jie Gao, Yujing Zeng, Zhenghua Zhang.

**Tracing Technology Diffusion of Social Media with Culturally Localized User Experience Approach**

Huatong Sun.

**Banner Evaluation Predicted by Eye Tracking Performance and the Median Thinking Style**

Man Ying Wang, Da-Lung Tang, Chih Tung Kao, Vincent C. Sun.

**Observation Analysis Method for Culture Centered Design - Proposal of KH method -**

Kaho Asano, Kazuhiko Yamazaki.

**User Experience for Mobile Business Applications**

Chair(s): Steffen Hess, Ralf Carbon.

**User Interaction Forensics – Detecting and Interpreting the User's Footprints during Touch Interaction**

Kai Breiner.

**Addressing Animated Transitions already in Mobile App Storyboards**

Marcus Trapp, René Yasmin.

**Novel Method of Evaluating GUI Design from the Viewpoint of Worker Experience -Central control systems for social infrastructure-**

Daiki Hama, Mai Kurioka, Mariko Kato, Ken Imamura, Miwa Nakanishi.

**Developing Interactive Checklist for Nurses' Handoff in Intensive Care Unit**

Shang Hwa Hsu, Yan-Ying Li.

**9/11 Memorial App: A Case Study of Serious Smart Phone UX Design**

Tobias Komischke.

**Industrial Software User Experience**

Chair(s): Sanjay Tripathi.

**Pragmatic Approach to Cost Benefit Analysis of User Centered Design**

Izumi Kohno, Hiroko Yasu, Satoshi Sugawara, Masahiro Nishikawa.

**A User Centred Approach to Determining the Impact of Faster Broadband on Small and Medium Sized Enterprises**

Doug L Williams, Andy Gower, Joshan Meenowa, Jon Wakeling.

**A Work-Centred, Systems Engineering Approach to Interface Design for Command and Control**

Bruce A Chalmers.

**SysML-based Approach for Automation Software Development – Explorative Usability Evaluation of the Provided Notation**

Daniel Schütz, Martin Obermeier, Birgit Vogel-Heuser.

**Emotional Experience and Interactive Design in the Workplace**

Kuo-Pin Chen, Wen-Huei Chou.

**How to Design Experiences: Macro UX versus Micro UX Approach**

Constantin Von Saucken, Ioanna Michailidou, Udo Lindemann.



# Parallel Sessions

## DUXU

### Energy Feedback Design and Information Visualization

Chair(s): Janelle LaMarche, Brian Y Lim.

### Interaction design in daily activity

Chair(s): Yoichi Motomura.

### Social Context and Game Mechanics for Energy Efficiency and Peak Load Reduction

Yoav Lurie.

### The Usability Perception Scale (UPscale): A Measure for Evaluating Feedback Displays

Beth Karlin, Rebecca Ford.

### Graphical Displays in Eco-Feedback: A Cognitive Approach

Rebecca Ford, Beth Karlin.

### Design Matters: Mid-Term Results from a Multi-Design Fuel Economy Feedback Experiment

Tai Stillwater, Kenneth Kurani.

### Classifying Energy-related Events Using Electromagnetic Field Signatures

Anand Kulkarni, Karla Conn Welch.

### The Driving Machine: Mobile UX Design that Combines Information Design with Persuasion Design

Aaron Marcus, Scott Abromowitz.

### CHARM Pad: Ontology-based Tool for Learning Systematic Knowledge about Nursing

Munehiko Sasajima, Satoshi Nishimura, Yoshinobu Kitamura, Akemi Hirao, Kanetoshi Hattori, Akemi Nakamura, Hiroe Takahashi, Yoshiyuki Takaoka, Riichiro Mizoguchi.

### Community Participation Support using an ICF-based Community Map

Satoru Kitamura, Koji Kitamura, Yoshifumi Nishida, Kenichiro Sakae, Junko Yasuda, Hiroshi Mizoguchi.

### Interactive Rock Climbing Playground Equipment: Modeling through Service

Mikiko Oono, Koji Kitamura, Yoshifumi Nishida, Yoichi Motomura.

### Co-creation of the nursing assist system with nurses in practice by a workflow evaluation method

Junji Ohyama, Takehiro Matsumoto, Mizuho Okada, Yoichi Motomura, Hiroshi Sato.

### Interaction Design using a Child Behavior-Geometry Database

Hiroyuki Kakara, Yoshifumi Nishida, Hiroshi Mizoguchi.

### Capturing Nursing Interactions from Mobile Sensor Data and In-room Sensors

Sozo Inoue, Kousuke Hayashida, Masato NAKAMURA, Yasunobu Nohara, Naoki Nakashima.

### Participatory Interaction Design for the Healthcare Service Field

Takuichi Nishimura, M. Kobayakawa, N. Nakajima, K.C. Yamada, T. Fukuhara, M. Hamasaki, H. Miwa, Kentaro Watanabe, Y. Sakamoto, T. Sunaga, Yoichi Motomura.

## DAPI

### Interaction for Ubiquitous Virtual Reality - I

Chair(s): Woontack Woo.

### An approach to the content-to-content interactivity in performing arts over networks

Boncheol Goo.

### SemanticRadar: AR-based Pervasive Interaction Support via Semantic Communications

Heesuk Son, Byoungoh Kim, Taehun Kim, Dongman Lee, SoonJoo Hyun.

### The New Communication Interface to Determine the Lifespan of Digital Information

Sooyeon Maeng, Bong Gwan Jun.

### Long-range Hand Gesture Interaction Based on Spatio-temporal Encoding

Jaewon Kim, Gyu Chull Han, Ig-Jae Kim, Hyoung-Gon Kim, Sang Chul Ahn.

### Intelligent Machine Space for Interacting with Human in Ubiquitous Virtual Reality

Youngho Lee, Young J. Ryoo, Jongmyong Choi, Sungtae Moon.

Distributed, Ambient and Pervasive Interactions

FRIDAY 8:00 - 10:00



## HCI

Human-Computer Interaction

<p><b>Gesture-based interaction</b> Chair(s): To be announced</p>	<p><b>Recognizing Emotions</b> Chair(s): To be announced</p>	<p><b>Design and evaluation techniques and methods for medical and rehabilitation devices</b> Chair(s): Simone Borsci.</p>	<p><b>User interface design</b> Chair(s): Sheue-Ling Hwang.</p>
<p><b>Functional Gestures for Human-Environment Interaction</b> Stefano Carrino, Maurizio Caon, Omar Abou Khaled, Rolf Ingold, Elena Mugellini.</p> <p><b>Finger Controller : Natural User Interaction using Finger Gestures</b> Unseok Lee, Jiro Tanaka.</p> <p><b>Computational Cognitive Modeling of Touch and Gesture on Mobile Multitouch Devices: Applications and Challenges for Existing Theory</b> Kristen K. Greene, Franklin P. Tamborello, Ross Micheals.</p> <p><b>A Method for Single Hand Fist Gesture Input to Enhance Human Computer Interaction</b> Tao Ma, William Wee, Chia Yung Han, Xuefu Zhou.</p> <p><b>MOBAJES: Multi-User Gesture Interaction System with Wearable Mobile Device</b> Enkhbat Davaasuren, Jiro Tanaka.</p> <p><b>The Language of Motion: A Taxonomy for Interface</b> Elaine Froehlich, Brian Lucid, Heather Shaw.</p> <p><b>Study of Interaction Concepts in 3D Virtual Environment</b> Vera Oblaender, Maximilian Eibl.</p>	<p><b>Personality and Emotion as Determinants of the Learning Experience: How Affective Behavior Interacts with Various Components of the Learning Process</b> Zacharias Lekkas, Panagiotis Germanakos, Nikos Tsianos, Constantinos Mourlas, George Samaras.</p> <p><b>Evaluating Engagement Physiologically and Knowledge Retention Subjectively through Two Different Learning Techniques</b> Marvin Andujar, Josh Ekandem, Juan Gilbert, Patricia A Morreale.</p> <p><b>A New E-learning System Focusing on Emotional Aspect Using Biological Signals</b> Saromporn Charoenpit, Michiko Ohkura.</p> <p><b>Evaluating Emotional State during 3DTV Viewing Using Psychophysiological Measurements</b> Kiyomi Sakamoto, Seiji Sakashita, Kuniko Yamashita, Akira Okada.</p> <p><b>The Impact of Gender and Sexual Hormones on Automated Psychobiological Emotion Classification</b> Stefanie Rukavina, Sascha Gruss, Junwen Tan, David Hrabal, Steffen Walter, Harald Traue, Lucia Jerg-Bretzke.</p> <p><b>Comparison of Kansei Information between Joyful and Happy Expressions in Dance</b> Nao Shikanai, Kozaburo Hachimura.</p>	<p><b>Environmental Evaluation of a Rehabilitation Aid Interaction under the Framework of the Ideal Model of Assistive Technology Assessment Process</b> Stefano Federici, Simone Borsci, Maria Laura Mele.</p> <p><b>User Requirements for the Development of Smartphone Self-Reporting Applications in Healthcare</b> Michael P Craven, Kirusnapillai Selvarajah, Robert Miles, Holger Schnädelbach, Adam Massey, Kavita Vedhara, Nicholas Raine-Fenning, John Crowe.</p> <p><b>A Grounded Procedure for Managing Data and Estimating the Sample Size of a Home Medical Device Assessment</b> Simone Borsci, Jennifer Martin, Julie Barnett.</p> <p><b>Native Apps versus Web Apps: Which is Best for Healthcare Applications?</b> Kirusnapillai Selvarajah, Michael P Craven, Adam Massey, John Crowe, Kavita Vedhara, Nicholas Raine-Fenning.</p> <p><b>Evaluation of Hip Impingement Kinematics on Range of Motion</b> Mahshid YazdiFar, Mohammadreza Yazdifar, Pooyan Rahmanivahid, Saba Eshraghi, Ibrahim Esat, Mahmoud Chizari.</p> <p><b>Study on Relationship Between Foot Pressure Pattern and Hallux Valgus Progression</b> Saba Eshraghi, Ibrahim Esat, Pooyan Rahmanivahid, Mahshid YazdiFar, Mona Esharghi, Amir Mohagheghi, Sara Horne.</p>	<p><b>Human Factor Research of User Interface for 3D Display</b> Chih-Hung Ting, Teng-Yao Tsai, Yi-Pai Huang, Wen-Jun Zeng, Ming-Hui Lin.</p> <p><b>Evaluation of Mono/Binocular Depth Perception Using Virtual Image Display</b> Shys-Fan Yang-Mao, Yu-Ting Lin, Ming-Hui Lin, Wen-Jun Zeng, Yao-lien Wang.</p> <p><b>Establishing a Cognitive Map of Public Place for Blind and Visual Impaired by Using IVEO Hands-On Learning System</b> Qing-Wen Lin, Sheue-Ling Hwang, Jan-Li Wang.</p> <p><b>Ergonomics Design with Novice Elicitation on an Auditory-Only In-Vehicle Speech System</b> Ming-Hsuan Wei, Sheue-Ling Hwang, Hsin-Chang Chang, Jian-Yung Hung, Chih-Chung Kuo.</p> <p><b>Towards a Design Guideline of Visual Cryptography on Stereoscopic Displays</b> Shih-Lung Tsai, Chao-Hua Wen.</p> <p><b>The Development of an Innovative Design Process for Eco-efficient Green Products</b> Shiaw-Tsyr Uang, Cheng-Li Liu.</p> <p><b>Towards Ergonomic User Interface Composition: A Study about Information Density Criterion</b> Yoann Gabillon, Sophie Lepreux, Káthia Marçal De Oliveira.</p>

FRIDAY 10:30 - 12:30

# Parallel Sessions

## HCI

### Human - Robot Interaction

Chair(s): To be announced

### Ergonomic Rating of Interaction Technologies for A Mobile Robot System

Uwe Herbst, Steffen Rühl, Andreas Hermann, Zhixing Xue, Klaus Bengler.

### Exploring Children's Attitudes towards Static and Moving Humanoid Robots

Fang-Wu Tung, Tsen-Yao Chang.

### Interface Design for Minimizing Loss of Context in In-situ Remote Robot Control

Jong-gil Ahn, Gerard Jounghyun Kim.

### Generation of Facial Expression Emphasized with Cartoon Techniques Using a Cellular-phone-type Teleoperated Robot with a Mobile Projector

Yu Tsuruda, Maiya Hori, Hiroki Yoshimura, Yoshio Iwai.

### Developing Sophisticated Robot Reactions by Long-term Human Interaction

Hiromi Nagano, Masataka Tokumaru, Miho Harata.

## HIMI

### Application in physiological and behavioral research for HCI related field

Chair(s): Kentaro Kotani.

### Assessing Mental Workload of In-Vehicle Information Systems by Using Physiological Metrics

Susumu Enokida, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao, Takahiro Ishikawa, Kenji Ishida.

### Changes in Posture of the Upper Extremity Through the Use of Various Sizes of Tablets and Characters

Hiroki Maniwa, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao.

### Non-contact Measurement of Biological Signals Using Microwave Radar

Hiroki Morodome, Satoshi Suzuki, Takafumi Asao, Kentaro Kotani.

### Development of Screening Visual Field Test Application that Use Eye Movement

Makoto Mizutani, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao, Tetsuya Sugiyama, Mari Ueki, Shota Kojima, Maho Shibata, Tsunehiko Ikeda.

### Estimation of driver's steering intention by using mechanical impedance

Takafumi Asao, Hiroo Suzuki, Satoshi Suzuki, Kentaro Kotani.

### Optimization of GUI on Touchscreen Smartphones Based on Physiological Evaluation Feasibility of Small Button Size and Spacing for Graphical Objects

Shohei Komine, Miwa Nakanishi.

### Personalised information spaces

Chair(s): To be announced

### Integrating the Anchoring Process with Preference Stability for Interactive Movie Recommendations

I-Chin Wu, Yun-Fang Niu.

### The right level of complexity in a banner ad – Roles of construal level and fluency

Chih Tung Kao, Man Ying Wang.

### TAGZILLA: Tag-based File Storage and Retrieval

Vikram Nair, Vijayanand Banahatti, Niranjana Pedaneekar.

### A Study of Customization for Online Business

Vincent Cho, Candy Lau.

### Similar or Not Similar: This Is a Parameter Question

Andrey A Masiero, Flavio Tonidandel, Plinio Thomaz Aquino Junior.

### I See, Please Tell Me More - Exploring Virtual Agents as Interactive Storytellers

David Lindholm, Eva Petersson Brooks, Tom Nauerby.

### Supporting Group and Personal Memory in an Interactive Space for Collaborative Work

Mari Tyllinen, Marko H.T. Nieminen.

### Safety-critical applications

Chair(s): To be announced

### Using Video Prototyping as a Means to Involve Crisis Communication Personnel in the Design Process: Innovating Crisis Management by Creating a Social Media Awareness Tool

Joel Brynielsson, Fredrik Johansson, Sinna Lindquist.

### Supporting Residents Evacuation and Safety Inquiry in case of Disaster

Masahiro Arima, Takuya Ueno, Michitaka Arima.

### Knowledge Visualization aiding Decision Making for Alarm Resolution in Electrical Power Systems

Wagesh Kulkarni.

### The Study of Surveillance around the Ship II

Tadasuke FURUYA, Takafumi SAITO.

### Increasing Situational Awareness of Indoor Emergency Simulation using Multilayered Ontology-Based Floor Plan Representation

Chaianun Damrongrat, Hideaki Kanai, Mitsuru Ikeda.

### The Effect of Information Quantity on Cbp Interface in the Advanced Nuclear Power Plant

Min-Chi Hseih, Sheue-Ling Hwang.

Human Interface and the Management of Information

FRIDAY 10:30 - 12:30



## EPCE

Engineering Psychology and Cognitive Ergonomics

### Situated Cognitive Engineering for Citizen's Well-Being

Chair(s): Mark A. Neerincx.

### Inclusive design: bridging theory and practice

Anita Cremers, Mark A. Neerincx, Jacomien De Jong.

### User requirement analysis of social conventions learning applications for non-natives and low-literates

Dylan G.M. Schouten, Nanja Smets, Marianne Driessen, Marieke Hanekamp, Mark A. Neerincx, Anita Cremers.

### Usability an Important Goal for the Design of Therapeutic Games for Older Adults

Anne McLaughlin, Michelle Bryant, John Sprufera, Jason Allaire, Maribeth Gandy.

### Aged People's Emotion Elicited by Touching Materials of Armrests

Tyan-Yu Wu, G. E. Pon.

### Online single EEG channel based automatic sleep staging

Gary N Garcia-Molina, Michele Bellesi, Sander Pastoor, Stefan Pfundtner, Brady Riedner, Giulio Tononi.

### Cognitive Engineering and Emergency Management

Denis A Coelho.

## UAHCI

Universal Access in Human-Computer Interaction

### Design Access in Ergonomics and Interaction

Chair(s): Fong-Gong Wu.

### Universal Conceptual Design Solution for Built-in Orthopaedic Rocker-bar Device

Robert CC Chen.

### Design Guidelines for an Integrated PHR System: An Approach for UI Designers to Break Down Individual-Level Barriers to PHR Adoption

Shu-Wen Tzeng, Yuan Zhou.

### Evaluating User Interface Design using Hierarchical Requirements Extraction Method (REM)

Toshiki Yamaoka.

### Exploration of Picture E-Book Design for App Web

Cheih-Ying Chen, Hung-Chieh Chang.

### The Innovative Concept of Icon Display on Elevator's Key Button

Ming-Tang Wang.

### GreenSense: Developing Persuasive Service Technology by Integrating Mobile Devices and Social Interaction for Sustainable and Healthy Behavior

Po-Chun Chen, Taysheng Jeng, Yi-Shin Deng, Sheng-Fen Chien.

### Developing Story Performing System for Children

Chien-Hsu Chen, Shao Yu Wang, Yi Chia Nina Lee.

### Inclusive education

Chair(s): To be announced

### Read-Aid - An Assistive Reading Tool for Children with Dyslexia

Suvarna Rekha Chinta, Sai Gollapudi, Harini Sampath, Bipin Indurkha.

### Ysitools: A Set of Generic Tools for the Analysis of Eye-movements

Damien Appert, Philippe Truillet.

### Universal Design and Accessibility Standards in Online Learning Objects

Cláudia Mara Scudelari de Macedo, Vania Ribas Ulbricht.

### Introducing an Information System for successful support of selective attention in online courses

Martin Ebner, Josef Wachtler, Andreas Holzinger.

### Challenges for Inclusive Affective Detection in Educational Scenarios

Olga C. Santos, Alejandro Rodriguez-Ascaso, Jesus Boticario, Sergio Salmeron, Pilar Quiros, Raul Cabestrero.

### Towards an Affective Computing Feedback System to Benefit Underserved Individuals: An Example Teaching Social Media Skills

Mohammad Nasser Saadatzi, Karla Conn Welch, Robert Pennington, James Graham.

### Handling Structural Models Composed of Objects and Their Mutual Relations in the Spatial Cognition Experiments

Nobuhito Yamamoto, Shoko Shiroma, Tomoyuki Nishioka.

### Technologies for Enhancing Universal Access

Chair(s): João Barroso, Leontios Hadjileontiadis.

### A Biological and Real-time Framework for Hand Gestures and Head Poses

Mario Saleiro, Miguel Farrajota, Kasim Terzic, João Rodrigues, Hans Du Buf.

### Social Media as Online Mentoring Tools for STEM Students with and without Disabilities

Robert Todd.

### An Error Tolerant Memory Aid for Reduced Cognitive Load in Number Copying Tasks

Frode Eika Sandnes.

### Symbiosis: An innovative human-computer interaction environment for Alzheimer's support

Dimitris Mandiliotis, Konstantinos Toumpas, Katerina Kyprioti, Kiki Kaza, João Barroso, Leontios Hadjileontiadis.

### Network For All: A Proposal for an Accessible Social Media Aggregator Solution

Mário Correia, Gonçalo Cruz, Ricardo Rodrigues Nunes, Jose L.B. Martins, Ramiro Gonçalves, Hugo Paredes, Paulo Martins.

### Automatically Generating Online Social Network Messages to Combat Social Isolation of People with Disabilities

John J Magee, Margit Betke.

### Interaction Design for Robotic Avatars - Does Avatar's Aging Cue Affect the User's Impressions of a Robot?

Angie L. Marin Mejia, Sukhan Lee.



# Parallel Sessions

## UAHCI

**Cutting Edge in Information Display: Recent Advances in Ergonomic Research for the Use of E-papers**

Chair(s): Masaru Miyao, Hiromu Ishio.

**Effects of Long-Time 3D Viewing on the Eye Function of Accommodation and Convergence**  
Hiromu Ishio, Takehito Kojima, Takumi Oohashi, Yuki Okada, Hiroki Takada, Masaru Miyao.

**Multi-Evaluation Method of Visual Fatigue and Motion Sickness while Viewing 2D/3D Video Clips on A Liquid Crystal Display**  
Hiroki Takada, Kazuhiro Fujikake, Yasuyuki Matsuura, Masaru Miyao.

**Effects of Environmental Illuminance on the Readability of E-books**  
Tatsuya Koizuka, Takehito Kojima, Shunta Sano, Nobuhiro Ishio, Masaru Miyao.

**Verification of the Minimum Illuminance for Comfortable Reading of an E-paper**  
Takehito Kojima, Shunta Sano, Nobuhiro Ishio, Tatsuya Koizuka, Masaru Miyao.

**Aging effects on the readability of characters on e-book terminals**  
Ranson Paul Lege, Satoshi Hasegawa, Akira Hasegawa, Takehito Kojima, Masaru Miyao.

**Effect of Accommodation Training in Foreign Labor**  
Masumi Takada, Masaru Miyao, Hiroki Takada, Yasuyuki Matsuura.

**An Evaluation of the iPod Touch as an Alternative Low-Vision Magnifier for People with Low Vision**  
Seunghyun «Tina» Lee, Jon Sanford.

## VAMR

Virtual, Augmented and Mixed Reality

**VR and Ultra Reality**

Chair(s): Yasushi Ikei.

**Tactile Apparent Motion Presented from Seat Pan Facilitates Racing Experience**  
Tomohiro Amemiya, Koichi Hirota, Yasushi Ikei.

**Human Adaptation, Plasticity and Learning for A New Sensory-Motor World in Virtual Reality**  
Michiteru Kitazaki.

**Virtual body in the Ultra Reality presentation**  
Yasushi Ikei, Koji Abe, Yujiro Okuya, Yukinori Masuda, Ryo Tanaka, Banri Oda, Tomohiro Amemiya, Koichi Hirota.

**Affecting Our Perception of Satiety by Changing The Size of Virtual Dishes Projected with a Tabletop Display**  
Sho Sakurai, Takuji Narumi, Yuki Ban, Tomohiro Tanikawa, Michitaka Hirose.

**Presentation of Odor in Multi-sensory Theater**  
Koichi Hirota, Yoko Ito, Tomohiro Amemiya, Yasushi Ikei.

**High Presence Communication between the Earth and International Space Station**  
Tetsuro Ogi, Yoshisuke Tateyama, Yosuke Kubota.

## CCD

Cross-Cultural Design

**Design for Individual Differences**

Chair(s): Jia Zhou.

**Modality-Independent Interaction Framework for Cross-Disability Accessibility**  
J. Bern Jordan, Gregg Vanderheiden.

**Feature Extraction of Individual Differences for Identification Recognition Based on Resting EEG**  
Rui Xu, Dong Ming, Yanru Bai, Jing Liu, Hongzhi Qi, Qiang Xu, Peng Zhou, Lixin Zhang, Baikun Wan.

**The Application of Consistent User Interface in Common Use Self Service (CUSS)**  
Hornq-Yi Yu, T. K. Philip Hwang, Jisook Han, Tsung-Hsian Wang.

**A Qualitative Study of Older Adults' Acceptance of New Functions On Smart Phones and Tablets**  
Jia Zhou, P. L. Patrick Rau, Gavriel Salvendy.

**Reception of Space: Inspiring Design without a Designer**  
Yihua Huang, Kin Wai Michael Siu.

## OCSC

Online Communities and Social Computing

**eSociety 2.0 - I**

Chair(s): To be announced

**Group Recommender Systems as a Voting Problem**  
George Popescu.

**The Influence of Social Networking Sites on Participation in the 2012 Presidential Election**  
Rachel Adler, William Adler.

**Supporting Social Deliberative Skills Online: the Effects of Reflective Scaffolding Tools**  
Tom Murray, A Lynn Stephens, Beverly Woolf, Leah Wing, Xiaoxi Xu, Natasha Shrikant.

**User Generated Content: an Analysis of User Behavior by Mining Political Tweets**  
Rocio Abascal-Mena, Erick Lopez-Ornelas, J. Sergio Zepeda-Hernandez.

**City 2.0 and Tourism Development**  
Karim Fraoua, Christian Bourret.

**Untangling the Web of e-Health: Multiple Sclerosis Patients' Perceptions of Online Health Information, Information Literacy, and the Impact on Treatment Decision Making Decision Making.**  
Anna Langhorne, Patrick Thomas, Laura Kolaczowski.

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## AC

Augmented Cognition

### Applications of Optical Brain Imaging

Chair(s): Banu Onaral.

### Differential Prefrontal Response During Natural and Synthetic Speech Perception: An fNIR Based Neuroergonomics Study

Hasan Ayaz, Paul Crawford, Adrian Curtin, Mashaal Syed, Banu Onaral, Willem Beltman, Patricia Shewokis.

### Functional Near-Infrared Spectroscopy in Addiction Treatment: Preliminary Evidence as a Biomarker of Treatment Response

Scott Bunce, Jonathan Harris, Kurtulus Izzetoglu, Hasan Ayaz, Meltem Izzetoglu, Kambiz Pourrezaei, Banu Onaral.

### Human Performance Assessment Study in Aviation Using Functional Near Infrared Spectroscopy

Joshua Harrison, Kurtulus Izzetoglu, Hasan Ayaz, Ben Willems, Sehchang Hah, Hyun Woo, Patricia Shewokis, Scott Bunce, Banu Onaral.

### Towards a hybrid P300-based BCI using simultaneous fNIR and EEG

Yichuan Liu, Hasan Ayaz, Adrian Curtin, Banu Onaral, Patricia Shewokis.

### Brain in the Loop Learning using Functional Near Infrared Spectroscopy

Patricia Shewokis, Hasan Ayaz, Adrian Curtin, Kurtulus Izzetoglu, Banu Onaral.

### Relationship Analysis between Subjective Evaluation and NIRS-based Index on Video Content

Shinsuke Mitsui, Atsushi Maki, Toshikazu Kato.

### EEG-based Hybrid Control System of a Musical Walkman Using Steady-State Visual Evoked Potential and Motor Imagery

Li-Wei Ko, Yu-Ting Liu.

## DHM

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

### Models and simulations in complex human environments

Chair(s): Vincent Duffy.

### Combining Motion Capture and Digital Human Modeling for Creating Instructions in Industrial Settings

Ulrike Schmunzsch, Ulas Yilmaz, Matthias Rötting.

### Investigation of an Agent-Based Modeling on Crowd Evacuation and its Application to Real Buildings

Fujio Yamamoto.

### Numerical Reconstruction of the Real-Life Fatal Accident at Work: a Case Study

Marcin Milanowicz, Pawel Budziszewski.

### Bayesian Affordance-Based Agent Model for Wayfinding Behaviors in Evacuation Problems

Moise Busogi, Namhun Kim, Dongmin Shin, Hokyung Ryu, ARM Yoo, Dongchul Kim.

### Simulating a Walk of Digital Human Model directly in Massive 3D Laser-scanned Point Cloud of Indoor Environments

Tsubasa Maruyama, Satoshi Kanai, Hiroaki Date.

### Working with computers: ergonomics, safety and health considerations

Chair(s): Michelle Robertson.

### Telework: Experiences of knowledge workers

Michelle Robertson.

### Temporal Dependence of Trapezius Muscle Activation during Sustained Eye-lens Accommodation at Near

Hans Richter, Camilla Lodin, Mikael Forsman.

### A Knowledge Transfer Process: Establishing Training in New Technology for an Ageing Workforce

Conne Bazley, Denise Brooks.

### The Effectiveness of Alternative Keyboards at Reducing Musculoskeletal Symptoms at Work: A Review

Nancy A. Baker.

### Evaluating Ergonomics Risks for Digital Radiologists

Alan Hedge.

### Hand and Arm Support for Computer Workstation

Ghi-Hwei Kao, T. K. Philip Hwang.

## DUXU

Design, User Experience, and Usability

### Design, Ergonomics, and Usability - IV

Chair(s): Marcelo Soares, Julie Waldron.

### The Design in the Development of Exergames: A New Game for the Contribute to Control Childhood Obesity

Marina Barros, Andre Neves, Walter Correia, Marcelo Soares, Fabio Campos.

### Participatory Design for Mobile Application for Academic Management in a Brazilian University

José Guilherme da Silva Santa Rosa, Andrei G. A. Rebouças, Marcel Passos.

### Design Methodology for Body Tracking Based Applications - A Kinect Case Study

Felipe Breyer, Bernardo Reis, Luis A Vasconcelos, Aline Cavalcanti, João Marcelo Teixeira, Judith Kelner.

### Luz, Câmera, Libras!: How a Mobile Game Can Improve the Learning of Sign Languages

Guilherme Moura, Luis A Vasconcelos, Aline Cavalcanti, Felipe Breyer, Daliton Da Silva, João Marcelo Teixeira, Crystian Leão, Judith Kelner.

### Design and usability: A Case Study on Selecting Exhibitors for the National Fair of Craftwork - FENEARTE - Recife, PE, Brazil

Tibério Tabosa, Virginia Cavalcanti, Ana Andrade, Erimar Cordeiro, Germannya D' Garcia.

### Calculation of Areas of Permanence in Public Spaces, According to Solar Radiation Simulated Conditions

Julie Waldron, Jorge Salazar.

# Parallel Sessions

## DUXU

**Usability Methods and Tools**  
Chair(s): Jennifer McGinn.

**Usability Testing Medical Devices: A Practical Guide to Minimizing Risk and Maximizing Success**  
Chris Hass, Dan Berlin.

**Merging Methodologies: Combining Individual and Group Card Sorting**  
Bob Thomas, Ian Johnson.

**Customer Recruitment: Ethical, Legal & Practical Issues**  
Kristyn Greenwood, Angela Johnston.

**Beyond Satisfaction Questionnaires: «Hacking» the Online Survey**  
Andrea L. Evans.

**Assessing Perceived Experience with Magnitude Estimation**  
Mick McGee, Misha Vaughan, Joe Dumas.

**Automated Real-time Confusability and Scent Analyser for the Web**  
Raza Habib, Paul Schaik, Mike Lockyer.

## DAPI

**Interaction for Ubiquitous Virtual Reality - II**  
Chair(s): Woontack Woo.

**Experimental Study on Display of Energy-related Information in Smart Homes Using Virtual Reality**  
Kodai Ito, Michiko Ohkura.

**Context-of-Interest driven Trans-Space Convergence for Spatial Co-Presence**  
Hyeongmook Lee, Taejin Ha, Seungtak Noh, Woontack Woo.

**The Association of In-World Avatar Investment With Expectations of Behavioral Change**  
Jacquelyn Morie, Sin-Hwa Kang, Eric Chance.

**Web based Me-centric Resource Management System for Pervasive Environment**  
Daeil Seo, Sangchul Ahn, Heedong Ko.

**An Efficient Motion Graph Searching Algorithm for Augmented Reality Characters**  
Sukwon Lee, Sung-Hee Lee.

**Application of bio-inspired metaheuristics to guillotined cutting processes optimize in an glass industry**  
Flavio Moreira da Costa, Tiago Vieira Carvalho, Renato Jose Sassi.

Distributed, Ambient and Pervasive Interactions

## HAS

**Intent Semantics: New Concept in Trust R&D**  
Chair(s): Claire Vishik.

**Towards Usable Generation and Enforcement of Trust Evidence from Programmer's Intent**  
Michael R.A. Huth, Jim Huan-Pu Kuo, Angela Sasse, Iacovos Kirlappos.

**Cloudopsy: an Autopsy of Data Flows in the Cloud**  
Angeliki Zavou, Vasilis Pappas, Vasileios P. Kemerlis, Michalis Polychronakis, Georgios Portokalidis, Angelos Keromytis.

**Influence of Trust Assurances in Mobile Commerce Applications on the Formation of Online Trust**  
Martin Hesseler, Gerhard Hartmann, Stefan Karsch.

**Increasing Trust Perceptions in the Internet of Things**  
Trenton W Schulz, Ingvar Tjøstheim.

**Supporting Human Decision-Making Online using Information-Trustworthiness Metrics**  
Jason R.C. Nurse, Sadie Creese, Michael Goldsmith, Syed Sadiqur Rahman.

**Addressing User Privacy and Experience in Distributed Long Lifetime Systems**  
Scott W Cadzow.

**Secure and Energy-efficient Logging in Wireless Pervasive Environments**  
Alexandros Fragkiadakis, Ioannis Askoxylakis, Elias Tragos.

Human Aspects of Information Security, Privacy and Trust

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# Parallel Sessions

## HCI

Human-Computer Interaction

<p><b>Interaction Design for Development (ID4D) of Indigenous Communities</b> Chair(s): Daniel O. Ochieng.</p>	<p><b>Haptics: Towards interacting with the world via touch</b> Chair(s): Chang S. Nam.</p>	<p><b>UI Prototyping methods and tools</b> Chair(s): To be announced</p>	<p><b>Motion, Gesture and Expression recognition - II</b> Chair(s): To be announced</p>
<p><b>Is Mobile phones explosion in the region exacerbating or alleviating poverty? A comparative study of Kenya and South Africa.</b> Margaret Nyambura Ndung'u.</p> <p><b>Mobile Money Services in Uganda: Design Gaps and Recommendations</b> Rehema Baguma.</p> <p><b>Addressing the Interface Impediments to Grid Computing Usage Among Researchers in Developing Countries</b> Elisha T. O. Opiyo, Gyanti Thakur.</p> <p><b>ICT4D Interaction Design:What Value can the Capability Approach add?</b> Samuel Ruhiu, Timothy M. Waema.</p>	<p><b>Comparison of Enhanced Visual and Haptic Features in a Virtual Reality-Based Haptic Simulation</b> Michael Clamann, Wenqi Ma, David Kaber.</p> <p><b>Influence of Haptic Feedback on a Pointing Task in a Haptically Enhanced 3D Virtual Environment</b> Brendan Corbett, Takehiko Yamaguchi, Shijing Liu, Lixiao Huang, Sangwoo Bahn, Chang S. Nam.</p> <p><b>Assessing the Effectiveness of Vibrotactile Feedback on a 2D Navigation Task</b> Woo Jeon, Yueqing Li, Sangwoo Bahn, Chang S. Nam.</p> <p><b>Behavioral Characteristics of Users with Visual Impairment in Haptically Enhanced Virtual Environments</b> Shijing Liu, Sangwoo Bahn, Heesun Choi, Chang S. Nam.</p> <p><b>Use of Reference Frame in Haptic Virtual Environments: Implications for Users with Visual Impairments</b> Ja Young Lee, Sangwoo Bahn, Chang S. Nam.</p> <p><b>Magnetic Field Based Near Surface Haptic and Pointing Interface</b> Kasun Thejitha Karunanayaka, Sanath Siriwardana, Chamari Edirisinghe, Ryohei Nakatsu, Ponnampalam Gopalkrishnakone.</p> <p><b>Mapping Texture Phase Diagram of Artificial Haptic Stimuli Generated By Vibrotactile Actuators</b> Anak Agung Gede Dharma, Kiyoshi Tomimatsu.</p>	<p><b>An Interface Prototyper Supporting Free Design Components Specification</b> Pedro Teixeira-Faria, Javier Rodeiro Iglesias.</p> <p><b>Multi-level Communicability Evaluation of a Prototyping Tool</b> Vinicius Segura, Fabiana P Simões, Gabriel L Sotero, Simone Barbosa.</p> <p><b>Established and Innovative Facets of Interactive Prototypes – a Case Study</b> Sebastian C. Scholz, Dieter Wallach.</p> <p><b>EMIL: A Rapid Prototyping Authoring Environment for the Design of Interactive Surface Applications</b> Johannes Luderschmidt, Nadia Haubner, Simon Lehmann, Ralf Dörner.</p> <p><b>An Empirical Study on Immersive Prototyping Dimensions</b> Samuel Moreira, Rui José, José C Campos.</p> <p><b>High-fidelity User Interface Design for Interactive Television Application</b> Jianmin Wang, Ting Xie, Fang You, Zelong Tang, Hongmei Li.</p>	<p><b>Gesture vs. Gesticulation: A Test Protocol</b> Francesco Carrino, Antonio Ridi, Rolf Ingold, Omar Abou Khaled, Elena Mugellini.</p> <p><b>Impact of gesture repetition in recognizing real human in animated hand motion</b> Manoj kumar Rajagopal.</p> <p><b>The Influence of Context Knowledge for Multi-modal Affective Annotation</b> Ingo Siegert, Ronald Böck, Andreas Wendemuth.</p> <p><b>Rebuilding Topology of Online Freehand 3D Object Sketches with Hidden lines</b> Shuxia Wang, Mantun Gao, Guanfeng Wang, Liling Wang.</p> <p><b>Multimodal Mathematical Expressions Recognition: Case of Speech and Handwriting</b> Sofiane Medjkoune, Harold Mouchere, Simon Petitrenaud, Christian Viard-Gaudin.</p>

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## HCI

### Inclusive Design for HCI

Chair(s): Yong Gu Ji.

### Preliminary Design of Haptic Icons from Users

Wonil Hwang, Dongsoo Kim.

### Conditions of Applications, Situations and Functions Applicable to Gesture Interface

Taebeum Ryu, Jaehong Lee, Myung Hwan Yun, Ji Hyoun Lim.

### Introducing Emotional Interfaces to Healthcare Systems

Rangarajan Parthasarathy, Xiaowen Fang.

### User Centered Inclusive Design Process: A 'situationally-induced impairments and disabilities' perspective

Hyung Jun Oh, Hyo Chang Kim, Hwan Hwangbo, Yong Gu Ji.

### Search Engine Accessibility for Low-Literate Users

Debora M Modesto, Simone B. Leal Ferreira, Aline S Alves.

### The Evaluation of a Voting Web Based Application

Linda Harley, Keith Kline, Jerry B. Ray, Carrie Bell, Andrew Baranak, Chandler Price, Matthew Hung, Brad Fain.

## HIMI

Human Interface and the Management of Information

### Service engineering and interaction

Chair(s): Sakae Yamamoto, Koji Kimita.

### Role of assigned persona for computer supported cooperative work in remote control environment

Yuzo TAKAHASHI.

### Interpersonal Service Support Based on Employee's Activity Model

Kentaro Watanabe, Takuichi Nishimura.

### Managing HMI quality in embedded system development

Haruhiko Urokohara, Nowky Hirasawa.

### A Study on Selection Ability in the 3D Space by the Finger

Junpei Fukaya, Makoto Oka, Ryuta Yamada, Hirohiko Mori.

### An Improvement of Disaster Information System for Local Residents

Yuichi Takahashi, Sakae Yamamoto.

### Framework for Quantitatively Evaluating the Quality Requirements of Software System

Yuki Terawaki.

### Quality of Service Ontology Languages for Web Services Discovery: An overview and Limitations

Furkh Zeshan, Radziah Mohamad, Mohammad Nazir Ahmad.

### Human-centered Information Systems and Applications

Chair(s): Hiroshi Tsuji, Ryosuke Saga.

### Basic Investigation into Hand Shape Recognition using Colored Gloves Taking Account of the Peripheral Environment

Takahiro Sugaya, Takayuki Suzuki, Hiromitsu Nishimura, Hiroshi Tanaka.

### Window Manager Designed For Cloud Services

Shizuki Yoshino, Tetsuo Tanaka, Kazunori Matsumoto.

### Transparent Digital Contents Sharing for Science Teachers

Thongchai Kaewkiriya, Ryosuke Saga, Hiroshi Tsuji.

### Word Classification for Sentiment Polarity Estimation Using Neural Network

Hidekazu Yanagimoto, Mika Shimada, Akane Yoshimura.

### ArchMatrix: Knowledge Management and Visual Analytics for Archaeologists

Stefano Valtolina, Barbara R Barricelli, Giovanna Bagnasco Gianni, Susanna Bortolotto.

### Pros and Cons of Various ICT Tools in Global Collaboration – A Cross-Case Study

Matti A Vartiainen, Olli Jahkola.

### Designing complex environments

Chair(s): Farid Shirazi.

### Task Analysis of Soft Control Operations using Simulation Data in Nuclear Power Plants

Seung Jun Lee, Wondea Jung.

### Migration Tolerant Human Computer Interaction for Air Traffic Controllers

Oliver Ohneiser, Hejar Gürlük.

### Strategic Study of Knowledge Management Which Led Into Furniture Design Industry

-Taking Example by Taiwan Furniture Industry

Chi-Hsiung Chen, Kang Hua Lan.

### Effects of Stimulus Orientation, Grouping and Alignment on Spatial S-R Compatibility

Ngai Hung Tsang, Ken Chan, Alan Chan.

### User Interface of Interactive Media Art in Stereoscopic Environment

Youngeun Kim, Migyung Lee, Sanghun Nam, Jinwan Park.

### Quantifying the Impact of Standards when Hosting Robotic Simulations in the Cloud

Sekou L Remy.

### An Intelligent Interactive Home Care System: An MPLS-Based Community Cloud

Farid Shirazi.

# Parallel Sessions

## UAHCI

Universal Access in Human-Computer Interaction

<p><b>Non visual smart environments</b> Chair(s): To be announced</p>	<p><b>Robots in everyday life</b> Chair(s): Hirotsada Ueda.</p>	<p><b>Interaction and Education for the Deaf</b> Chair(s): To be announced</p>	<p><b>Senior Workforce</b> Chair(s): Hironobu Takagi, Chieko Asakawa.</p>
<p><b>Using Sonification and Haptics to Represent Overlapping Spatial Objects: Effects on Accuracy</b> Junlei Yu, Kris Lohmann, Christopher Habel.</p> <p><b>Multimodal Kinect-supported Interaction for Visually Impaired Users</b> Richard Gross, Bockholt Ulrich, Ernst Biersack, Arjan Kuijper.</p> <p><b>Audio Transportation System for Blind People</b> Jaime Sanchez, Marcia de Borba Campos.</p> <p><b>Enriching Graphic Maps to Enable Multimodal Interaction by Blind People</b> Caterina Senette, Maria Claudia Buzzi, Marina Buzzi, Barbara Leporini, Loredana Martusciello.</p> <p><b>I-Ball: A Programmable Sporting Aid for Children with a Visual Impairment to Play Soccer</b> Surya P. Singh, Paul Pounds, Hanna Kurniawati.</p> <p><b>An Integration Framework for Motion and Visually Impaired Virtual Humans in Interactive Immersive Environments</b> Frank Sulzmann, Roland Blach, Manfred Dangelmaier.</p>	<p><b>Characteristics of Robots and Virtual Agents as a Persuasive Talker</b> Kaoru Sumi, Mizue Nagata.</p> <p><b>How Does Unintentional Eye Contact with a Robot Affect Users' Emotional Attachment to it?: Investigation on the Effects of Eye Contact and Joint Attention on Users' Emotional Attachment to a Robot</b> Takanori Komatsu, Haruka Takahashi.</p> <p><b>How Do We Feel When Babyloid Starts Crying Suddenly?</b> Felix Jimenez, Masayoshi Kanoh, Masato Goto.</p> <p><b>Home Robots, Learn by Themselves</b> Osamu Hasegawa, Daiki Kimura.</p> <p><b>Talking-Ally: Toward Persuasive Communication in Everyday Life</b> Yuki Odahara, Naoki Ohshima, Ravindra S De Silva, Michio Okada.</p> <p><b>A Map Guidance System by Multiple Dialog Robots Cooperation</b> Ken Yonezawa, Yu Suzuki, Hirotsada Ueda.</p> <p><b>AwareCover: Interactive Cover of the Smartphone for Awareness Sharing</b> Ayumi Fukuchi, Koji Tsukada, Itiro Sii.</p>	<p><b>Using Mediated Communication to Teach Vocational Concepts to Deaf Users</b> Ingrid T Monteiro, Aline S Alves, Clarisse Sieckenius De Souza.</p> <p><b>Development of The Hearing Communication System in An Individual and The Classroom</b> Manabu Ishihara, Shin-nosuke Suzuki, Jun Shirataki.</p> <p><b>Visual Perception of Deaf Children to Inform Interaction of Tools for Literacy</b> Juliana Bueno, Cayley Guimarães, André Mendonça, Laura Sánchez García, Rubens Massayuki Suguimoto.</p> <p><b>Deaf students and comic hypermedia: proposal of accessible learning object</b> Raul Busarello, Vania Ribas Ulbricht, Patricia Biegging, Vilma Villarouco.</p> <p><b>Innovation in Learning - the Use of Avatar for Sign Language</b> Tania Cristina Lima, Mario Sandro Rocha, Thebano Almeida Santos, Angelo Benetti, Evandro Soares, Helvecio Siqueira de Oliveira.</p> <p><b>Analyzing Barriers for People with Hearing Loss on the Web: a Semiotic Study</b> Marta Angélica Montiel Ferreira, Rodrigo Bonacin.</p> <p><b>Subunit Modeling for Japanese Sign Language Recognition Based on Phonetically Depend Multi-stream Hidden Markov Models</b> Shinji Sako, Tadashi Kitamura.</p>	<p><b>Development and Field Trial of a Social TV System for Elderly People</b> Masaru Miyazaki, Masanori Sano, Shigeaki Mitsuya, Hideki Sumiyoshi, Masahide Naemura, Arisa Fujii.</p> <p><b>Age-based Task Specialization for Crowdsourced Proofreading</b> Masatomo Kobayashi, Tatsuya Ishihara, Toshinari Itoko, Hironobu Takagi, Chieko Asakawa.</p> <p><b>How Unfamiliar Words in Smartphone Manuals Affect Senior Citizens</b> Tatsuya Ishihara, Masatomo Kobayashi, Hironobu Takagi, Chieko Asakawa.</p> <p><b>Towards Mobile Embodied 3D Avatar as Telepresence Vehicle</b> Yutaka Tokuda, Atsushi Hiyama, Takahiro Miura, Tomohiro Tanikawa, Michitaka Hirose.</p> <p><b>Time-mosaic Formation of Senior Workforces for Complex Irregular Work in Cooperative Farms</b> Takahiro Miura, Masato Nakayama, Atsushi Hiyama, Naomi Yatomi, Michitaka Hirose.</p> <p><b>A Framework of Affordance and Usability of Mobile User Interface for Older Adults</b> Chui Yin Wong.</p> <p><b>Breaking Psychological Barrier toward Changes: Two Experiences</b> Bruno Merlin.</p>

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**VAMR**

**Virtual, Augmented and Mixed Reality**

**The Role of Virtual, Augmented and Mixed Reality in STEAM Education for the 21st Century**  
Chair(s): Stephen M Fiore.

**Picking Up STEAM: Educational Implications for Teaching with an Augmented Reality Guitar Learning System**  
Joseph Keebler, Travis Wiltshire, Dustin Smith, Stephen M Fiore.

**Virtual Reality Data Visualization for Team-Based STEAM Education: Tools, Methods, and Lessons Learned**  
Daniel Keefe, David Laidlaw.

**ChronoLeap: The Great World's Fair Adventure**  
Lori C. Walters, Darin E Hughes, Manuel Gétrudix Barrio, Charles E Hughes.

**Mixed Reality Space Travel for Physics Learning**  
Darin E Hughes, Shabnam Sabbagh, Robb Lindgren, J. Michael Moshell, Charles E Hughes.

**Using Motion Sensing for Learning: A Serious, Mixed Reality Nutrition Game**  
Mina Johnson.

**Mission: LEAP - Teaching Innovation Competencies by Mixing Realities**  
Christopher Stapleton, Atsusi «2C» Hirumi, Dana S. Mott.

**CCD**

**Cross-Cultural Design**

**Human-computer interaction and human errors in complex systems**  
Chair(s): Qin Gao, Zhizhong Li.

**Human error factor analysis of computer-based control system**  
Licao Dai.

**Secondary Task Method for Workload Measurement in Alarm Monitoring and Identification Tasks**  
Xiaojun Wu, Zhizhong Li.

**Evaluation of Human-System Interfaces with Different Information Organization Using an Eye Tracker**  
Kejin Chen, Zhizhong Li.

**Cultural Diversity - New Challenge to Medical Device Use Safety for International Markets**  
Long Liu, Uvo Hoelscher, Ziying Yao.

**Introducing Human Performance Modeling in Digital Nuclear Power Industry**  
Xiang Jiang, Qin Gao, Zhizhong Li.

**Effects of Sleep Deprivation on Pilot's Cognitive Behavior in Flight Simulation**  
Zhongqi Liu, Fang Xie, Qianxiang Zhou.

**Effects of Spaceflight Operation Complexity and Training on Operation Error**  
Meng Wang, Yijing Zhang.

**Changes in Heart Rate Variability during Manual Controlled Rendezvous and Docking with Task Complexity**  
Pengjie Li, Bin Wu, Yijing Zhang, Zhi Yao, Weifen Huang, Xiang Zhang.

**Knowledge Sharing**  
Chair(s): Hua Qin.

**The Research on Knowledge Diffusion based on Small World Network**  
Xinxin Feng, Baojiang Chen, Huanzhi Zhu.

**Constructing Interaction Scenarios of High-building Interior in Fire**  
Hua Qin, Linghua Ran, Shaohong Cai.

**Study on Aggressive Driving Activities at Crossroads in Beijing**  
Hua Qin, Huanzhi Zhu, Renwen W Huang.

**The Effects of Age, Viewing Distance and Font Type on the Legibility of Chinese Characters**  
Linghua Ran, Xin Zhang, Xiaoyuan Ren, Huimin Hu.

**Research Facing Interface Design of Android System Industrial Control System**  
Songfeng Gao, Guixue Yang, Linlin Zhao.

**AC**

**Augmented Cognition**

**Using Augmented Cognition for Gamification**  
Chair(s): Martha E. Crosby.

**Combining Augmented Cognition and Gamification**  
Curtis Ikehara, Martha E. Crosby, Paula Alexandra Silva.

**So Fun it Hurts - Gamifying an Engineering Course**  
Gabriel Barata, Sandra Gama, Joaquim Jorge, Daniel Gonçalves.

**Measuring Engagement to Stimulate Critical Thinking**  
Patricia Donohue, Tawnya Gray, Dominic Lamboy.

**Behavioral Biometric Identification on Mobile Devices**  
Matt B Wolff.

**Issues in Implementing Augmented Cognition and Gamification on a Mobile Platform**  
Curtis Ikehara, Jiecai He, Martha E. Crosby.

**Using the Smartphone Accelerometer to Monitor Fall Risk while Playing a Game: the Design and Usability Evaluation of Dance! Don't Fall**  
Paula Alexandra Silva, Francisco Nunes, Ana Vasconcelos, Maureen Kerwin, Ricardo Moutinho, Pedro Teixeira.

**Gamification for Measuring Cyber Security Situational Awareness**  
Barbara Endicott-Popovsky, Glenn Fink, Daniel Best, David Manz, Viatcheslav Popovsky.

# Parallel Sessions

## DHM

Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management

### Emerging Technologies in Working Conditions

Chair(s): Elsbeth M. De Korte.

### Automation design and human systems integration: modeling, validation and certification issues

Chair(s): Didier Fass, Brian F. Gore.

### AmI-Technology at Work – A Sociological Perspective Covering Aspects of Occupational Safety And Health (OSH)

Michael Bretschneider-Hagemes.

### Safety and Health at Work through Persuasive Assistance Systems

Matthias Hartwig, Armin Windel.

### Evaluating comfort levels of a workstation with an individually controlled heating and lighting system

Elsbeth M. De Korte, Lottie Kuijt-Evers, Marleen Spiekman, Linda Hoes-Van Oeffelen, Bianca Van der Zande, Gilles Vissenberg, Gerard Huiskes.

### Serious Gaming used as Management Intervention to Prevent Work-related Stress and Raise Work-engagement among Workers

Noortje M. Wiezer, Maartje Bakhuis Roozeboom, Esther Oprins.

### Chair based measurements of sitting behaviour– a field study of sitting postures and sitting time in office workers

Matthijs Netten, Bas Van der Doelen, Richard Goossens.

### Validation of an Integrated Biomechanical Modeling Approach to the Ergonomic Evaluation of Drywall Installation

Lu Yuan.

### The Effect of Dynamic Workstations on The Performance of Various Computer and Office-based Tasks

Eva-Maria Burford, Juliane Botter, Dianne Commissaris, Reinier Koenemann, Suzanne Hiemstra-van Mastrigt, Rolf Peter Ellegast.

### Putting in Perspective Human-machine System Theory and Modeling: from Theoretical Biology to Artifacts Integrative Design and Organization.

Didier Fass.

### A Validation Approach for Complex NextGen Air Traffic Control Human Performance Models

Brian F. Gore, Paul Milgram.

### Ideal Mode Selection of a Cardiac Pacing System

Dominique Méry, Neeraj Kumar Singh.

### Simulating the Impact of Mental Models on Human Automation Interaction in Aviation

Sebastien Mamessier, Karen Feigh.

### Causal Attribution and Control: between Consciousness and Psychological Half-Shadow.

**Application to Flight Operations**  
Bruno Berberian, Jean-Christophe Sarrazin, Laurent Chaudron.

### Cognitive Behavior Modeling of Manual Rendezvous and Docking Based on the ACT-R Cognitive Architecture

Chunhui Wang, Yu Tian, Yanfei Liu, Shanguang Chen, Zhiqiang Tian, Junsong Li.

### Evaluation of Drivers Interaction with Assistant Systems using Criticality Driven Guided Simulation

Stefan Puch, Bertram Wortelen, Martin Fränze, Thomas Peikenkamp.

## DUXU

Design, User Experience, and Usability

### Design, Ergonomics, and Usability - V

Chair(s): Marcelo Soares, Claudia Renata Mont'Alvão.

### Inclusive and open design

Chair(s): Hua Dong.

### Usability Assessment in The Multicultural Approach

Maria Lucia L. R. Okimoto, Cristina Olaverri Monreal, Klaus Bengler.

### Branding "for All": Toward the Definition of Inclusive Toolkits of Analysis and Visual Communication for Brand Identities

Giuseppe Di Bucchianico, Stefania Camplone, Stefano Picciani.

### Participatory Design and Usability: A Behavioural Approach of Workers' attitudes in the Work Environment

Dierci M. Silveira.

### Breaking Technological Paradigms - Sustainable Design in Air Transport Multi-Mission

Edgard Thomas Martins, Isnard Thomas Martins, Marcelo Soares.

### Information Accessibility in Museums with a Focus on Technology and Cognitive Process

Laura Martins, Felipe P.T. Gabriele.

### Usability Testing of Mobile Applications Store: Purchase, Search and Reviews

Wilson S Prata, Claudia Renata Mont'Alvão, Manuela Quaresma.

### User-Mobile Phone Interactions: a Postphenomenology Analysis

Bin Zhang, Hua Dong.

### Designing technology for older people – The role of technical self-confidence in usability of an inclusive heating control

Nicola Combe, David Harrison, Hua Dong.

### Open design: non-professional user-designers creating products for citizen science, a case study of beekeepers.

Robert Daniel Phillips, Yelena Ford, Karl Sadler, Sarah Silve, Sharon Baurley.

### How to categorize users from a design point of view?

Lena Lorentzen.

### A Pilot Study of the Intuitiveness of Smartphone Camera Interface for Elderly Users

HyunJu Shin, DaeSung Ahn, Junghyun Han.



## DUXU

### Mobile Web & Mobile App Design and Usage

Chair(s): Stephan Böhm.

### End-User Development of Mobile Mashups

Cinzia Cappiello, Maristella Matera, Matteo Picozzi.

### Towards Medical Cyber-Physical Systems: Multimodal Augmented Reality for Doctors and Knowledge Discovery about Patients

Daniel Sonntag, Sonja Zillner, Christian Schulz, Markus Weber, Takumi Toyama.

### Smart Metering with Smartphones: User-centered Design of a Mobile Application in the Context of Energy Efficiency

Stephan Böhm, Lee Szwec.

### A mobile prototype for clinical emergency calls

Cornelius Wille, Thomas Marx, Maciak Adam, Dr..

### Feature Evaluation for Mobile Applications: A Design Science Approach Based on Evolutionary Software Prototypes

Bodo Iglar.

### User-Originated Innovation of Mobile Financial Services

Päivi Heikkilä, Heli M. Järventie-Ahonen, Sirpa Riihiaho.

## DAPI

### Design and development frameworks and methods in Ambient Intelligence

Chair(s): To be announced

Distributed, Ambient and Pervasive Interactions

### Requirements for Applying Simulation-based Automated Usability Evaluation to Model-based Adaptive User Interfaces for Smart Environments

Michael Quade, Andreas Rieger, Sahin Albayrak.

### A Prototyping and Evaluation Framework for Interactive Ubiquitous Systems

Christine Keller, Romina Kuehn, Anton Engelbrecht, Mandy Korzetz, Thomas Schlegel.

### How Does User Feedback to Video Prototypes Compare to that Obtained in a Home Simulation Laboratory?

Prina Bajracharya, Thelxi Mamagkaki, Alexandra Pzdynakova, Marianna Viera da Fonseca Serras Pereira, Tatiana Zavialova, Tin De Zeeuw, Pavan Dadlani, Panos Markopoulos.

### MIDAS: A Software Framework for Accommodating Heterogeneous Interaction Devices for Cloud Applications

Euijai Ahn, Kangyoon Lim, Gerard Jounghyun Kim.

### A context-aware middleware for interaction device deployment in Aml

Tao Xu, Huiliang Jin, Bertrand David, René Chalon, Yun Zhou.

### The Mobile Context Framework: Providing Context to Mobile Applications

Luís Oliveira, António Nestor Ribeiro, José C Campos.

## HAS

### Encouraging an Information Security Culture by addressing Human Behavior

Chair(s): Kerry-Lynn Thomson.

Human Aspects of Information Security, Privacy and Trust

### Essential Lessons Still not Learned? Examining the Password Practices of End-users and Service Providers

Nina Bär, Steven Furnell.

### Personality's Influence on Facebook's Privacy Settings: A Case of College Students in Taiwan

Tingya Kuo, Hung-Lian Tang.

### A Taxonomy of Cyber Situation Awareness Questions for the User-Centered Design of Cyber Situation Awareness

Celeste Lyn Paul, Kirsten Whitley.

### Understanding People's Preferences for Disclosing Contextual Information to Smartphone Apps

Fuming Shih, Julia Boortz.

### A Comparison of American and German Folk Models of Home Computer Security

Michaela Kauer, Melanie Volkamer, Sebastian Günther, Daniel Storck.

### Relationships between Password Choices, Perceptions of Risk and Security Expertise

Sadie Creese, Duncan D Hodges, Sue Jamison-Powell, Monica Whitty.

# Parallel Sessions

## HCI

Human-Computer Interaction

### Emerging Issues in HCI

Chair(s): To be announced

### Semiotics of Interaction: Towards a UI Alphabet

Jan Brejcha, Aaron Marcus.

### HCI Education in Brazil: Challenges and Opportunities

Clodis Boscaroli, Silvia A Bim, Milene S Silveira, Raquel Prates, Simone Barbosa.

### Confabulation in the Time of Transdisciplinarity: Reflection on HCI Education and a Call for Conversation.

Nicholas W True, Jeroen PA Peeters, Daniel Fallman.

### Internet Anxiety: Myth or Reality?

Santosh Kumar Kalwar, Kari Heikkinen, Jari Porras.

### UX Design Processes & Evaluation Methods

Chair(s): Esther Jun, Kyungdoh Kim.

### Remote Usability Evaluation of Mobile Web Applications

Fabio Paternó, Paolo Burzacca.

### An Application of the Ballistic Movement Method for Evaluating Computer Mice

Ray F. Lin, Ching-Wen Chung, Yi-Chien Tsai, Chi-Yu Huang.

### Priming Categorization in a Card Sort

Camie Steinhoff, Jeremiah Still.

### Analyzing Face and Speech Recognition to Create Automatic Information for Usability Evaluation

Thiago A Coleti, Marcelo Morandini, Fatima de Lourdes dos Santos Nunes.

### Ease of Icon Processing Can Predict Icon Appeal

Sine J P McDougall, Irene Reppa.

### Design and Usability Analysis of Gesture-based Control for Common Desktop Tasks

Farzin Farhadi-Niaki, S. Ali Etemad, Ali Arya.

### Interacting with the web - II

Chair(s): To be announced

### A Web-based Interface for a System that Designs Sensor Networks

Lawrence J. Henschen, Julia C. Lee.

### Pattern Languages for redesigning the Moodle HCI

Pardis Alizadeh.

### 'Realness' in Chatbots: Establishing Quantifiable Criteria

Kellie Morrissey, Jurek Kirakowski.

### A Color Schemer for Webpage Design Using Interactive Mood Board

Zhenyu Gu, Zhanwei Wu, Jiamin Yu, Jian Lou.

### A Page Navigation Technique for Overlooking Content in a Digital Magazine

Yuichiro Kinoshita, Masayuki Sugiyama, Kentaro Go.

### Sound to Sight: The Effects of Self-Generated Visualization on Music Sight-Singing as an Alternate Learning Interface for Music Education within a Web-Based Environment

Yu-Ting Huang, Chi-Nung Chu.

## HIMI

Human Interface and the Management of Information

### Management of interaction

Chair(s): Hirohiko Mori, Sakae Yamamoto.

### Kanji Characters in Japan – Remaining Challenges

Toshihiro Enami.

### The Relationships between Kansei Scale for Uniqueness on Products and Purchase Motivation

Yusuke Ohta, Keiko Kasamatsu.

### Influence of the Safety Margin on Behavior that Violates Rules

Mitsuhiko Karashima, Hiromi Nishiguchi.

### Transferring tacit skills of WADAIKO

Makoto Oka, Asahi Mizukoshi, Hirohiko Mori.

### Cognitive analysis of drivers behavior with seamless display of back monitor and side view mirror

Naoyuki Susuki, Kenta Takiguchi, Makoto Oka, Hirohiko Mori.

### Leaning Origami Using 3D Mixed Reality Technique

Atsushi Nakano, Makoto Oka, Hirohiko Mori.

### The Proposition of a Framework to Support the Design of Ecological Systems for the Web

Marcelo Morandini, Tharsis M Novais, Thiago A Coleti, Pedro Correia.



## HIMI

### Creating social media

Chair(s): To be announced

### Responsibilities and Challenges of Social Media Managers

Christian Meske, Stefan Stieglitz.

### EventLens: An Automatic Magazine Generating System for Social Media

Hao Chen, Han Tang, Zhiyu Wang, Peng Cui, Yingqing Xu, Shiqiang Yang.

### A User Driven Design Approach to Creating UGC Services – Challenging the Newspaper Industry

Esbjörn Ebbesson, Carina Ihlström Eriksson.

### Placebooks: participation, community, design, and ubiquitous data aggregation 'in the wild'

Alan Chamberlain, Andrew Crabtree, Mark Davies, Kevin Glover, Stuart Reeves, Peter Tolmie, Matt Jones.

### Semantically structured VDL-based iconic tags system

Xiaoyue Ma, Jean-Pierre Cahier.

### Mo-Buzz: Socially-Mediated Collaborative Platform for Ubiquitous Location Based Service

Owen Noel Newto Fernando, Vajira Sampath Rathnayake, Santosh Vijaykumar, May O. Lwin, Schubert Foo.

### A Support Framework for Automated Video and Multimedia Workflows for Production and Archive

Robert Manthey, Robert Herms, Marc Ritter, Michael Storz, Maximilian Eibl.

## EPCE

### Cognitive aspects in society

Chair(s): To be announced

Engineering Psychology and Cognitive Ergonomics

### Promotion of Cooperative Behavior in Social Dilemma Situation -How Group Heuristics, Restriction of Short-term Memory, and Penalty Promote Cooperative Behavior-

Atsuo Murata, Saki Kubo, Naoki Hata, Takuma Kanagawa.

### A New Behavioral Measure of Cognitive Flexibility

Christian A Gonzalez, Ivonne Figueroa, Brooke G. Bellows, Dustin Rhodes, Robert J Youmans.

### Individual Differences in Cognitive Flexibility Predict Poetry Originality

Ivonne Figueroa, Robert J Youmans.

### When stereotypes meet robots: The effect of gender stereotypes on people's acceptance of a security robot

Benedict Tiong Chee Tay, Tazoon Park, Younbo Jung, Yeow Kee Tan, Alvin Hong Yee Wong.

### Proposal of Intellectual Productivity Model based on Work State Transition

Kazune Miyagi, Kotaro Oishi, Kosuke Uchiyama, Hirotake Ishii, Hiroshi Shimoda.

## UAHCI

### Cutting Edge in Information Display: Recent Advances in Ergonomic Research for the Use of 3D

Chair(s): Hiroki Takada, Sina Fateh.

Universal Access in Human-Computer Interaction

### Measurement of Lens Accommodation and Convergence during the Viewing of 3D Images

Takumi Oohashi, Hiromu Ishio, Yuki Okada, Tomohiko Yanase, Takehito Kojima, Masaru Miyao.

### Evaluating the Legibility of Stereoscopic Game Consoles

Yuki Okada, Takehito Kojima, Takumi Oohashi, Masaru Miyao.

### A Surgery Planning System by Visualizing 3D Profile of the Knee during Motion for Anterior Cruciate Ligament Reconstruction

Kouki Nagamune, Yuichiro Nishizawa, Daisuke Araki, Koji Nishimoto, Yuichi Hoshino, Ryosuke Kuroda, Masahiro Kurosaka.

### Effect of Display Size on Body Sway in Seated Posture while Viewing an Hour-long Stereoscopic Film

Kazuki Yoshikawa, Hiroki Takada, Masaru Miyao.

### Form in Potential Functions while Maintaining Upright Postures during Exposure to Stereoscopic Video Clips

Yasuyuki Matsuura, Masaru Miyao, Hiroki Takada.

### A Study of Accommodation Training by Stereoscopic Film Presentation

Masumi Takada, Akihiro Sugiura, Yasuyuki Matsuura, Masaru Miyao, Hiroki Takada.

### Effective Usage of Stereoscopic Visualization for the Learning of a Motional Mechanism

Shu Matsuura.

### Smart Products and Services

Chair(s): Kevin Tseng.

continues...

### Universal Access to Participatory Musical Experiences for People with Disabilities

Nizan Friedman, David Reinkensmeyer, Mark Bachman.

### Development of Smart Device-Based Thermostatic Control System Applying on Cooling Vests

Jing-Jing Fang, Tai-Hong Kuo, Cheng-Ying Wu.

### Single Tap Hierarchy-Structured Zoom as Interface for Interactive Indoor Wayfinding Map for Elderly Users

Chun-Wen Chen, Kevin Tseng, Yun-Fong Kao.

### User Acceptance of a Community-based Healthcare Information System Preserving User Privacy

Chien-Lung Hsu, Ming-Ren Lee.

### Effectiveness of Learning Chinese Character Using Tablet Technology

Chao-Yang Yang, Ting-Yi Chiu-Huang, Yu-Ting Wu.

### Modified Control-response Ratio for Move and Rotation Operations on a Large Multi-touch Interface

Wenzhi Chen, Chun-Wen Chen, Kuan-Hung Chen.

### Content Analysis of Specialist Interviews in the Development of the Music Therapy Activity System

Kevin Tseng, Chieh-Yun Liu.

# Parallel Sessions

## UAHCI

### Innovative technologies for children with ASD

Chair(s): To be announced

### A Novel Virtual Reality Driving Environment for Autism Intervention

Dayi Bian, Joshua Wade, Lian Zhang, Esubalew T Bekele, Amy Swanson, Julie Crittendon, Medha S Sarkar, Zachary E Warren, Nilanjan Sarkar.

### A Step towards Adaptive Multimodal Virtual Social Interaction Platform for Children with Autism

Esubalew T Bekele, Mary Young, Zhi Zheng, Lian Zhang, Amy Swanson, Rebecca Johnston, Zachary E Warren, Nilanjan Sarkar, Julie Davidson.

### Virtual Reality-based Facial Expressions Understanding for Teenagers with Autism

Esubalew T Bekele, Zhi Zheng, Amy Swanson, Julie Davidson, Zachary E Warren, Nilanjan Sarkar.

### Project Communicate: Empowering Children with Autism and their Caregivers in India

Ruchir Hajela, Prasanta Bhattacharya, Rahul Banerjee.

### A Usability Study on Natural Interaction Devices with ASD Children

Ravi Agarwal, Harini Alagarai Sampath, Bipin Indurkha.

### A Proposed ASD-Centric Framework: The Case of ASDAPT

Panagiotis Germanakos, Maria Claudia Buzzi, Marina Buzzi.

### Design and Evaluation of Applying Robots to Assisting and Inducing Children with Autism in Social Interaction

Tzu Chi Yin, Fang-Wu Tung.

## VAMR

### Human robot interaction and haptics

Chair(s): Scott Ososky.

### Increasing Robot Autonomy Effectively Using the Science of Teams

David Schuster, Florian G Jentsch.

### Cybernetic Teams: Towards the Implementation of Team Heuristics in HRI

Travis Wiltshire, Dustin Smith, Joseph Keebler.

### Visual, Vibrotactile, and Force Feedback of Collisions in Virtual Environments: Effects on Performance, Mental Workload and Spatial Orientation

Bernhard M. Weber, Mikel Sagardia, Thomas Hulin, Carsten Preusche.

### Development of Knife-shaped Interaction Device Providing Virtual Tactile Sensation

Azusa Toda, Kazuki Tanaka, Asako Kimura, Fumihisa Shibata, Hideyuki Tamura.

### Optimal Design of a Haptic device for a particular task in a Virtual Environment

Jose San Martin, Loic Corenthy, Luis Pastor, Marcos Garcia.

### The Electric Bow Interface

Masasuke Yasumoto, Takashi Ohta.

### Exploring complexity through simulation and immersion

Chair(s): Denis Laurendeau.

### Making Sense of Large Datasets in the Context of Complex Situation Understanding

Marielle Mokhtari, Eric Boivin, Denis Laurendeau.

### An Asymmetric Bimanual Gestural Interface for Immersive Virtual Environments

Julien-Charles Lévesque, Denis Laurendeau, Marielle Mokhtari.

### Virtual Reality based Virtual Reality based Interactive Conceptual Simulations Combining Post-Processing and Linear Static Simulations

Holger Graf, André Stork.

### Information Management for Multiple Entities in a Remote Sensor Environment

Peter Venero, Allen Rowe, Thomas Carretta, James Boyer.

### VWSocialLab: Prototype Virtual World (VW) Toolkit for Social and Behavioral Science Experimental Set-Up and Control

Lana Jaff, Austen Hayes, Amy Banic.

### Controlling and Filtering Information Density with Spatial Interaction Techniques via Handheld Augmented Reality

Jens Keil, Michael Zoellner, Timo Engelke, Folker Wientapper, Michael Schmitt.

### Painting Alive: Handheld Augmented Reality System for Large Targets

Jae-In Hwang, Minhyuk Sung, Ig-Jae Kim, Sang Chul Ahn, Hyoung-Gon Kim, Heedong Ko.

## CCD

### Towards a cross-cultural web

Chair(s): To be announced

### A Comparison of Eye Movements between Americans and Koreans when Searching Information on Web Pages

Changwoo Yang.

### Incorporating Culture in Website Design: A Comparison of Taiwanese and Australian Website Characteristics

Hsiu Ching Laura Hsieh, Chi-Hsiung Chen, Sin Dai Hong.

### Localization of Web Design: An Investigation of Culturally Preferred Web Attributes in Taiwan and the UK

Hsiu Ching Laura Hsieh, Sin Dai Hong.

### Developing a Contextual Network for Indigenous Communities in Mexico

Mario Alberto Moreno Rocha, Carlos Alberto Martínez Sandoval, Cuauhtémoc Rivera Loaiza, Ma. Margarita Virgen González.

### Cultural Differences between Chinese and English Speakers in Mobile Internet Content Preference

Qifeng Yan.

### The Design of Online Communities and Cultural Specific Interpretation of Cross-Cultural perspective

Chen Xue, Javed A Sheikh.

### Generating Culturally Based Web Design Standards for E-commerce Applications

Bennett Stone.

Virtual, Augmented and Mixed Reality

Cross-Cultural Design



<p><b>User-centered Design for Life Technology</b> Chair(s): Hsiu-Ping Yueh.</p>
<p><b>The Impact of Workplace Gossip on Organizational Cynicism: Insights from the Employment Relationship Perspective</b> Chien-Chih Kuo, Chiu-Yi Lu, Ting-Kuei Kuo.</p> <p><b>Exploring Consumers' Responses to Delayed Introduction of a New Mobile Phone</b> Hsuan-Hsuan Ku.</p> <p><b>On Class Design using Multi-mouse Quiz by Elementary Schoolteachers</b> Juan Zhou, Mikihiko Mori, Hajime Kita.</p> <p><b>The interaction between human and home service robots on a daily life cycle</b> Hsiu-Ping Yueh, Weijane LIN.</p> <p><b>Discovering the Use of a Home Smart Telephone: A Persona Approach</b> Weijane LIN, Chih-Lo Chen, Chien-Ting Yang, Hsiu-Ping Yueh.</p> <p><b>Smart Mobile Devices in Lifestyles under Transformation: A Comparative Study of Smart Communication among Youth in Hong Kong and Beijing</b> Albee Xin Chen, Kin Wai Michael Siu.</p> <p><b>Moderating Effect of Culture on IT and Health Standard: A Country-Level Analysis</b> Supunmali Ahangama, Danny Poo.</p>

<p><b>OCSC</b> <b>eSociety 2.0 - II</b> Chair(s): To be announced</p>
<p><b>Online Communities and Social Computing</b></p> <p><b>A comparative review of research literature on Microblogging use and risk in organizational and educational Settings</b> Soureh Latif Shabgahi, Nordiana Ahmad Kharman Shah, Andrew Cox.</p> <p><b>The Role of the Community in a Technical Support Community: A Case Study</b> Don Allen, Thomas Schneider.</p> <p><b>Effects of Sharing Farmers' Information using Content Management System</b> Tomoko Kashima, Shimpei Matsumoto, Tatsuo Matsutomi.</p> <p><b>Social Media: An Ill-defined Phenomenon</b> James White, King-wa Fu, Braeden Benson.</p> <p><b>A High-School Home-Schooling Education Model Based on Cloud Computing</b> Jordan Valdespino, William Zuhlke, June Wei.</p>

<p><b>AC</b> <b>Modeling the Complex Dynamics of Teamwork</b> Chair(s): Ronald Stevens.</p>
<p><b>Augmented Cognition</b></p> <p><b>The Geometry of Behavioral and Brain Dynamics in Team Coordination</b> Silke M Dodel, Emmanuelle Tognoli, Scott Kelso.</p> <p><b>Neurophysiological Estimation of Team Psychological Metrics</b> Maja Stikic, Chris Berka, David Waldman, Pierre Balthazard, Pless Nicola, Thomas Maak.</p> <p><b>Analysis of Semantic Content and its Relation to Team Neurophysiology during Submarine Crew Training</b> Jamie Gorman, Melanie Martin, Terri Dunbar, Ronald Stevens, Trysha Galloway.</p> <p><b>How Long is the Coastline of Teamwork? A neurodynamic model for group and team operation and evolution</b> John Kolm, Ronald Stevens, Trysha Galloway.</p> <p><b>Physio-behavioral Coupling as an Index of Team Processes and Performance: Overview, Measurement, and Empirical Application</b> Adam Strang, Gregory Funke, Sheldon Russell, Robin Thomas.</p> <p><b>Modeling Complex Tactical Team Dynamics in Observed Submarine Operations</b> Tara Smallidge, Eric M Jones, Jerry Lamb, Rachel Feyre, Ronald Steed, Abaigeal Caras.</p> <p><b>Ecological Momentary Storytelling: Bringing down Organizational Stress through Qualifying Work Life Stories</b> Lisbeth H. Kappelgaard, Katja Lund.</p>

<p><b>DHM</b> <b>Biomechanics in Product and Process Design</b> Chair(s): Vincent Duffy.</p>
<p><b>Digital Human Modeling and applications in Health, Safety, Ergonomics and Risk Management</b></p> <p><b>Constructing Ergonomic Safety Modelling for Evaluating New Designs of Child Car Seats</b> Che-Yu Lu, Hsin-Hsi Lai.</p> <p><b>The Biomechanical and Physiological Effect of Two Dynamic Workstations</b> Juliane Botter, Eva-Maria Burford, Dianne Commissaris, Reinier Koenemann, Suzanne Hiemstra-van Mastrigt, Rolf Peter Ellegast.</p> <p><b>Digital Human Modeling for Physiological Factors Evaluation in Work System Design</b> Lingyan Wang, Henry Lau.</p> <p><b>Visualizing design problems and solutions of workstations on ships</b> Monica M Lundh, Mikael Blomé, Steven Mallam, Joanna Paraiso.</p> <p><b>Markerless Motion Capture Integrated with Human Modeling for Virtual Ergonomics</b> Giorgio Colombo, Daniele Regazzoni, Caterina Rizzi.</p> <p><b>Human Pose Estimation from Depth Image Using Visibility Estimation and Key Points</b> Sungjin Huh, Gyeonghwan Kim.</p>



# Parallel Sessions

## DUXU

Design, User Experience, and Usability

<p><b>Users' involvement, needs and requirements in DUXU</b> Chair(s): To be announced</p>	<p><b>Usability studies</b> Chair(s): To be announced</p>	<p><b>Design at the Frontier of User-Experience Development</b> Chair(s): Zelda Harrison.</p>	<p><b>Service innovation and creativity management</b> Chair(s): Ding-Bang Luh.</p>
<p><b>User Involvement in Idea Brainstorming of Design Process : Finding the Effective Strategy in Social Network Service</b> Chiu Shu-Chuan, Kiyoshi Tomimatsu.</p> <p><b>Modelling Human Mental Workload as a Defeasible Phenomenon</b> Luca Longo.</p> <p><b>Prototyping with Experience Workshop</b> Jussi V Mikkonen, Yi-Ta Hsieh.</p> <p><b>A User Centred Approach to Evaluating the Future Demand for Bandwidth from Consumers</b> Doug L Williams, Andy Gower, Joshan Meenowa, Jon Wakeling.</p> <p><b>Eliciting User Requirements and Acceptance for Customizing Mobile Device System Architecture</b> Katrin Arning, Bianka Trevisan, Martina Ziefle, Eva-Maria Jakobs.</p>	<p><b>Usability Evaluation of Two Chinese Segmentation Methods in Subtitles to Scaffold Chinese Novice</b> Chih-Kai Chang.</p> <p><b>A usability testing of Chinese character writing system for foreign learners</b> Manlai You, Yu-Jie Xu.</p> <p><b>Trial of diagnostic to find preferable job using the visual image information interaction - Prototype development and evaluation in global human resources matching site-</b> Akira Kondo, Naoko Kondo.</p> <p><b>SINGRAR Usability Study</b> Isabel L. Nunes, Mario Simoes-Marques.</p> <p><b>Determining the Effect of Menu Element Size on Usability of Mobile Applications</b> Shelly K Welch, Si-Jung Kim.</p> <p><b>Using Eye-tracking to Test and Improve Website Design</b> Anna Prisacari, Thomas Holme.</p> <p><b>Research Methodology Approach to Improve the Robustness of the Trend Board Method Through Its Formalization</b> Angela Cadavid Lopez, Jorge Maya.</p>	<p><b>Ultrabooks™ and Windows 8: a touchy UX story</b> Daria Loi.</p> <p><b>Interactive Design and the Human Experience: What Can Industrial Design Teach Us</b> Neil Matthiessen.</p> <p><b>The Dimensions of Positive and Negative User Experiences with Interactive Products</b> Gabrielle Provost, Jean-Marc Robert.</p> <p><b>Design Thinking Methodology for the Design of Interactive Real-Time Applications</b> Diego Sandino, Luis M. Matey, Gorka Vélez.</p> <p><b>A Dependency-Sharing Tool for Global Software Engineering</b> Douglas Lee, Allen E Milewski, Daniela Rosca.</p> <p><b>Designing for resonance by evocative objects: An experiential interaction design method</b> Chih-Sheng Su, Rung-Huei Liang.</p>	<p><b>Design Process and Knowledge Searching Model based on User Creativity</b> Chia-Ling Chang, Ding-Bang Luh.</p> <p><b>Satisfying Consumers' Needs through Systematic Empathic Design Model</b> Ming-Hsuan Hsieh, Ding-Bang Luh, Cheng-Yong Huang, Chia-Hsiang Ma.</p> <p><b>Innovative Behavioral Intention and Creativity Achievement in Design: Test of an Integrated Model</b> Chia-Chen Lu, Ding-Bang Luh.</p> <p><b>A Design Process for New Concept Development</b> Ding-Bang Luh, Frank Ming-Hung Chen, Vincent (I-Hsun) Ku.</p> <p><b>Conception Pyramid Method for Cultural Product Form Development</b> Tsai-Lin Yang, Ming-Chyuan Ho.</p> <p><b>The Relationship between Preference and Stare Duration on Bicycle</b> Jin-Han Tseng, Ding-Bang Luh, Zhi-Hong Liang.</p> <p><b>Management of Individual and Organizational Design Knowledge</b> Tz-Ying Lin, Ding-Bang Luh.</p>

FRIDAY 16:00 - 18:00



## DAPI

### User monitoring in Ambient Intelligence

Chair(s): To be announced

### Understanding Privacy and Trust Issues in a Classroom Affective Computing System Deployment

Shaundra B Daily, Dante Myers, Shelby Darnell, Tania Roy, Melva James.

### Detecting Emotion from Dialogs and Creating Personal Ambient in a Context Aware System

Lun-Wei Ku, Cheng-Wei Sun.

### Architecture for Organizing Context-Aware Data in Smart Home for Activity Recognition System

Konlakorn Wongpatikaseree, Junsoo Kim, Yoshiki Makino, Azman Osman Lim, Yasuo Tan.

### Unobtrusive Recognition of Working Situations

Tobias Grosse-Puppendahl, Sebastian Benchea, Felix Kamieth, Andreas Braun, Christian Schuster.

### Creating Rule Sets for Smart Environments through Behavior Recording

Alexander Marinc, Tim Dutz, Felix Kamieth, Maxim Djakow, Pia Weiss.

### PhotoLoop: Implicit Approach for Creating Video Narrations for Slideshows

Keita Watanabe, Koji Tsukada, Michiaki Yasumura.

**Increased Community Engagement via Map Based Website Modules/Plugins**

Sapumal Ahangama.

**Interactive Screening for Learning Difficulties: Analyzing Visual Patterns of Reading Arabic Scripts with Eye Tracking**

Arwa Al-Edaily, Areej Al-Wabil, Yousef Al-Ohali.

**How to Diagram a Dramatic Story**

Sabah Al-Fedaghi.

**The E-training Caravans: An e-Inclusion Initiative in Saudi Arabia**

Hend S. Al-Khalifa.

**Brainwave Typing: Comparative Study of P300 and Motor Imagery for Typing Using Dry-Electrode EEG Devices**

Hadeel Al-Negheimish, Lama Alandas, Latifah Al-Mofeez, Aljawharah Al-Abdullatif, Nuha Al-Khalifah, Areej Al-Wabil.

**Eye-Controlled Games for Behavioral Therapy of Attention Deficit Disorders**

Ashwag Al-Shathri, Areej Al-Wabil, Yousef Al-Ohali.

**Interactive Serious Gaming for Children with Auditory Processing Difficulties in the Arabic Language**

Arwa Alamoudi, Modhi Almozainy, Rawan Alabdulrahman, Sara Alkoblan, Sarah Drine, Areej Al-Wabil.

**AN INVESTIGATION OF MULTIMODAL METAPHORS IN E-BOOK ASSESSMENT INTERFACES**

Amirah Nasser Algahtani, Dimitrios Rigas.

**The Design and Development of an Online Multimedia Language Assistant for Arabic-Speaking Web Users with Dyslexia**

Ohoud Alharbi, Areej Al-Wabil, Noura Alarfaj, Lamya Al-Hathlool, Maha Al-Ghofaily, Dania Madani.

**An Investigation into the Impact of CG Film Resources used to Depict a Historical City of Al-Madinah with Regards to Educating Children in a Museum Context City of Al-Madinah**

Walaa jamal Alharthi.

**Accessibility and utilization of e-learning tools and library support services among tertiary institution students in Lagos State, Nigeria**

Stella N Anasi, Stella Oyediran-Tidings.

**Issues with Designing Dementia-Friendly Interfaces**

Claire Ancient, Alice K Good.

**Visual Perception Modeling on Sense of Material of Object Surface**

Yoshiki Aoyama, Toshikazu Kato.

**Usability Needs of mobile applications for business management among MSEs: A case of Myshop in Uganda**

Rehema Baguma, Bridget Nakajubi, Nancy Mwakaba, Marko Myllyluoma.

**Unintelligability of Tokens in Virtual Tourism**

Maryam Bakhshaei, Abbas Motamedi, Ali Aminbeidokhti.

**Android vs. iOS Interaction Design Study for a Student Multiplatform App**

Abimael Barea, Xavier Ferre, Lorenzo Villarroel.

**Towards an Emergent and Autopoietic Approach to Adaptive Chord Generation Through Human Interaction**

Francisco de P. Barretto, Suzete Venturelli, Gabriel Do Rego.

**Persuasive Features in a Web-Based System for Weight-Loss Team Competition**

Josipa Basic, Borchuluun Yadamsuren, Dinara Saparova, Yanfei Ma.

**Using EEG Biometric Feedback Devices to Investigate Interruption Impact on Multi-Tasking Task Completion**

Robert Beaton, Scott McCrickard, Manuel Pérez-Quiriones.

**Gesture Recognition using Commodity RGB-D Sensor for Imitation Learning Platform for Children with Autism**

Esubalew T Bekele, Jacob Bumpus, Shuvajit Das, Julie Crittendon, Zachary E Warren, Nilanjan Sarkar.

**User Driven Service Design and Innovation Platforms**

Birgitta A Bergvall-Kåreborn, Mikael Wiberg.

**OnRoute: A Mobile Context-Aware Public Transportation Planning Application**

Etienne Bertou, Suleman Shahid.

**Pee-democracy : Opening data to the Great British Public Toilet Map**

Jo-Anne Bichard, Gail Ramster.

**Smart Watches for Home Interaction Services**

Gerald Bieber, Nicole Fernholz, Mirko Gaerber.

**Applying an approach to develop web applications considering accessibility practices using Design Rationale**

Thiago Jabur Bittar, Leandro Agostini do Amaral, Luanna Lobato, Renata Pontin de Mattos Fortes.

**Usability and User Acceptance of University Web Portal Interfaces: A Case of South African Universities**

Vathiswa M Booie, George Dista.

**Designing Educational Information Systems for Saudi Students**

Abeer A. Boreqqah, Amandeep Dhir, Khalid Buragga.

**Integrating Production Workers into User Interface Design for Diagnosis Devices in Automotive Production Environments: Field Experiences and Lessons Learned**

Nikolaj Borisov, Annette Kluge, Wolfram Luther, Benjamin Weyers.

**Empirical Review of Challenge Design in Video Game Design**

Michael Brandse, Kiyoshi Tomimatsu.

**End-User Development supporting Ubiquitous User Experience**

Jailson A. de Brito Junior, Vaninha Vieira, Adolfo Duran.

**Pilot's interaction with a glass cockpit navigation system**

Ondrej Bruna, Tomas Levora, Pavel Paces.

**Facebook an Open Education Platform: Exploring its Educational Uses**

Khalid Buragga, Amandeep Dhir, Abeer A. Boreqqah.

**iPad 2013: A Learning Tool for Students with Special Needs**

Khalid Buragga, Amandeep Dhir, Abeer A. Boreqqah.

**A New Serious Game Software Development Methodology Better Addressing End-User Involvement**

Nergiz Ercil Cagiltay, Mehmet Cagatay, Gul Tokdemir, Pinar Ege.

**An Accessible Chat Prototype for Screen Reader Users in Mobile Devices**

Rocío Calvo, Ana Iglesias, Lourdes Moreno.

**Applying an Augmented Book for a Sport Skill Learning**

Mauro CGA Carvalho, Bruno M Carvalho, Felipe LP Carvalho, Heidi D Oliveira-Junior, Gerson G Cunha, Luiz Landau, Estelio HM Dantas.

**Improve of Business Intelligence Usage in Brazilian Chemical Industry in the Global Crisis of 2008, 2009 and 2010**

Tiago Vieira Carvalho, Renato Jose Sassi.

**The Systems of communication in cabin for heavy trucks drivers. Usability study**

Juan Castillo.

**A HCI/AI Tool for Astronomy**

Jerry D Cavin.

**Calculating Website's Usability Metrics Using Log File Information**

Marcus V. Cerrato, Marcelo Morandini.

**A study on the relationships between drivers' emotions and brain signals**

Songyi Chae.

**Participate: Pervasive Computing for Environmental Campaigns**

Alan Chamberlain, Dominic Price, Kevin Glover, Martin Flintham, Chris Greenhalgh, Steve Benford, Andy Gower, Amanda Gower.

**Service-Learning Model of Cultural and Creative Talent Cultivation for the Bamboo Industry Cluster**

Tsen-Yao Chang, Kuo-Li Huang.

**The slip-resistance effect assessment of the anti-slip strip on different contaminated floors**

Ching-Chung Chen, Hui Chun Chen.

**Developing an Interactive Game System for Upper Limb Stroke Rehabilitation**

Chun-Ching Chen.

**Gesture-based human-machine interface: A case study comparing the realism of furniture products in e-commerce**

Kuen-meau Chen.

**Study on Application of Shaanxi Mianhua Folk Rural Culture in Product Design**

Liling Chen, Lijing Ji, Shuxia Wang, Junxuan Chen.

**Eye Gaze and Mouse Cursor Relationship in a Debugging Task**

Monchu Chen, Veraneka Lim.

**Green Credit : A Multi-Modal Input Personal Informatics System**

Po-Chun Chen, Taysheng Jeng.

**A Self-customizing Digital Menu app for the Apple ipad**

Xiaohan Chen.

**The application of HFACS and HFIX on commercial aviation in Asia: Taiwan as an example**

Yi-yuan Chen.

**An Approach to Design with People who have Special Needs**

Selene Chew.

**Estimation of User's State During a Dialog Turn with Sequential Multi-modal Features**

Yuya Chiba, Masashi Ito, Akinori Ito.

**The Question Concerning Technology As Art**

HyunKyoung Cho, Chang-Soo Park.

**CamouLED: Real-time Generation of Pixel Pattern for Camouflage**

Woon Jung Cho, Hye-Kyoung Seo, Hannah Kim, Jiyeun Lee, Dong-Hyun Kang, Min-Ki Kim, Kwang-Hee Han.

**Affective Service Design Considered Informational Assimilation of Layout Factors**

Youngil Cho, Sukeyoung Kim.

**Analysis of Perceived Discomfort and Electromyography for Touch Locations of a Soft Keyboard**

Bori Choi, Seokbong Park, Kihyo Jung.

**A Novel User Interface and Interaction Method using Smart Handheld Devices for Digital Information Display in Public Spaces**

Yonghun Choi, Hae-Cheol Yoon, Yong Gu Ji, Ji-Hyung Park.

**Emotion-Cognition Interaction of Decision Making in the Social Context**

Chongwook Chung, Jeounghoon Kim, Chung-Kon Shi.

**Effects of Digital Age to the Turkish Academic Libraries, Librarians, and Library Users**

Ertugrul Cimen.

**A Sensor Glove System for Rehabilitation in Instrumental Activities of Daily Living**

Aodhan L Coffey, Tomas E Ward.

**Apps for Rapid Epidemiological Analysis (AREA)**

Joseph Cohn, Brennan Cox, David Combs, Brian Johnson, Stephen Eggan, Kirsten Carlson, Antonio Anglero, David Rozovski, Elizabeth O'Neill, Gershon Weltman, Amos Freedy Freedy, Timur Chabuk.

**Dense Array, Low Field Magnetic Resonance Imaging Devices for Combat Casualty Care**

Joseph Cohn, Stephen Eggan, David Combs, Antonio Anglero, Brian Johnson, David Rozovski, Brennan Cox, Kirsten Carlson, Elizabeth O'Neill, Masoud Radparvar.

**Medical Modeling and Simulation Based Training Return on Investment Decision Model**

Joseph Cohn, Kirsten Carlson, David Combs, Antonio Anglero, Brian Johnson, David Rozovski, Stephen Eggan, Brennan Cox, Elizabeth O'Neill, Meredith B Carroll.

**Stress Resilience Training System (SRTS)**

Joseph Cohn, Theodore Morrison, Donald Chartrand, Gershon Weltman, Brian Johnson, David Rozovski, Kirsten Carlson, Stephen Eggan, Brennan Cox, Antonio Anglero, David Combs, Elizabeth O'Neill, Rollin McCraty.

**Is video game use associated with improved post-work recovery and reduced work-home interference, and is this mediated by online social support?**

Emily I M Collins, Anna Cox.

**An App a Day Keeps the Doctor...Informed: User Evaluation of a Patient Mobile Health Application and Clinician Dashboard**

Sarah L Cook, Rita Sembajwe, Barbara Massoudi, Amanda Recker.

**Servo-actuated stylus for post stroke arm, and fore arm rehabilitation.**

Mario Covarrubias, Monica Bordegoni, Umberto Cugini.

**The Role of Knowledge Management in Agile Software Development**

Broderick Crawford, Claudio Leon de la Barra, Ricardo Soto, Mario Dorochesi, Eric Monfroy.

**Ants Can Schedule Software Projects**

Broderick Crawford, Ricardo Soto, Franklin Johnson, Eric Monfroy.

**Mobile (rescue) architecture in the light of contemporary habitation standards and the ergonomics of the solutions.**

Roman Czajka.

**Constructing an Embodied Interaction For Concept Mapping**

Andreea Danielescu, Caroline Savio-Ramos, John P Sadauskas.

**Inclusive websites for the elderly: user friendly guidelines for designers and managers of websites and applications**

Alireza Darvishy, Alice K Good.

**Issues and Understandings for Rural HCI Systems Development: agile approaches "in the wild"**

Mark Davies, Alan Chamberlain, Andrew Crabtree.

**My Music Mosaic**

Jaylyn Dawson, Molly C Satterfield, Joshua Vargas, Amanda McIntyre, Vesna Dragojlov, Ryan Meuth.



## **Effects of the updating frequencies of timely information on decision making behavior: An eye-tracking approach**

Rong-Fuh Day.

## **New Perspectives on Interactivity in Project Management Tools**

Mirko De Almeida Madeira Clemente, Axel Berndt, Hannes Leitner, Mandy Keck, Ricardo Gaertner, Rainer Groh.

## **Study Of Effect Of Controlled Breaks On Mental Fatigue In Air Traffic Controllers**

Manasi N Deshpande.

## **Photo Sharing with Cloud Services for Teenagers - A User Study in India**

Amandeep Dhir, Marko H.T. Nieminen.

## **User-Centered Practices and Tools for Industrial Crowdsourcing**

Amandeep Dhir, Marko H.T. Nieminen.

## **Developing Mobile Financial Services from the "User value" Viewpoint**

Amandeep Dhir.

## **My iPad: A New Learning Tool for Classrooms**

Amandeep Dhir, Mohammed Al-Kahtani.

## **Survey of Available Web Services for Maritime Tracking**

Tatyana Velikova Dimitrova.

## **The Design and Usability Testing of a Mobile Application to Aid in Child-to-Adult-Care Transition**

Jeremy A Dixon, Josh Dehlinger, Shannan Dixon.

## **Your Own Facial Parameter Generation for a 3D Avatar Interface Using an MRI Medical Image**

Hiroshi Dohi, Hitoshi Iba, Mitsuru Ishizuka.

## **Relationship between Weight of Our Developed White Cane and Muscle Load on the Upper Limbs during Swinging Action of the Cane**

Kouki Doi, Atsushi Sugama, Takahiro Nishimura, Akihiko Seo, Shuichi Ino, Kiyohiko NUNOKAWA, Kazuhiko Kosuge, Akito Miyazaki, Masaaki Sugiyama, Yoshihiro Tanaka, Mayumi Sawada, Ken Kaneko, Susumu Ouchi, Katsuhiko Kanamori.

## **Verification of the Questionnaire for the Level of Mental Models Building**

Toshihisa Doi, Keisuke Ishihara, Toshiki Yamaoka.

## **MAGIC: Developing a Multimedia Gallery Supporting mid-Air Gesture-based Interaction and Control**

Giannis Drossis, Dimitris Grammenos, Chryssi Birliraki, Constantine Stephanidis.

## **A Shadow Touching Technique for Interactive Projector Devices**

Lan-Rong Dung, Ren-Yu Huang.

## **Pupil Detection using Stereo-Matching Method and a Constant Interpupillary Distance Condition for a Solution of Glasses Reflection Problem in the Video-Based Gaze Detection System**

Yoshinobu Ebisawa, Kiyotaka Fukumoto, Hiroki Yamakawa.

## **Proposal of PC Input Method by Combination of Gaze Detection and Head Movement Detection**

Yoshinobu Ebisawa, Hayato Hakamada, Kiyotaka Fukumoto.

## **A Study on the Prototype of Focusing on the Operability for Requirement Acquisition**

Yusuke EMORI, Yusuke KISHIYAMA, Tsutomu KONOSU.

## **Modeling the Types of Interaction with Ambient Environment**

DongJin Eun, Hark-Joon Kim, ChoonKyoung Moon, Pilseung Yang, Seonghoon Kang.

## **Tabletnet. Using Cloud Services to Improve the Educational Environment**

Habib M. Fardoun, Bassam Zafar, Antonio Paules Ciprés, Sebastian Romero Lopez.

## **DualMouse: Permitting Fast, Precise and User-Friendly Keyboard-Based Mouse Control**

Torsten Felzer, Stephan Rinderknecht.

## **Rules of Engagement: Brain-Computer Interfaces for Military Training**

Cali M. Fidopiastis, Tami Griffith.

## **Employing Creative Practice as a Research Method in the Field of Wearable and Interactive Technologies**

Tania Raune Frankjaer, Patricia J. Flanagan, Daniel Gilgen.

## **Changing Interactions to Reduce Energy Consumption: Specification of a Context-Aware System Centered on the Home Occupants' Concerns**

Myriam Fréjus, Michele Dominici, Frederic Weis, Germain Poizat, Julien Guibourdenche, Bastien Pietropaoli.

## **Interpret Human Gestures with a Time of Flight Camera using Standard Image Processing Algorithms on a Distributed System**

Bjoern Froemmer, Nils Roeder, Elke Hergenroether.

## **Evaluation of Subjective and EEG-Based Measures of Mental Workload**

Gregory Funke, Benjamin Knott, Vincent F Mancuso, Adam Strang, Justin Estep, Lauren Menke, Rebecca Brown, Allen Dukes, Brent Miller.

## **Designing of face image processing technique for sorting out Japanese raccoons form raccoons**

Tadasuke FURUYA, Yayoi KANEKO, Hiroaki ISHII, Takafumi SAITO.

## **Use of Assistive Technology Resources for Low Vision Students**

Maria Elisabete R. Freire Gasparetto, Marilia Ferroni.

## **Intelligent Student-Bot for an interactive question and answer user interface**

Emmanuel Günther, Bettina Harriehausen-Mühlbauer.

## **A Cost Metamodel to Improve the Development of Context-Aware HCIs**

Nadia Ghaibi, Olfa Daassi.

## **Finger Spell: Human Computer Interaction Using Vision based Hand Gesture Recognition to Aid Indian Deaf and Dumb Community**

Archana Santosh Ghotkar, Gajanan Kharate.

## **Road Accident Auto-Dialer via Pressure Sensor**

Kim Nee Goh, Yoke Yie Chen, Davindren Arumugam.

## **Personal risk management**

Hanna Golas.

## **Living in a trap: exposure, risk and vulnerability in contemporary building design.**

Leonardo A. Gomez Castillo, Ney Dantas.

## **Self soothing by Looking Back on Favorite Memories: An Exploration of Mobile Application Prototypes That Facilitate Positive Wellbeing Via Reminiscing**

Alice K Good, Claire Ancient, Georgiana Postolache, Alex Socianu, Adam Afghan.

## **Application of SMART criteria in planning improvements to the operating conditions of machinery**

Adam Gorny, Beata M. Mrugalska.

## **Infoscope: A Mobile Device Supporting Exploratory and Playful Knowledge Discovery in Physical Environments**

Dimitris Grammenos.



**A Computational Model of Graded Cueing: Robots Encouraging Behavior Change**

Jillian Greczek, Amin Atrash, Maja Mataric.

**Giving Form to the Voices of Lay-Citizens: Monumental-IT, an Intelligent, Robotic, Civic Monument**

Keith Evan Green, Tarek Mokhtar, Ian D. Walker.

**Audio-Only Augmented Reality System for Social Interaction**

Tom Gurion, Nori Jacoby.

**Affordance-based Human Behavior Modeling in Product-use Situations**

Taehyun Ha, Sangwon Lee.

**A Novel Approach for Adaptive EEG Artefact Rejection and EOG Gaze Estimation**

Mohammad Reza Haji Samadi, Neil Cooke.

**The Importance of Choice Design for Low Literate User Experience**

Lisa D. Harper, Melissa McMacken, Lianne Appelt, Kathryn Summers.

**The Problem of Implicature in "Do Not Track" Choice Design**

Lisa D. Harper, Deborah Kohl, Kathryn Summers.

**Towards Usable and Secure Natural Language Processing Systems**

Yasser Hausawi, Liam M Mayron.

**Narratarium: An Immersive Storytelling Environment**

Katherine Hayden, Dan Novy, Catherine Havasi, Michael Bove, Santiago Alfaró, Rob Speer.

**Variables of Usability**

James N Helfrich.

**Point-and-click Interface Based on Parameter-free Eye Tracking Technique Using a Single Camera**

Shinichi Hikita, Yasuhiro Seto.

**Developing Visualisation Techniques of Tasks in Air Traffic Control Work**

Hajime Hirako, Toshiya Sasaki, Kazuhiko Yamazaki, Hisae Aoyama, Satoru Inoue, Yutaka Fukuda.

**The Site-specific Learning Model on Mobile Phones Using Zeigarnik Effect**

Yuko Hiramatsu, Atsushi Ito, Fumihiko Sato.

**The Effects of Online Multiuser Virtual Environments on Creative Motivation in Collaborative Design Studios**

SeungWan Hong, Yun Gil Lee, Yehuda Kalay.

**Comparisons of computer exposure and forearm musculoskeletal symptoms among three computer groups - The application of an external logger**

Wei-Hsien Hong, Hsieh-Ching Chen, Ya-Hsiu Hsu, Hsin-Chieh Wu.

**Prototyping Method for Augmented Reality Service based on Head Mounted Display Devices**

Yoo Hoonsik, Pan Younghwan.

**The Convergence of Security and Usability: Defining a Combined Framework of Design Principles for Mobile Devices**

Ann-Marie Horcher, Guivrender Tejay.

**How genders differ in Taiwanese college students' multiple intelligences and English learning**

Yi-an Hou.

**Designing a Service Innovation Measurement of SMEs**

Yen-Hao Hsieh.

**Moving Castle: Service Design on Sedan Security System**

Hung-Pin Hsu.

**Human-centric design for human-machine interface of next generation ICU**

Shang Hwa Hsu.

**Automatic Sleep Stage Classification GUI with a Portable EEG Device**

Chih-Sheng Huang, Chun-Ling Lin, Li-Wei Ko, Yu-Kai Wang, Jyun-Wei Liang, Chin-Teng Lin.

**An exploration of figures and text in visual narration: Visual flow and preference factors**

Chiwu Huang, Miao-Hsien Chuang.

**Task-oriented M-Commerce Interface Design**

Eugenia Y. Huang, Yu-Ju Lin, Travis K. Huang.

**To Decipher the Capital's Cultural Image Based on the New Generations' Perspectives on Action figure Design**

Kuo-Li Huang, Tsen-Yao Chang, Ting-Chun Tung.

**Segmenting Instrumented Activities of Daily Living (IADL) Using Kinematic and Sensor Technology for the Assessment of Limb Apraxia**

Charmayne ML Hughes, Manish Parekh, Joachim Hermsdörfer.

**Supporting User's Continued Effort for Health by Estimating Mental Loads of Actions**

Hitoshi Ikeda, Toshikazu Kato.

**Computer-Based Character Creation in Storytelling: Prototyping and Testing of Random Character Creator**

Hokyoung Im, YiKyung Kim, Bong Gwan Jun.

**A Support System for Healthy Eating Habits: Optimization of Recipe Retrieval**

Yuma Inagawa, Junki Hakamata, Masataka Tokumaru.

**Fundamental Study for New Evaluation Method Based on Physical and Psychological Load in Human Movement**

Hiroaki Inoue, Shimizu Shunji.

**Collaborative Design Support System based on Interactive Genetic Algorithm(IGA)**

Yasufumi Inoue, Takashi Inoue, Masataka Tokumaru.

**Cloth Handling in Virtual Space**

SHIGERU INUI, Yuko Mesuda, Yosuke Horiba.

**Mapping Peace Ideas around the Table**

Andri Ioannou, Panayiotis Zaphiris, Fernando Loizides, Christina Vasiliou.

**Calibrating Screen Coordinates of Tabletop Display using Shadow-Cursor**

Makio Ishihara, Yukio Ishihara.

**Laser Pointer Interaction and Its Properties in Pointing Performance**

Makio Ishihara, Takuya Nakashima.

**Protecting Intellectual Property: Economic Espionage and Industrial Spying**

Mustafa Isik.

**Towards Exploring Web Interface Sign Ontology: A User Study**

Muhammad Nazrul Islam.

**Developing a Mobile Application for Language Disabled Children with User Centered Design**

Lizeth Islas, Victor M. Gonzalez, Marcelo Mejia.

**Adaptive Control Elements for Navigation Systems**

Benedikt Janny, Johann Winterholler, Aleko Petrov, Thomas Maier.

**Performance Analysis of Naïve Bayesian Methods for Paragraph Level Text Classification in the Kannada Language**

R Jayashree, K Srikantamurthy, Basavaraj S. Anami.

## Visualizing Software Ecosystems as Living Cities

Clinton L Jeffery.

## Emotional Speech Conversion using Pitch-Synchronous Harmonic and Non-harmonic Modeling of Speech

Kwang Myung Jeon, Nam In Park.

## Designing Interactive Sonification for Live Aquarium Exhibits

Myounghoon Jeon, Riley Winton, Ashley Henry, Sanghun Oh, Carrie Bruce, Bruce Walker.

## Lyricons (Lyrics + Earcons): Designing a New Auditory Cue Combining Speech and Sounds

Myounghoon Jeon.

## Research on a Communicative Interface for User-Abstract Oriented Experience Construction

YI JI.

## Differences Between a Young and Older Computer users' Recognition Rate of Tactons

Ricardo Jimenez.

## A Two-Step Click Interaction for Mobile Internet on Smartphone

Kihyo Jung, Jina Jang.

## Development of Brand Selection Model Considering Customer Service

Hiroki Kageyama, Fumiaki Saitoh, Syohei Ishizu.

## Measurement of Internet anxiety using FeelCalc

Santosh Kumar Kalwar, Kari Heikkinen, Jari Porras.

## Interactive Color Perspective for 3D Graphics Applications: Enhancing Depth Perception and the Understanding of Object Relations

Dietrich Kammer, Jan Wojdziak, Rainer Groh.

## Paper Control Panel: Making Paper-based Touch Interface

Masahiro Kaneko, Jiro Tanaka.

## A Museum Guide Application for Deployment on User-Owned Mobile Devices

George Kapnas, Asterios Leonidis, Maria Korozi, Stavroula Ntoa, George Margetis, Constantine Stephanidis.

## Social Networking Using Mobile Devices

Dima Kassab, Xiaojun Yuan, Jami L. Cotler.

## Making it Everyone's Finna – Cross-sector Collaboration and User Experience Design in a Digital Library

Heli Kautonen.

## Seamless Mobility: Individual Mobility Profiles for a Better Usability of Shared Vehicles

Moritz Kümmerling, Christian Heilmann.

## Wearable Health Monitoring System

Ali Mehmood Khan.

## Intelligent Natural Language Interface for Web-based Information Retrieval

Rahul Shankar Khokale, Mohammad Atique, Pradeep Pawar.

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