HCI 2011 International

14th International Conference on Human - Computer Interaction

jointly with:

Symposium on Human Interface (Japan) 2011

9th International Conference on **Engineering Psychology and Cognitive Ergonomics**

6th International Conference on Universal Access in Human-Computer Interaction

4th International Conference on **Virtual and Mixed Reality**

4th International Conference on Internationalization, Design and Global Development

4th International Conference on Online Communities and Social Computing

6th International Conference on **Augmented Cognition**

3rd International Conference on **Digital Human Modeling**

2nd International Conference on **Human Centered Design**

1st International Conference on **Design, User Experience, and Usability**

Under the auspices of 12 distinguished international boards of 302 board members from 34 countries

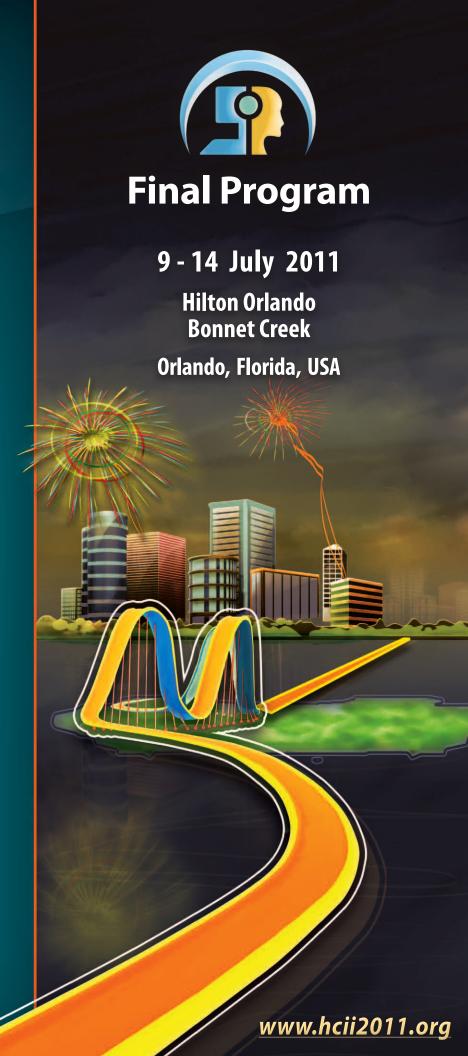


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Founder of the Conference Series and Scientific Advisor

Gavriel Salvendy
Purdue University, *USA*and Tsinghua University, *P.R. China*

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

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Conference at a Glance

Conference Registration - Secretariat

Conference Registration will take place at the Conference Secretariat, located at **Bonnet Creek Ballroom Foyer North**, during the following hours:

Friday, 8 July	15:00 – 19:00
Saturday, 9 July	08:00 – 18:30
Sunday, 10 July	08:00 – 18:30
Monday, 11 July	07:30 – 17:00
Tuesday, 12 July	07:30 – 18:30
Wednesday, 13 July	07:30 – 18:30
Thursday, 14 July	07:30 – 18:00

The Conference registration fee includes:

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

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

Conference Evaluation

Your opinion and comments are very important for the improvement and future planning of the conference.

We kindly ask you to spend a few minutes to fill-in the on-line anonymous survey through the link:

www.surveymonkey.com/s/HCII2011



or scan the QR-Code on the left

The survey will be available until 20 August 2011.

Program					
Saturday 9 July 2011	• Tutorials Day 1 - page 11				
Sunday 10 July 2011	• Tutorials Day 2 - page 11				
Monday 11 July 2011	 Tutorials Day 3 - page 11 Open Networking Session on the Global Public Inclusive Infrastructure Chair: Gregg C. Vanderheiden, USA (08:30 - 17:00, Room: Hamilton) Opening Plenary Session - Room: FLORIDIAN BALLROOM - Salon G-L Chair: Michael J. Smith, USA Keynote address: "Technology-Mediated Social Participation: The Next 25 Years of HCI Challenges" by: Ben Shneiderman - page 5 Gala Reception - page 92 				
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Welcome Note

HCI International 2011



Gavriel Salvendy
Conference Series Founder and
HCII 2011 Scientific Advisor

Dear Colleague,

It is with great honor and pleasure that I welcome you to HCI International 2011, the 14th International Conference on Human-Computer Interaction, held in Orlando, FL, USA, 9-14 July 2011, in cooperation with the:

- Symposium on Human Interface (Japan) 2011
- 9th International Conference on Engineering Psychology and Cognitive Ergonomics
- 6th International Conference on Universal Access in Human-Computer Interaction
- · 4th International Conference on Virtual and Mixed Reality
- 4th International Conference on Internationalization, Design and Global Development
- 4th International Conference on Online Communities and Social Computing
- 6th International Conference on Augmented Cognition
- 3rd International Conference on Digital Human Modeling
- 2nd International Conference on Human Centered Design
- 1st International Conference on Design, User Experience, and Usability



Constantine Stephanidis General Chair HCII 2011

HCI International is the worldwide renowned international forum for the dissemination and exchange of up-to-date scientific information on theoretical, generic and applied areas of Human-Computer Interaction.

HCI International 2011 promises to be an unforgettable cluster of high quality international scientific events, and an ideal occasion to come to contact with the rapidly evolving ICT market in the world. This year, HCI International and the affiliated Conferences explore a wide variety of new hot topics which reflect and contribute to a paradigm shift towards ubiquitous interaction, intelligent environments and interactive technologies supporting virtually any aspect of human life and activities in a global and social perspective.

The 23-volume Conference Proceedings are published by Springer in the Lecture Notes in Computer Science (LNCS), Lecture Notes in Artificial Intelligence (LNAI) and Communications in Computer and Information Science (CCIS) series, and are available on-line through the SpringerLink Digital Library (http://www.springer.com/lncs, http://www.springer.com/series/7899), readily accessible by all subscribing libraries around the world. The Proceedings are also published by Springer in DVD, which is provided in your registration bag.

An impressive number of nearly 2000 individuals from 61 countries are participating in this truly international in scope event, where the work of the world's foremost leaders in the field is presented. We are privileged that Ben Shneiderman has joined us as the keynote speaker at the opening plenary session. Furthermore, during this session, for the second time in the history of the HCI International Conference series, fourteen awards will be conferred. Twelve awards will be given to the best papers in each Affiliated Conference / Thematic Area. The winners will receive a plaque and a certificate. Among these twelve best papers, one paper will be selected as Best HCI International 2011 Conference paper, and will receive a golden award and a certificate. Finally, the Best Poster will also receive a plaque award and a certificate.

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

Constantine Stephanidis General Chair

HCI International 2013

The 15th International Conference on Human-Computer Interaction, HCI International 2013, will be held jointly with the affiliated Conferences in the Mirage Hotel, Las Vegas, Nevada, USA, 21 - 26 July 2013.

It will cover a broad spectrum of themes related to Human Computer Interaction, including theoretical issues, methods, tools, processes and case studies in HCl design, as well as novel interaction techniques, interfaces and applications. The program will feature, among others: pre-conference half-day and full-day tutorials, parallel sessions, poster presentations, an opening session with a keynote address, and an exhibition.

The Proceedings will be published by Springer.

For more information, please visit the Conference website: www.hcii2013.org

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

Opening Plenary Session

Monday, 11 July 2011 @ 17:30

FLORIDIAN BALLROOM - Salon G-L

Technology-Mediated Social Participation: The Next 25 Years of HCI Challenges



Professor Ben Shneiderman

University of Maryland
Department of Computer Science
A. V. Williams Building
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Abstract

The dramatic success of social media such as Facebook, Twitter, YouTube, blogs, and traditional discussion groups empowers individuals to become active in local and global communities. Some enthusiasts believe that with modest redesign, these technologies can be harnessed to support national priorities such as healthcare/wellness, disaster response, community safety, energy sustainability, etc.

However, accomplishing these ambitious goals will require long-term research to develop deep science foundations and extreme technology strategies. The enduring questions of how to motivate participation, increase social trust, and promote collaboration remain grand challenges even as the technology rapidly evolves. This talk invites researchers across multiple disciplines to participate in inspirational prototypes, innovative evaluations, and robust technologies.

Analyzing Social Media Networks with NodeXL Insights from a Connected World

By Derek Hansen, Ben Shneiderman, Marc Smith Paperback, 304 Pages, Published: AUG-2010 ISBN 13: 978-0-12-382229-1

Imprint: MORGAN KAUFMANN

Scan the image on the right with the camera from your smart phone to view more details



Biographical Sketch

Ben Shneiderman is a Professor in the Department of Computer Science, Founding Director (1983-2000) of the Human-Computer Interaction Laboratory, and Member of the Institute for Advanced Computer Studies at the University of Maryland at College Park. He has taught previously at the State University of New York and at Indiana University. He was made a Fellow of the ACM in 1997, elected a Fellow of the American Association for the Advancement of Science in 2001, and received the ACM CHI (Computer Human Interaction) Lifetime Achievement Award in 2001.

He was elected to the National Academy of Engineering in 2010. He was the Co-Chair of the ACM Policy 98 Conference, and is the Founding Chair of the ACM Conference on Universal Usability, November 16-17, 2000. Ben Shneiderman's interest in creativity support tools led to organizing the June 2005 NSF workshop and to chairing the June 2007 Conference on Creativity & Cognition. He is a Member of the Board of Scientific Counselors Meeting, National Library of Medicine Lister Hill Center, the National Academies Committee on Technical and Privacy Dimensions of Information for Terrorism Prevention and Other National Goals, and the President's Council of Advisors on Science and Technology, Networking and Information Technology Technical Advisory Group (TAG). He is on the State of the USA Product Advisory Group and a member of the Web Science Research Initiative Advisory Committee.

His major research focus has been information visualization, beginning with his dynamic queries and starfield display. In 1991, he developed the treemap concept, which continues to inspire research and commercial implementations. Later information visualization work includes LifeLines for exploring a patient history, and its successor, PatternFinder, which enables search across electronic medical records. Searching for patterns in numerical time series data was enabled by TimeSearcher, which was applied for stock market, auction, genomic, weather, and other data. The Hierarchical Clustering Explorer supports discovery of features in multi-dimensional data, especially for gene expression data, using the powerful rank-by-feature framework. Current projects focus on network visualization: Network Visualization by Semantic Substrates, SocialAction, and NodeXL. These tools are being applied for citation analysis and social network analysis.

Professor Shneiderman has published many books, including:

- 1980. Software Psychology: Human Factors in Computer and Information Systems; Little, Brown and Co.
- 1987. Designing the User Interface: Strategies for Effective Human-Computer Interaction, 1st edition. Addison-Wesley.
- 1999. Readings in Information Visualization: Using Vision to Think. With Stuart K. Card and Jock D. Mackinlay. Morgan Kaufmann.
- 2002. Leonardo's Laptop: Human Needs and the New Computing Technologies; MIT Press.
- 2010. Designing the User Interface: Strategies for Effective Human-Computer Interaction, 5th edition. With C. Plaisant. Addison-Wesley.
- 2011. Analyzing Social Media Networks with NodeXL: Insights from a Connected World. With D. Hansen and M. Smith. Morgan Kaufmann.

In addition, he has published more than 200 technical papers and book chapters. He has been on the Editorial Advisory Boards of nine journals including the ACM Transactions on Computer- Human Interaction and the ACM Interactions. He edited the Ablex Publishing Co. book series on "Human-Computer Interaction." He has consulted and lectured for many organizations including Apple, AT&T, Citicorp, GE, Honeywell, IBM, Intel, Library of Congress, Microsoft, NASA, NCR, and university research groups.

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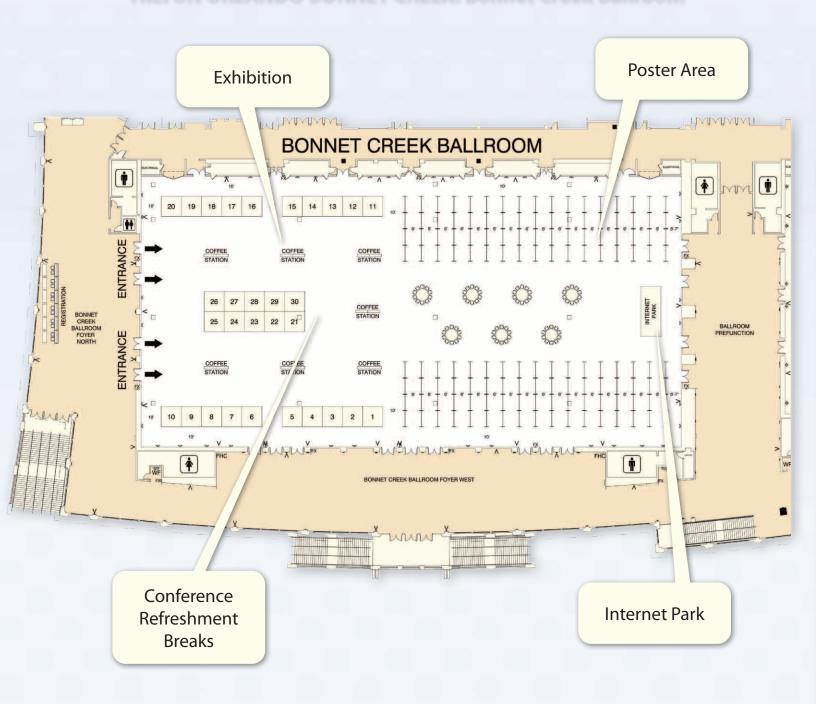
Conference Exhibition

The Exhibition of HCI International 2011 is hosted in the **Bonnet Creek Ballroom** of the Hilton Orlando Bonnet Creek.

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

Timetable							
Display set-up	Monday, 11 July	12:00 - 17:00					
	Tuesday, 12 July	09:00 - 18:30					
Opening Hours	Wednesday, 13 July	09:00 - 18:30					
	Thursday, 14 July	09:00 - 18:00					
Display dismantle	Thursday, 14 July	18:00 - 21:00					

HILTON ORLANDO BONNET CREEK: Bonnet Creek Ballroom



LIST OF EXHIBITORS











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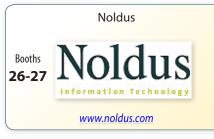






















Proceedings

Conference Authors may purchase printed copies of any HCI International 2011 LNCS/LNAI/CCIS proceedings volume directly from Springer with a discount of 33.3% on the list price.

Shipping charges will be added on top of the discounted book prices.



www.springer.com



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			HCI International 2011 Proceedi	ings Volumes Prid	ce List		
Volume	Series	Vol. No	Title - Conference Name	Editor(s)	ISBN	Net List Price	Author Net Price
1	LNCS	6761	Human-Computer Interaction: Design and Development Approaches	Jacko, J.A. (Ed.)	978-3-642-21601-5	€ 87,00	€ 58,03
2	LNCS	6762	Human-Computer Interaction: Interaction Techniques and Environments	Jacko, J.A. (Ed.)	978-3-642-21604-6	€ 79,00	€ 52,69
3	LNCS	6763	Human-Computer Interaction: Towards Mobile and Intelligent Interaction Environments	Jacko, J.A. (Ed.)	978-3-642-21615-2	€ 79,00	€ 52,69
4	LNCS	6764	Human-Computer Interaction: Users and Applications	Jacko, J.A. (Ed.)	978-3-642-21618-3	€ 87,00	€ 58,03
5	LNCS	6765	Universal Access in Human-Computer Interaction. Design for All and elnclusion	Stephanidis, C. (Ed.)	978-3-642-21671-8	€70,00	€ 46,69
6	LNCS	6766	Universal Access in Human-Computer Interaction. Users Diversity	Stephanidis, C. (Ed.)	978-3-642-21662-6	€ 79,00	€ 52,69
7	LNCS	6767	Universal Access in Human-Computer Interaction. Context Diversity	Stephanidis, C. (Ed.)	978-3-642-21665-7	€ 62,00	€ 41,35
8	LNCS	6768	Universal Access in Human-Computer Interaction. Applications and Services	Stephanidis, C. (Ed.)	978-3-642-21656-5	€ 87,00	€ 58,03
9	LNCS	6769	Design, User Experience, and Usability. Theory, Methods, Tools and Practice	Marcus, A. (Ed.)	978-3-642-21674-9	€ 87,00	€ 58,03
10	LNCS	6770	Design, User Experience, and Usability. Theory, Methods, Tools and Practice	Marcus, A. (Ed.)	978-3-642-21707-4	€ 87,00	€ 58,03
11	LNCS	6771	Human Interface and the Management of Information. Interacting with Information, Part I	Smith, M.J.; Salvendy, G.(Eds.)	978-3-642-21792-0	€ 87,00	€ 58,03
12	LNCS	6772	Human Interface and the Management of Information. Interacting with Information, Part II	Salvendy, G.; Smith, M.J. (Eds.)	978-3-642-21668-8	€ 70,00	€ 46,69
13	LNCS	6773	Virtual and Mixed Reality — New Trends	Shumaker, R. (Ed.)	978-3-642-22020-3	€ 62,00	€ 41,35
14	LNCS	6774	Virtual and Mixed Reality — Systems and Applications	Shumaker, R. (Ed.)	978-3-642-22023-4	€ 62,00	€ 41,35
15	LNCS	6775	Internationalization, Design and Global Development	Rau, P.L.P. (Ed.)	978-3-642-21659-6	€ 79,00	€ 52,69
16	LNCS	6776	Human Centered Design	Kurosu, M. (Ed.)	978-3-642-21752-4	€ 79,00	€ 52,69
17	LNCS	6777	Digital Human Modeling	Duffy, V. (Ed.)	978-3-642-21798-2	€70,00	€ 46,69
18	LNCS	6778	Online Communities and Social Computing	Ozok, A.A.; Zaphiris, P. (Eds.)	978-3-642-21795-1	€ 62,00	€ 41,35
19	LNCS	6779	Ergonomics and Health Aspects of Work with Computers	Robertson, M. (Ed.)	978-3-642-21715-9	€ 46,00	€30,68
20	LNAI	6780	Foundations of Augmented Cognition. Directing the Future of Adaptive Systems	Schmorrow, D.D. ; Fidopiastis, C.M. (Eds.)	978-3-642-21851-4	€ 79,00	€ 52,69
21	LNAI	6781	Engineering Psychology and Cognitive Ergonomics	Harris, D. (Ed.)	978-3-642-21740-1	€ 79,00	€ 52,69
22	CCIS	173	HCI International 2011 - Posters' Extended Abstracts, Part I	Stephanidis, C. (Ed.)	978-3-642-22097-5	€ 89,00	€ 59,36
23	CCIS	174	HCI International 2011 - Posters' Extended Abstracts, Part II	Stephanidis, C. (Ed.)	978-3-642-22094-4	€ 80,00	€53,36

Tutorials Synopsis

	Saturday, 9 July 2011						
	Tutorials	Room	Time				
T 01	Enhancing Reliability and Efficiency of Computer Based Tasks Gregory Bedny, Waldemar Karwowski, Inna Bedny		drawn authors				
T 02	Cognitive Crash Dummies: Predicting Performance from Early Prototypes Bonnie E. John	Orange	09:00 - 12.30				
T 03	Overview of Human Information Processing for Human-Computer Interaction Kim-Phuong Vu, Robert Proctor	Palm Beach	09:00 - 12.30				
T 04	Cognitive Neuroscience for the HCI Practitioner Chris Forsythe	Nassau	14:00 - 17.30				
T 05	Cost-effective User-Centered Design based on 9241-210 Nigel Bevan	Orange	14:00 - 17.30				
T 06	Extreme Cognition in Human Computer Interaction – Foundations & Applications G. Susanne Bahr	Palm Beach	14:00 - 17.30				

	Sunday, 10 July 2011					
	Tutorials	Room	Time			
T 07	Designing Interaction for Ambient Intelligence Environments Norbert Streitz	Nassau	09:00-17:30			
T 08	Cross-Cultural HCI / User-Experience Development Aaron Marcus	Orange	09:00-17:30			
T 09	Multimodal Information - Collection and Analysis of Interactive Data Kristiina Jokinen	Hamilton	09:00-17:30			
T 10	Gaze Metrics in Adaptive Systems Kelly Hale	Taylor	09:00 - 12.30			
T11	Assessing Usability Capability using ISO Standards Nigel Bevan	Union	09:00 - 12.30			
T 12	Practical Statistical Methods for User Research James Lewis , Jeff Sauro	Palm Beach	09:00 - 12.30			
T13	Designing with the Mind in Mind: The Psychological Basis for UI Design Rules Jeff Johnson	Palm Beach	14:00 - 17.30			
T14	Applying Cognitive Compatibility Principles to the Design of Computer Interfaces Robert Proctor, Kim-Phuong Vu	Taylor	14:00 - 17.30			
T 15	Designing for Persuasion and Engagement Susan Weinschenk	Union	14:00 - 17.30			

	Monday, 11 July 2011						
	Tutorials	Room	Time				
T 16	Mobile HCI / User-Experience Development Aaron Marcus	Orange	08:30-17:00				
T 17	Introduction to Social Network Analysis Panayiotis Zaphiris, Chee Siang Ang	Nassau	08:30-17:00				
T 18	Brain-Computer Interface Günter Edlinger, Christoph Guger	Palm Beach	08:30-12:00				
T 19	Practical Speech User Interface Design for Interactive Voice Response Applications James Lewis	Taylor	08:30-12:00				
T 20	How to Select the Most Appropriate Methods for User Centered Design Nigel Bevan	Union	08:30-12:00				
T 21	Raising Cultural Awareness in HCI Design Astrid Beck, Kerstin Röse, Rüdiger Heimgärtner	Palm Beach	13:30-17:00				
T 22	Interactive Business Process Development – The Stakeholder Approach Albert Fleischmann, Christian Stary	Taylor	13:30-17:00				
T 23	User-centered Design and Universal Access: How they can Work Together in Practice Simeon Keates	Union	13:30-17:00				



View the detailed descriptions of the Tutorials online at: www.hcii2011.org/tutorials

or scan the QR-Code on the left

Parallel Sessions Overview

Tuesday, 12 July 2011

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

	08:00 – 10:00 (page 18 - 22)		10:30 – 12:30 (page 23 - 27)		
Thematic Area	session code	Session Title	session code	Session Title	
EHAWC					
НІМІ	S001 S002	New Prospective of the Research for Tactile & Haptic Interactions Ontologies, Semantic Web and Interaction	S020 S021	Human Factors Considerations in NextGen Personal, Family and Social Media	
НСІ	\$003 \$004 \$005 \$006	Children-Computer Interaction Rich Application Technologies and Rich User Experiences Advanced System Architecture in the Social Context (I) HCI in MIS	\$022 \$023 \$024 \$025	New Technology and User Experience for Ubiquitous and Mobile Learning Patterns and Models for Interactive System Development Developing Service Cognition Safety of Medication Usage	
EPCE	S007	Human Factors and Aviation Safety	5026	Industrial and Military Applications	
UAHCI	S008 S009 S010 S011	Sociocultural Aspects in Monolingual and Multilingual Human-Computer Interaction Inclusive Interaction Interfaces Conversational Robots in HCI Stakeholder -Driven Process Management	S027 S028 S029 S030	The Future of Universal Access (I) SMART Interfaces for Consumer Health Applications (I) Looking for an Accessible Life; while in Desktop, Mobile and Web Human, Computer and Environment	
VMR	S012	Developing Virtual Environments (I)	S031 S032	Digital Puppetry: Bringing Virtual Characters to Life Interaction and Navigation in Virtual Environments	
IDGD	S013 S014	Cultural Design Issues Mobile & Internet @ User Experience	S033 S034	Designing "Friendship" into Modern Products (I) User Experience Design and Research in Multinational Companies	
ocsc					
AC	S015	Assessment of Team NeuroDynamics during Training	S035	Brain Computer Interfaces	
DHM	S016	Motion Modelling			
HCD	S017	Human Systems Integration Design: from Biology to Technology and Organization			
DUXU	S018 S019	UX/UI Design Usability Studies: Rigor, or Rigor Mortis?	S036 S037	Persuasion Design Focus on Visual Innovation	

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

Sessions Day 1

Tuesday, **12 July 2011**

Afternoon 13:30 - 18:00

		13:30 – 15:30 (page 27 - 31)		16:00 – 18:00 (page 32 - 36)
Thematic Area	session code	Session Title	session code	Session Title
EHAWC			S056	Light and Display
HIMI	S038	Supporting Communication and Collaboration	S057 S058	Novel Devices and Techniques for Interacting with Information Education and Training
НСІ	S039 S040 S041 S042	Towards Integrating Haptic Experiences: Does Touch Really Matter? Signal and Image Processing for HCI (I) Spatial Interaction Design (I) Gesture-based Interaction (I)	S060 S059 S061	Facial Gesture Recognition and Gaze Tracking Brain Interfaces and Electromyography Advanced HCI Applications
EPCE	S043	Cognitive Issues in Interaction (I)	5062	Cognitive Issues in Interaction (II)
UAHCI	S044 S045 S046 S047	Social Inclusion Intelligent Interfaces and Functionality, Adaptation, and Personalization Multimodal and Multicultural Communicative Agent (MMMCA) Universal Access Methods and Tools	S063 S064 S065	Universal Access in Practice Design Access in Ergonomics and Interaction Distributed Intelligence and the Web
VMR	S048	Human Behaviour in Virtual and Augmented Environments	S066	3D Technology for HMD and LCD as a Human Interface
IDGD	S049	Designing "Friendship" into Modern Products (II)	S067	Human Factors and Control of Complex Systems
ocsc	S050	Electronic Business	S068	Higher Education and Social Computing Applications
AC	S051	Computational Neuroscience & Predicting Cognitive & Affective States	S069	AugCog Overview
DHM	S052	Posture and Comfort	5070	Applications of Digital Human Modelling
HCD	S053	Novel Design Approaches	S071	Objective Aspects and Subjective Aspects in User Experience
DUXU	S054 S055	User Experience in Online Communication Globalization / Localization of DUXU	S072 S073	Promoting Design Quality, Design Culture and Innovative Thinking within the Enterprise Sustainability: Future Roles, Responsibilities, and Opportunities for the HCI Profession

VMR Virtual Reality, Usability and Internationalization • **IDGD** Internationalization, Design and Global Development **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling **HCD** Human Centered Design • **DUXU** Design, User Experience, and Usability

Parallel Sessions Overview

Wednesday, 13 July 2011

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

	08:00 – 10:00 (page 37 - 41)			10:30 – 12:30 (page 41 - 45)
Thematic Area	session code	Session Title	session code	Session Title
EHAWC			S092	Biomedical and Health Visualization HCI Design
HIMI	S074 S075	Communication Enhancement Designing Web Sites and Interfaces to Optimize HCI	S093 S094	Practical Implications of Applied Visual Analytics Industrial, Aeronautical and Military Applications
НСІ	S076S077S078S079	Advanced System Architecture in the Social Context (II) Tabletop and Surface Interaction Text, Human Languages and Translation Health and Well-being Applications	S095 S096 S097	Emotions in HCI Novel Interaction Methods and Techniques Learning Environments
EPCE	S080	Detecting Terrorist Activities	S098	Cognitive Issues in Interaction (III)
UAHCI	S081 S082 S083 S084	Information Technology Strategies in Health Care Active Ageing with ICT SMART Interfaces for Consumer Health Applications (II) The Future of Universal Access (II)	S099 S100 S101	Smart Products and Services Designing Interactions for the Ageing Society Universal Accessibility in Documents
VMR	S085 S086	Toward Ultra-Reality Technology for VR/MR Health and Rehabilitation Applications of VR and AR	S102	Developing Virtual Environments (II)
IDGD	S087	Social Networks: Cultural Design and Analysis Methods	S103	HCI for Economic Development: from HCI4D to the PRC
ocsc			S104	Interacting with Wikis and Blogs
AC	S088	Cultural Neuroscience and Individual Differences: Implications for Augmented Cognition	S105	AugCog in Training and Education
DHM	S089	Upper Extremity Safety and Health	S106	Cognitive Modelling and AR/VR based Support Technologies for Future Home and Work Environments
HCD			S107	Towards a Human-Centred Web
DUXU	S090 S091	Psychological and Physiological Evaluation for User on Interface Design Novel Mobile Interactions, Services and Environments	S108 S109	ISO Usability Standards and Enterprise Software User Experience and the Web

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

Sessions Day 2

Wednesday, 13 July 2011

Afternoon 13:30 - 18:00

	13:30 – 15:30 (page 46 - 50)			16:00 – 18:00 (page 50 - 54)	
Thematic Area	session code	Session Title	session code	Session Title	
EHAWC	S110	New Ways of Working in Offices			
німі	S111 S112 S113	Kansei Value Creation Designing the Service Engineering in the Present Day Visualisation Methods, Techniques and Applications	S128	Security and Forensic Aspects of Human-Computer Interaction	
HCI	S114 S115 S116 S117	Signal and image processing for HCI (II) Cognitive and Psychological Issues in HCI (I) Novel Approaches to Usability Multimodal Interaction	\$129 \$130 \$131 \$132	Innovative Interaction Strategies Gesture-based Interaction (II) User Interface Design Methods and Tools Capturing and Consolidating Design Knowledge	
EPCE	S118	Situation Awareness and Transportation Safety	S133	Aeronautics and Space	
UAHCI	S119 S120	BCI: Application Interfaces and Environments Affective Technology through Affective Management	S134 S135 S136 S137	Designing Interfaces for In-vehicle Driver Support Systems - Issues under Consideration Aging and HCI New Approaches to the Study of Web Accessibility Advances in Accessibility	
VMR	S121	VR in Products Design and Assembly	S138	"What's the Name of the Game? Does It Mean Anything To You?" - Maximizing the Learning Value of Serious Games and Virtual Worlds	
IDGD	S122	Social Innovation and Service Design Education and Practices in China	S139	Trends of HCI in China	
ocsc	S123	Information in On-line Communities			
AC	S124	Technology Integration	S140	Public, Private and Industry Researchers: their Combined Role is a Key to Success in Advancing Augmented Cognition	
DHM			S141	Shape Analysis and its Applications	
HCD	S125	Usability and Design	S142	Holistic Prosthetics Technology for People with Multiple Disability	
DUXU	S126 S127	Communication Issues and the User Experience: Branding, Content Design and Semiotics Mobile Services and Devices	S143 S144 S145	Usability in the Life Science Industry Revisiting User Support Industrial User Experience	

VMR Virtual Reality, Usability and Internationalization • **IDGD** Internationalization, Design and Global Development **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling **HCD** Human Centered Design • **DUXU** Design, User Experience, and Usability

Parallel Sessions Overview

Thursday, **14 July 2011**

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

	08:00 – 10:00 (page 55 - 58)			10:30 – 12:30 (page 59 - 63)	
Thematic Area	session code	Session Title	session code	Session Title	
EHAWC	S146	Technology Mediated Collaboration	S162	Quality of Working Life	
HIMI	S147 S148	Relationality DesignRelationality Design Access to Information	S163 S164	Embodied Interaction and Communication Toward Creating Human-Centric Services in Service Engineering Design	
НСІ	S149 S150 S151 S152	Mobile Interaction HCI in the Physical, Architectural and Cultural Environment Interacting with the World Wide Web Spatial Interaction Design (II)	\$165 \$166 \$167	Modeling Interaction Human Performance Modeling Using Interactive Simulations Cognitive and Psychological Issues in HCI (II)	
EPCE	S153	Driver Measurement and Sensing	S168	Basic Issues of Interface Design	
UAHCI	S154 S155 S156 S157	Camera-based Interfaces for People with Disabilities Mobile User Interaction Behavior Computer Animation, Communicability and Education for All Functional Modeling and Rehabilitation (I)	S169 S170 S171	elnclusion - Policies, Programs, Best Practices Ergonomics in Architecture The Future of Universal Access (III)	
VMR	S158	Ubiquitous Virtual Reality	S172	Digital Museum	
IDGD			S173	Research on User Experience and Service System Design in Mobile Network	
ocsc			S174	Design of Social Applications	
AC	S159	Operational Neuroscience	S175	Augmenting Cognition by Social Information and Collective Intelligence	
DHM			S176	Driver Modeling	
HCD	S160	The Home and the Mobile Context	S177	HCD and Innovation	
DUXU	S161	Methods and Tools for Assessing and Enhancing the User Experience	S178	User Experience in Complex Systems	

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

Sessions Day 3

Thursday, **14 July 2011**

Afternoon 13:30 - 18:00

	13:30 – 15:30 (page 63 - 67)		16:00 – 18:00 (page 68 - 72)	
Thematic Area	session code	Session Title	session code	Session Title
EHAWC				
HIMI	S179 S180	Personalisation, Intelligent HCI Convergence Persuasion and Credibility	S196	Psychological and Physiological Model Applied to Human Interface Design
HCI	S181 S182	Adaptive User Interfaces HCI and Auto Industry	S197 S198	Executable Models to Bridge Design Time and Runtime of Interactive Systems Innovative User Interfaces for Navigation and Guidance
	S183	Interaction Design	S199	Human Interaction in Mobility
			S200	Human System Interaction
EPCE	S184	Cognitive Design for Human-Automation Interaction in Vehicle Guidance		
	S185 S186	Functional Modeling and Rehabilitation (II) Advanced Interaction Supporting Universal Access in	S201	Personal Health Systems (PHS) Integration With Ambient Assisted Living (AAL) : Is Ambient Assisted Health (AAH) a Reality?
UAHCI	C107	Educational Systems	S202	New Trends in Non-visual Interaction
	S187	Implications of Cloud Computing for People with Cognitive Disabilities	S203	Design Access in Human Communication and Interaction
VMR	S188	Dive into the Movie - New Technique to Make Audience Attainable into the Contents	S204	Augmented Reality Industrial Applications
IDGD	S189	Living Lab for Smart Shopping: User Experience in Convenience Store	S205	Culture and Product Design
ocsc	S190	Social Spaces for Virtual Gameplay and Learning – New Inquiries	S206	Next Generation Social Media: Mass Collaboration as a Business Model
AC	S191	Augmented Cognition Applications	S207	Applications of Functional Near Infrared Imaging Measurement
DHM	S192	Product Design & Human Interface	S208	Human Performance Modeling in Aviation
HCD	S193	Design and Service	S209	User-centered Smarter Products Design and Modeling
DUXU	S194	User Experience Design Methods	S210	Environment
	S195	Designing Products and Devices	S211	User Experience in Business
			S212	Usability Studies

VMR Virtual Reality, Usability and Internationalization • **IDGD** Internationalization, Design and Global Development **OCSC** Online Communities and Social Computing • **AC** Augmented Cognition • **DHM** Digital Human Modeling **HCD** Human Centered Design • **DUXU** Design, User Experience, and Usability

S002

HIMI **S001 New Prospective of the Research**

for Tactile & Haptic Interactions Room: Park

Chair(s): Sakae Yamamoto, Tokyo University of Science, Japan; Miwa Nakanishi, Keio University, Japan.

Ontologies, Semantic Web and Interaction

Room: Lexington

Chair(s): To be announced

Development of Tactile and Haptic Systems for U.S. Infantry Navigation and Communication

Linda Elliott, US Army Research Laboratory, United States; Elmar Schmeisser, US Army Research Office, United States; Elizabeth Redden, US Army Research Laboratory, United States.

Characteristics of Information Transmission Rates Using Noncontact Tactile Display

Kentaro Kotani, Masavoshi Havashi, Nobuki Kido, Takafumi Asao, Kansai University, Japan.

Effects of Joint Acceleration on Rod's Length Perception by **Dynamic Touch**

Takafumi Asao, Yuta Kumazaki, Kentaro Kotani, Kansai University, Japan.

Applicability of Touch Sense Controllers Using Warm and Cold Sensations

Miwa Nakanishi, Keio University, Japan; Sakae Yamamoto, Tokyo University of Science, Japan.

Characteristics of Comfortable Sheet Switches on Control Panels of Electrical Appliances: Comparison using Older and **Younger Users**

Yasuhiro Tanaka, Keio University, Japan; Yuka Yamazaki, Mitsubishi Electric Corporation, Japan; Masahiko Sakata, Mitsubishi Electric Group, Central Melco Corporation, Japan; Miwa Nakanishi, Keio University, Japan.

Information Processing for Constructing Tactile Perception of Motion: a MEG Study

Ayumi Nasu, Kentaro Kotani, Takafumi Asao, Kansai University, Japan; Seiji Nakagawa, National Institute of Advanced Industrial Science & Technology (AIST), Japan.

Study on Haptic Interaction with Digital Map on Mobile Device

Daiji Kobayashi, Chitose Institute of Science and Technology, Japan; Yoshitaka Asami, Sakae Yamamoto, Tokyo University of Science, Japan.

A Methodology to Develop a **Clinical Ontology for Healthcare Business**

Mario Macedo, IPT, Portugal; Pedro Isaias, Universidade Aberta, Portuaal.

Interacting with Semantics: A **User-Centered Visualization Adaptation based on Semantics**

Kawa Nazemi, Matthias Breyer, Jeanette Forster, Dirk Burkhardt, Arjan Kuijper, *Fraunhofer, Germany*.

My Personal User Interface: A **Semantic User-Centric Approach** to Manage and Share User Information

Till Plumbaum, Technische Universitat Berlin, Germany; Katja Schulz, Martin Kurze, Deutsche Telekom Laboratories, Germany; Sahin Albayrak, Technische Universitat Berlin, Germany.

Dynamic Interface Reconfiguration based on **Different Ontological Relations**

Elisa Chiabrando, Roberto Furnari, Pierluigi Grillo, Silvia Likavec, Ilaria Lombardi, Universita di Torino,

A User-Centric Metadata **Creation Tool for Preserving the Nation's Ecological Data**

Fatma Nasoz, University of Nevada, Las Vegas, United States; Renee Bryce, Utah State University, United States; Craig Palmer, University of Nevada, Las Vegas, United States; David Rugg, U.S. Forest Service, United States.

Technology-Based Decision-Making Support System

Hanmin Jung, Mikyoung Lee, Pyung Kim, Won-Kyung Sung, Korea Institute of Science and Technology Information (KISTI), Korea.

HCI **S003**

Children-Computer Interaction

Chair(s): Jamshid Beheshti, McGill University, Canada.

Rich Application Technologies and Rich User Experiences

S004

Room: Jackson

Chair(s): Tobias Komischke, Infragistics, Inc., United States; Xianjun Sam Zheng, Siemens Corporate Research, United States.

How Children Can Design the **Future**

Mona Leigh Guha, Allison Druin, University of Maryland, United States; Jerry Alan Fails, Montclair State University, United States.

A Comparison of Children's and Adults['] Retrieval Performances and Affective Reactions when using a Conventional Interface and an Information Visualization Interface

Andrew Large, Jamshid Beheshti, McGill University, Canada.

Following the Signs: Children's Use of Visual Cues to Facilitate Website Evaluation

Valerie Nesset, University at Buffalo (SUNY), United States.

Evaluating Leading Web Search Engines on Children's Queries Dania Bilal, Rebekah Ellis, University of Tennessee, United States.

An Interface for Opportunistic **Discovery of Information for** Young People

Jamshid Beheshti, Andrew Large, McGill University, Canada.

The Interaction of Children's **Concepts about Agents and** their Ability to use an Agent-**Based Tutoring System.**

Alicia Hymel, Daniel Levin, Jonathan Barrett, Megan Saylor, Gautam Biswas, Vanderbilt University, United States.

Influence of Gender and Age on the Attitudes of Children **Towards Humanoid Robots**

Fang-Wu Tung, National Taiwan University of Science and Technology, Taiwan.

The Impact of Rich Application Frameworks on User Experience Design

Tobias Komischke, Infragistics, Inc., United States.

Streamlining User Experience Design and Development: Roles, Tasks and Workflow of Applying Rich Application Technologies

Xianjun Sam Zheng, Mo Wang, Gilberto Matos, Shaopeng Zhang, Siemens Corporate Research, United

Trends, Challenges and Promises of Rich Experience on Mobile **Devices**

Yihsiu Chen, Verizon Wireless, United

Enhanced User Experience in Managing Personal Finances Cindy Lu, iNautix USA, United States.

Design and Rich Application Frameworks

Kevin Richardson, Electronic Ink, United States.

Designing Interaction Concepts, Managing Customer **Expectation and Mastering** Agile Development in Rich Application Product Development

Marcela Esteves, Vladimir Andrade, Siemens Corporate Research, United

continues

S005 S006

Advanced System Architecture in the Social Context (I)

Room: Liberty

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

HCI in MIS

Room: Dixie

Chair(s): Scott McCoy, College of William and Mary, United States.

Activity Recognition for Risk Management with Installed Sensor in Smart and Cell Phone

Nobuchika Sakata, Shogo Nishida, Daisuke Honda, Osaka University, Japan.

Method for Cultivating the "Inquiry-mindset" Using the **Information Access-based Belief Bias Parameter**

Kyoko Ito, Yuki Ito, Shogo Nishida, Osaka University, Japan.

Development of Information Filtering Systems for Disaster Prevention

Yoshinori Hijikata, Tsutomu Yamanaka, Yuya Tanaka, Shogo Nishida, Osaka University, Japan.

Proposal of BCM Evaluation Method Based on Disaster Scenario Simulation

Ryuhei Kaneko, Yoshio Nakatani, Ritsumeikan University, Japan.

Beginner Driver Support System for Merging into Left Main Lane

Yuki Nakamura, Yoshio Nakatani, Ritsumeikan University, Japan.

Proposal of Collaborative Learning Support Method in **Risk Communications**

Hiroshi Yajima, Naohisa Tanabe, Tokyo Denki University, Japan.

Control Error Analysis of Computerized Operational Enviornment in Nuclear Power Plants

Seung Jun Lee, Jaewhan Kim, Seung-Cheol Jang, Korea Atomic Energy Research Institute, Korea.

Visual Hierarchy and Viewing **Behavior: An Eye Tracking Study**

Soussan Djamasbi, Worcester Polytechnic Institute, United States; Marisa Siegel, Thomas Tullis, Fidelity Investments, United States.

Investigating Online Advertising in Chile

Scott McCoy, College of William and Mary, United States; Cristobal Fernandez Robin, Jose Luis Cortes, Universidad Tecnica Federico Santa Maria, Chile.

Why Virtual Job Recruitment Is Not Well Accepted by Generation Y?—A Case Study on Second Life

Eleanor Loiacono, Soussan Djamasbi, Bengisu Tulu, Oleg Pavlov, Worcester Polytechnic Institute, United States.

Are MIS Students Learning What They Need to Land a Job?

Andrea Everard, University of Delaware, United States; Brian Jones, Tennessee Technological University, United States; Scott McCoy, College of William and Mary, United States.

Toward An Understanding of a Computerized Monitoring **System Failure: An Interpretive** Approach

Nathan Johnson, Yibai Li, Fengchun Tang, Saonee Sarker, Washington State University, United

An Enriched Understanding of Why the Environment and **Individual Characteristics are** Important in Understanding **Technology Utilization in** Healthcare: An Evolutionary **Psychology Perspective**

Chon Abraham, College of William and Mary, United States; Iris Junglas, Accenture Research Institute for High Performance, United States.

Distance Education at the **Graduate Level: A Viable** Alternative?

Brian Jones, Tennessee Technological University, United States; Andrea Everard, University of Delaware, United States; Scott McCoy, College of William and Mary, United States.

EPCE S007

Human Factors and Aviation Safety

Room: Union

Chair(s): Wen-Chin Li, National Defense University, Taiwan.

Rule Fragmentation in the Airworthiness Regulations: A **Human Factors Perspective**

Don Harris, HFI Solutions Ltd, United Kinadom.

The Number of Trials with Target Affects the Low Prevalence Effect

Fan Yang, Xianghong Sun, Kan Zhang, Biyun Zhu, Chinese Academy of Sciences, P.R. China.

Applied Cognitive Ergonomics Design Principles for Fighter Aircraft

Jens Alfredson, Johan Holmberg, Rikard Andersson, Maria Wikforss, Saab, Sweden.

Exploring the Relationship among Dimensions of Flight **Comprehensive Capabilities** Based on SEM

Ruishan Sun, Yang Li, Civil Aviation University of China, P.R. China.

Analysis of Mental Workload during En-route Air Traffic **Control Task Execution based on Eye-Tracking Technique**

Caroline Martin, Universite de Toulouse / DGAC, DTI R&D, France; Julien Cegarra, Universite de Toulouse, France; Philippe Averty, DGAC, DTI R&D, France.

UAHCI S008

Sociocultural Aspects in Monolingual and Multilingual **Human-Computer Interaction**

Access in Human-Computer Interaction Room: Hamilton

Chair(s): Christina Alexandris, University of Athens, Greece.

Multilingual aspects of reference and gaze

Kristiina Jokinen, University of Helsinki, Finland.

Greek Verbs and User Friendliness in the Speech Recognition and the Speech **Production Module of Dialog Systems for the Broad Public**

Christina Alexandris, Ioanna Malagardi, University of Athens, Greece.

Greek WordNet and Its Extension with Terms of the **Computer Science Domain**

Panagiotis Blitsas, Maria Grigoriadou, University of Athens, Greece.

A Multitasking Approach to Adaptive Spoken Dialogue Management

Tobias Heinroth, Dan Denich, Wolfgang Minker, Ulm University, Germany.

Integration of a Spanish-to-LSE **Machine Translation System into** an e-learning Platform

Fernando Lopez-Colino, Javier Teiedor, Jordi Porta, Jose Colas, Universidad Autonoma de Madrid,

I can't Hear You? Driver's Interacting with Male or Female Voices in Native or Non-Native Language

Ing-Marie Jonsson, Nils Dahlback, Linkoping University, Sweden.

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UAHCI VMR **S009 S010 S011 S012 Developing Virtual Inclusive Interaction Interfaces Conversational Robots in HCI Stakeholder - Driven Process** Management **Environments (I)** Room: Nassau Room: Palm Beach Room: Taylor Room: Jade Chair(s): Patrick Langdon, University Virtual and Mixed Reality Chair(s): Hirotada Ueda, Kyoto of Cambridge, United Kingdom. Sangyo University, Japan. Chair(s): Christian Stary, Johannes Chair(s): Jan-Torsten Milde, Fulda Kepler University of Linz, Austria; University of Applied Sciences, Albert Fleischmann, jCOM1 AG, Germany. Germany. Evaluating the Design, Use An Experiment for Motivating **Kev Features of Subject-**MSL AR Toolkit: AR Authoring **Elderly People with Robot** and Learnability of Household Oriented Modeling and **Tool with Interactive Features Products for Older Individuals Guided Interaction Organizational Deployment** Jinwook Shim, Jong-Hoon Seo, Tack-Christopher Wilkinson, Ryohei Sasama, Don Han, Yonsei University, Korea. Patrick Langdon, P. John Clarkson, Tomoharu Yamaguchi, Keiji Yamada, Albert Fleischmann, jCOM1 AG, **Semantic Web-Techniques** University of Cambridge, United TUESDAY 08:00 - 10:00 NEC Corporation, Japan. Germany; Christian Stary, Johannes and Software Agents for the Kingdom. Kepler University of Linz, Austria. Investigation of Users' Reactions **Automatic Integration of Virtual Eliciting Interaction Toward Various Kinds of** A Genesis of Thinking in the **Prototypes Requirements for Adaptive Artificial Agents: Comparison of Evolution of Ancient Philosophy** Rafael Radkowski, Heinz Multimodal TV based an Robotic Agent with an Onand Modern Software Nixdorf Institute, Germany; Florian Weidemann, University of **Applications** screen Agent Development Carlos Duarte, Jose Coelho, Stephan Sneed, Metasonic AG, Paderborn, Germany. Takanori Komatsu, Pedro Feiteira, David Costa, Yuuki Seki, Shinshu University, Germany. Mesh Deformations in X3D Daniel Costa, University of Lisbon, Japan; Ryohei Sasama, Relationship between BPM via CUDA with Freeform Portugal. Tomoharu Yamaguchi, Keiji Yamada, **Deformation Lattices Education and Business Process** NEC Corporation, Japan. Accessible UI Design and Solutions: Results of a Student Yvonne Jung, Holger Graf, Multimodal Interaction through **Importance of Physical** Johannes Behr, Arjan Kuijper, **Hybrid TV Platforms: Towards** Interaction between Human and Fraunhofer, Germany. Werner Schmidt, University of Applied a Virtual-user Centered Design Robot for Therapy Sciences Ingolstadt, Germany. **Acceleration of Massive Particle** Takanori Shibata, National Institute Framework Stakeholder-driven Business **Data Visualization Based on GPU** of Advanced Industrial Science & Pascal Hamisu, Fraunhofer, Hyun-Rok Yang, Kyung-Kyu Kang, Process Management - An Germany; Gregor Heinrich, vsonix Technology (AIST), Japan. **Evaluation of the Suitability,** Dongho Kim, Soongsil University, GmbH, Germany; Christoph Jung, **Building of Turn-taking Avatars** Adequacy and Effectiveness Korea. Volker Hahn, Fraunhofer, Germany; that Express Utterance Attitudes of Quality and Process Stroke-based Semi-automatic Carlos Duarte, University of - A Social Scientific Approach Management Region of Interest Detection Lisbon, Portugal; Patrick Langdon, to Behavioral Design of Michael Jungen, Consultant, Algorithm for In-situ Painting Pradipta Biswas, University of **Conversational Agents -**Germany. Recognition Cambridge, United Kingdom. Masahide Yuasa, Naoki Mukawa, Youngkyoon Jang, Woontack Woo, Seeing the Wood for the Trees The Contribution of Multimodal Tokyo Denki University, Japan. Gwangju Institute of Science and Again! SMART - A Holistic Way of Adaptation Techniques to the An Experimental Study Technology (GIST), Korea. **Corporate Governance Offering GUIDE** Interface of the Use of Multiple Virtual Reality as Knowledge a Solution Ready to Use Jose Coelho, Carlos Duarte, **Humanoid Robots as a Social** Fritz Bastarz, Patrick Halek, **Enhancement Tool for** University of Lisbon, Portugal. **Communication Medium** INFOMEDIA services GmbH, Austria. Musculoskeletal Pathology **Older User Errors in Handheld** Kotaro Hayashi, Nara Institute of Sophia Sakellariou, NHS Greater **Making Task Modeling Suitable Touchscreen Devices: to What** Science and Technology, Japan; Glasgow and Clyde, United Kingdom; for Stakeholder-Driven **Extent is Prediction Possible?** Takayuki Kanda, ATR Intelligent Vassilis Charissis, Glasgow Caledonian **Workflow Specifications** Mike Bradley, Patrick Langdon, Robotics and Communication University, United Kingdom; Peter Forbrig, Anke Dittmar, P. John Clarkson, University of Laboratories, Japan; Hiroshi Ishiguro, Stephen Grant, NHS Ayrshire and Jens Bruning, Maik Wurdel, University Cambridge, United Kingdom. Osaka University, Japan; Arran, United Kingdom; Janice Turner, of Rostock, Germany. Tukasa Ogasawara, Nara Institute **Standardizing User Models** Diane Kelly, NHS Education of Science and Technology, Japan; **Crisis Management Training:** for Scotland, United Kingdom; Pradipta Biswas, Patrick Langdon, Norihiro Hagita, Nara Institute **Techniques for Eliciting and** Christodoulos Christomanos, Core University of Cambridge, United of Science and Technology / ATR **Describing Requirements and** Lab + Ltd. Software Developing Group, Kingdom. Intelligent Robotics & Communication **Early Designs across Different** United Kingdom. **Modelling Cognitive Impairment** Labs, Japan. **Incident Types Touching Sharp Virtual Objects** to Improve Universal Access Phynocation: A Prototyping of a Ebba Thora Hvannberg, Elina Jokisuu, Patrick Langdon, **Produces a Haptic Illusion** Jan Rudinsky, University of Iceland, Teaching Assistant Robot for C Andrea Brogni, Darwin Caldwell, P. John Clarkson, University of Iceland. Language Class Cambridge, United Kingdom. Istituto Italiano di Tecnologia (IIT), Akihiro Ogino, Haruaki Tamada, Italy; Mel Slater, University College **An Approach Towards** Hirotada Ueda, Kyoto Sangyo London, UK / ICREA-Universidad de Considering Users' University, Japan. Barcelona, Spain. **Understanding in Product** User Modeling through Design **Unconscious Interaction with** Anna Mieczakowski,

Patrick Langdon, P. John Clarkson,

University of Cambridge, United

Kingdom.

Smart Shop

Japan.

Toshikazu Kato, Chuo University,

DHM AC **S015 S016 IDGD S013 S014 Assessment of Team Motion Modelling Cultural Design Issues** Mobile & Internet @ User **NeuroDynamics during Training** Room: Fulton **Experience** Room: Sarasota Room: Madison Chair(s): Wen-chih Chang, National Room: Orange Digital Human Modeling Chair(s): Hsiu-Ping Yueh, National Chair(s): Chris Berka, Advanced Taiwan University of Science and Taiwan University, Taiwan. Chair(s): Hong Ji, China Telecom Technology, Taiwan. Brain Monitoring, Inc., United States; Corp., Ltd., P.R. China. Ron Stevens, UCLA IMMEX Project, United States. **Developing Systems for the Simulating Ingress Motion for** Menu Design of Digital Photo A Proposal of a Model Rapid Modeling of Team **Heavy Earthmoving Equipment** Frame for Older Users to Evaluate the Usability **Neurodynamics** HyunJung Kwon, The University of Hsiu-Ping Yueh, Weijane Lin, Tzu-Performance of the Product with Iowa, United States; Mahdiar Hariri, Ron Stevens, Trysha Galloway, Yi Lu, Yen-Lien Chou, National Taiwan **Different Patterns** UCLA IMMEX Project, United States; University of Iowa, United States; Danxin Li, Tingzi Ouyang, Ning Yang, University, Taiwan. Raian Bhatt, Jasbir Arora, Chris Berka, Advanced Brain China Telecom Corp., Ltd., P.R. China. **Design and Construction of SNS** Karim Abdel-Malek, The University of Monitoring, Inc., United States; Platform and «Working Room» A Study on the Reference Peter Wang, UCLA IMMEX Project, Iowa, United States. for Community for fostering Standard for WAP-specific United States. A Biomechanical Approach Japanese teachers **Chinese Character Design Team Coordination Dynamics** for Evaluating Motion Related Masayuki Murakami, Ning Yang, Xuling Xu, Fengguo Guo, and the Interactive Approach: Discomfort: Illustration by an Naoki Nakamata, Kumiko Nakanishi, China Telecom Corp., Ltd., P.R. China. **Emerging Evidence and Future** Application to Pedal Clutching Kikuko Yui, Kyoto University of Foreign The Solution of Mobile Phone Movement Studies, Japan. **Client Product Usability** Jamie Gorman, Texas Tech University, Xuguang Wang, IFSTTAR, France; Design Ethics Education in **Evaluation** United States. Romain Pannetier, IFSTTAR / Renault Taiwan: A Study of Syllabi of Hong Ji, Weiwen Zhou, Fengguo SAS, France; Nagananda Burra, **Enhancing Team Performance Ethics-Related Courses** Guo, China Telecom Corp., Ltd., P.R. Julien Numa, IFSTTAR, France. using Neurophysiologic Manlai You, Yingying Lee, National Joint Torque Modeling of Knee Synchronies in a Virtual Training Yunlin University of Science and **Reading Chinese in eBook Extension and Flexion** Environment Technology, Taiwan. Readers: a Review Fabian Guenzkofer, Florian Engstler, Marianne Clark, Kimberly Cellucci, **Cultural Effects on Arabic** Liang Ma, P.L. Patrick Rau, Tsinghua Heiner Bubb, Klaus Bengler, Scientific Research Corporation, **Electronic TV** University, P.R. China. Technische Universitat Munchen, United States; Chris Berka, Maysoon Abulkhair, Heba Abdrabu, Daniel Levendowski, Jonny Trejo, Germany. Once Broken, Never Fixed? The Hanadi Aljada'ani, Sultana Alsahafi, Impact of Culture and Medium Advanced Brain Monitoring, Inc., **Motion Capture Experiments for** Reem Alsaggaf, King AbdulAziz United States; Amy Kruse, Total on Repairing Trust in CMC Validating Optimization-Based University, Saudi Arabia. Immersion Software, Inc., United Qiping Zhang, Nancy Marksbury, **Human Models** States; Ron Stevens, UCLA IMMEX Animating our Island's Culture Long Island University, United States. Aimee Cloutier, Robyn Boothby, - Spreading and Socializing our Proiect, United States. Jingzhou (James) Yang, Texas Tech **Using Metaphors to Explore** Island's Culture through Digital **Augmenting Robot Behaviors** University, United States. **Cultural Perspectives in Cross-**Animation **Using Psycho Physiological** Cultural Design **3D Human Motion Capturing** Flavio Andalo, Milton Vieira, Federal Measures Luciana Salgado, Clarisse Sieckenius **Based only on Acceleration and** University of Santa Catarina, Brazil. Daniel Barber, Lauren Reinerman-De Souza, Carla Leitao, PUC - Rio de **Angular Rate Measurement for** The Cultural Integration of Jones, Stephanie Lackey, *University* Janeiro, Brazil. **Low Extremities** of Central Florida, United States; **Knowledge Management into** Christoph Schiefer, RWTH Aachen Irwin Hudson, US Army Research Interactive Design University / German Social Accident Laboratory, United States. Javed Sheikh, Bob Fields, Insurance (DGUV), Germany; Elke Duncker, Middlesex University, **Multi-modal Measurement** Thomas Kraus, Elke Ochsmann, United Kingdom. **Approach to Team Cohesion** RWTH Aachen University, Germany; Camilla Knott, Alexandra Geyer, Ingo Hermanns, Rolf Ellegast, **Computer Usage and User** Jason Sidman, Emily Wiese, Aptima, German Social Accident Insurance **Experience in Jordan:** Inc., United States. (DGUV), Germany. **Development and Application of** the Diamond Model of Territorial **Performance-based Metrics Schema for Motion Capture Data Factors** for Evaluating Submarine Management Fuad El-Qirem, Al-Zaytoonah **Command Team Decision-**Ali Kevvani, Henrik Johansson, University of Jordan, Jordan; Mikael Ericsson, University making Gilbert Cockton, Northumbria Eric Jones, Aptima, Inc., United States; West, Sweden; Dan Lamkull, University, United Kingdom. Volvo Car Corporation, Sweden; Ronald Steed, UpScope Consulting, United States: Federick Diedrich. Roland Ortengren, Chalmers Aptima, Inc., United States; University of Technology, Sweden. Robert Armbruster, Commander, Submarine Force Atlantic, United States; Cullen Jackson, Aptima, Inc., United States. **Communications-Based Automated Assessment of Team Cognitive Performance** Kiran Lakkaraju, Susan Stevens-Adams, Robert Abbott, Chris Forsythe, Sandia National

Laboratories, United States.

S017

Human Systems Integration Design: from Biology to **Technology and Organization**

Room: Empire

Chair(s): Didier Fass, LORIA, University of Lorraine, France.

Co-simulation and Multi-models for Pervasive Computing as a **Complex System**

Laurent Ciarletta, Ecole des Mines in NANCY, France.

A Methodical Approach for **Developing Valid Human Performance Models of Flight Deck Operations**

Brian Gore, Becky Hooey, SJSU/ NASA Ames Research Center, United States; Nancy Haan, Dell Services Federal Government, United States; Deborah Bakowski, Eric Mahlstedt, SJSU/NASA Ames Research Center, United States.

Aggregation of Human Activities - Building Flight Proles

David Gueron, Laurent Chaudron, Nicolas Maille, ONERA «The French Aerospace Lab», France; Jean Caussanel, University of Paul Cezanne, Aix-Marseille III, France.

Human Systems Integration Design: Which Generalized Rationale?

Romain Lieber, Didier Fass, LORIA, University of Lorraine, France.

Semantic-Conditioned Peripheral Vision Acuity Fading Awareness (PVAFA)

Ming-Chia Wang, Manlai You, National Yunlin University of Science and Technology, Taiwan.

Influence of a Multimodal **Assistance Supporting** Anticipatory Driving on the **Driving Behavior and Driver's** Acceptance

Hermann Hajek, Daria Popiv, Technische Universitat Munchen, Germany; Mariana Just, BMW Group Forschung und Technik, Germany; Klaus Bengler, Technische Universitat Munchen, Germany,

DUXU S018

UX/UI Design

Room: Manatee

Chair(s): Gyouhyung Kyung, Ulsan User Experience, and Usability National Institute of Science & Technology (UNIST), Korea.

S019 Usability Studies: Rigor, or Rigor Mortis?

Room: Escambia

Chair(s): Randolph Bias, The University of Texas at Austin, United

Measurement of User **Experience to Select a Comfortable Mattress**

Jung-Yong Kim, Seung-Nam Min, Min-Ho Lee, Joo-Hyun Jeong, Hanyang University, Korea; Jung-Ho An, Young-Sung Shin, Simmons Co. Ltd, Korea.

Versatile Wearable Computer for Drivers

Gyouhyung Kyung, Songyi Chae, Kyung Hyun Nam, Ulsan National Institute of Science & Technology (UNIST), Korea; Kyungmin Lee, Wanjae Shin, Hyundai-Kia Motors,

Measuring Drivers' Dynamic Seating Experience Using Pressure Mats

Songyi Chae, Gyouhyung Kyung, Kyung Hyun Nam, Ulsan National *Institute of Science & Technology* (UNIST), Korea.

Investigating the Integration of Hand-held Haptic Devices in **Daily Work Activities: The Case** of a Tennis Coaching Assistant on iPhone

Evanthia Faliagka, University of Patras, Greece; Petros Karkoulias, Hellenic Open University, Greece; Maria Rigou, University of Patras, Greece; Spiros Sirmakessis, Giannis Tzimas, Technological Institution of Messologhi, Greece; Athanasios Tsakalidis, University of Patras, Greece.

User Evaluation of Internet Kiosks in University Setting

Erkan Er, Kursat Cagiltay, Middle East Technical University, Turkey.

Impact of Distance to Screen upon Spacial Awareness

Kazuya Kuroda, Makio Ishihara, Fukuoka Institute of Technology, Japan.

Range Statistics and the Exact Modeling of Discrete non-**Gaussian Distributions on Learnability Data**

Robert Hoffman, Institute for Human-Machine Cognition, United States.

Detection of Software Usability Deficiencies

Dan Tamir, Oleg Komogortsev, Carl Mueller, Divya K. D. Venkata, Greg LaKomski, Árwa Jamnagarwala, Texas State University, United States.

EMA: Automated Eyemovement-driven Approach for **Identification of Usability Issues**

Oleg Komogortsev, Dan Tamir, Carl Mueller, Texas State University, United States; Jose Camou, The Iowa State University, United States; Corey Holland, Texas State University, United States.

Fishing for Results: A multipronged approach to promote usability for TSLAC.

Stacy Michaelsen, Randolph Bias, The University of Texas at Austin, United States.

The Importance of Rigor in **Usability Studies**

Randolph Bias, The University of Texas at Austin, United States.

Serious Games Usability Testing: How to Ensure Proper Usability, Playability, and Effectiveness

Tanner Olsen, Katelyn Procci, Clint Bowers, University of Central Florida, United States.

HIMI HCI **S020 S021 S022 S023**

Human Factors Considerations in NextGen

Room: Madison

Chair(s): Kim-Phuong Vu, California State University, Long Beach, United States.

Personal, Family and Social Media

Brunel University, United Kingdom.

How Data Comm Methods and Multi-**Dimensional Traffic Displays Influence** Pilot Workload under Trajectory Based **Operations**

Jimmy Nguyen, L. Paige Bacon, R. Conrad Rorie, Meghann Herron, Kim-Phuong Vu, Thomas Strybel, California State University, Long Beach, United States; Vernol Battiste, SJSU/NASA Ames Research Center, United States.

Flight Deck Workload and Acceptability of Verbal and Digital Communication

Summer Brandt, Joel Lachter, Quang Dao, Vernol Battiste, SJSU/NASA Ames Research Center, United States; Walter Johnson, NASA Ames Research Center, United States.

Is ACARS and FANS-1A Just Another Data Link to the Controller?

Vernol Battiste, Joel Lachter, Sarah Ligda, SJSU/NASA Ames Research Center, United States; Jimmy Nguyen, L. Paige Bacon, California State University, Long Beach, United States; Robert Koteskey, SJSU/NASA Ames Research Center, United States; Walter Johnson, NASA Ames Research Center, United States.

Conflict Resolution Automation and Pilot Situation Awareness

Quang Dao, Summer Brandt, SJSU/NASA Ames Research Center, United States; L. Paige Bacon, Joshua Kraut, Jimmy Nguyen, Katsumi Minakata, Hamzah Raza, California State University, Long Beach, United States; Walter Johnson, NASA Ames Research Center, United States.

Effect of ATC Training with NextGen Tools and Online Situation Awareness and Workload Probes on Operator Performance

Ariana Kiken, R. Conrad Rorie, L. Paige Bacon, Sabrina Billinghurst, Joshua Kraut, Thomas Strybel, Kim-Phuong Vu, California State University, Long Beach, United States; Vernol Battiste, SJSU/NASA Ames Research Center, United States.

Effects of Data Communications Failure on Air Traffic Controller Sector Management Effectiveness, Situation Awareness, and Workload

Joshua Kraut, Ariana Kiken, Sabrina Billinghurst, Corey Morgan, Thomas Strybel, Dan Chiappe, Kim-Phuong Vu, California State University, Long Beach, United States.

A Preliminary Investigation of Training **Order for Introducing NextGen Tools**

R. Conrad Rorie, Ariana Kiken, Corey Morgan, Sabrina Billinghurst, Gregory Morales, Kevin Monk, Kim-Phuong Vu, Thomas Strybel, California State University, Long Beach, United States; Vernol Battiste, SJSU/NASA Ames Research Center, United States.

Room: Liberty

Chair(s): Gheorghita Ghinea,

Experience Explorer: Context-based Browsing of **Personal Media**

Tuomas Vaittinen, Nokia Research Center, Finland: Tuula Karkkainen, Tampere University of Technology, Finland; Kimmo Roimela, Nokia Research Center, Finland.

SAM: A Spatial Interactive Platform for Studying Family Communication Problem

Guo-Jhen Yu, Teng-Wen Chang, Ying-Chong Wang, National Yunlin University of Science and Technology, Taiwan.

Interface Evaluation of Webbased e-Picture Books in Taiwan

Pei-shiuan Tsai, Manlai You, National Yunlin University of Science and Technology, Taiwan.

Analysis on Relationship between Smiley and **Emotional Word Included in** Chat Text

Junko Itou, Tomoyasu Ogaki, Jun Munemori, Wakayama University, Japan.

Co-Creation of Value through Social Network Marketing: A Field Experiment Using a Facebook Campaign to **Increase Conversion Rate**

Asle Fagerstrom, Norwegian School of IT, Norway; Gheorghita Ghinea, Brunel University, United Kingdom.

Research on the **Relationships between Visual Entertainment Factor and Chat Communication**

Tomoyasu Ogaki, Junko Itou, Jun Munemori, Wakayama University, Japan.

«Life Portal»: An Information Access Scheme based on Life Logs

Shin-ichiro Eitoku, Manabu Motegi, Rika Mochizuki, Takashi Yagi, Shin-yo Muto, NTT Corporation, Japan; Masanobu Abe, Okayama University, Japan.

New Technology and User Experience for Ubiquitous and Mobile Learning

Room: Hamilton

Chair(s): Takashi Mitsuishi, Tohoku University, Japan; Hitoshi Sasaki, Takushoku University, Japan; Yuichi Ohkawa, Tohoku University, Japan.

A Reading History Logger for **Supporting Reading Habit** Development

Yasuo Miyoshi, Takaaki Obayashi, Kochi University, Japan.

Visualization Framework for Computer System Learning Eiichi Hayakawa, Yuuki Nakagawa,

Hideharu Ochiai, Masahiko Fuji, Takushoku University, Japan; Yosuke Nishino, Hachioji Soshi High School, Japan.

A Development of Web-based **Player for Instructions Recorded** with the Electronic Blackboard System IMPRESSION

Yuichi Ohkawa, Takashi Mitsuishi, Tohoku University, Japan.

A Drawing Learning Support System with Auto-evaluating Function based on the Drawing Process Model

Takashi Nagai, Mizue Kayama, Kazunori Itoh, Shinshu University, Japan.

Evaluation of Continuous Trial by Mobile Learning in Nursing **Practical Training**

Yukie Majima, Yumiko Nakamura, Yasuko Maekawa, Mizuko Hiramatsu, Yukari Nakajima, Satoshi Horii, Hifumi Aoyama, Osaka Prefecture University, Japan.

Evaluation of Online Handwritten Characters for Penmanship Learning Support

Tatsuya Yamaguchi, Noriaki Muranaka, Masataka Tokumaru, Kansai University, Japan.

Patterns and Models for Interactive System Development

continues >>

Room: Empire

Chair(s): Christian Martin, Augsburg University of Applied Sciences, Germany; Peter Forbrig, University of Rostock, Germany.

HCI Patterns as a Means to Transform Interactive User Interfaces to Diverse Contexts

Juergen Engel, Christian Martin, Augsburg University of Applied Sciences, Germany; Peter Forbrig, University of Rostock, Germany.

Towards Pattern-Driven **Engineering of Run-Time** Adaptive User Interfaces for **Smart Production Environments**

Marc Seissler, Kai Breiner, University of Kaiserslautern, Germany; Gerrit Meixner, German Research Center for Artificial Intelligence (DFKI), Germany.

User Modeling Approaches towards Adaptation of Users' **Roles to Improve Group** Interaction in Collaborative 3D Games

Johanna Octavia, Anastasiia Beznosyk, Karin Coninx, Peter Quax, Kris Luyten, Hasselt University – tUL - IBBT, Belgium.

User-oriented Accessibility Patterns for Smart Environments

Michael Zaki, Peter Forbrig, University of Rostock, Germany.

Patterns for usable Accessible Design

Homa Javahery, Michael Gower, IBM Pacific Development Centre, Canada; Daniel Sinnig, Concordia University, Canada; Peter Forbrig, University of Rostock, Germany.

From Structural Analysis to **Scenarios and Patterns for Knowledge Sharing Applications** Claus Kaelber, teamwissen, Germany;

Christian Martin, Augsburg University of Applied Sciences, Germany.

The First Interaction Design **Pattern Library for Internet** of Things User Created **Applications**

Marc Godon, Mohamed Ali Feki, Marc Roelands, Lieven Trappeniers, Alcatel Lucent Bell Labs, Belgium.

10:30 - 12:30 **TUESDAY** **S024**

Universal Access in Human-Computer

Safety of Medication Usage

Room: Park

Chair(s): Masaomi Kimura, Shibaura Institute of Technology, Japan.

Design of Communication Field for Leading to Satisfied **Understanding: Example of High-Level Radioactive Waste** Disposal in Japan

Hiroshi Kimura, Masashi Furukawa, The University of Tokyo, Japan.

Cognitive Analysis for Knowledge Modelling in Air Traffic Control Work

Satoru Inoue, Hisae Aoyama, Electronic Navigation Research Institute, Japan; Keiichi Nakata, University of Reading, United Kingdom.

A Framework for Agent-based Simulation in Tourism Planning

Dingding Chao, Kazuo Furuta, Taro Kanno, The University of Tokyo,

Emotional Human-Machine Interaction: Cues from Facial Expressions

Tessa-Karina Tews, Michael Oehl, Felix Siebert, Rainer Hoger, Helmut Faasch, Leuphana University of Lueneburg, Germany.

Interactions between Human and Computer Networks: **EFL College Students Using Computer Learning Tools in** Remedial English Classes

Ai-ling Wang, Tamkang University, Taiwan.

Using Grounded Theory and **Text Mining to Find Interesting Reading Materials for Slow EFL** Learners

Yuh-chang Lin, Aletheia University, Taiwan; Chia-Ling Hsu, Tamkang University, Taiwan; Mu-Hua Lin, Hsiao-Fang Yang, National Chenachi University, Taiwan; Chao-Fu Hong, Aletheia University, Taiwan.

Spatial Design, Designers and **Users: Exploring the Meaning of Multi-party Service Cognition**

Tom Hope, Tokyo Institute of Technology, Japan; Mizuki Oka, Yasuhiro Hashimoto, The University of Tokyo, Japan; Myeong-Hee Lee, Design Team Matt, Japan.

The Similarity Index of Character **Shape of Medicine Names Based** on Character Shape Similarity

Keita Nabeta, Akira Hatano, Hirotsugu Ishida, Masaomi Kimura, Michiko Ohkura, Shibaura Institute of Technology, Japan; Fumito Tsuchiya, International University of Health and Welfare, Japan.

Therapeutic Category Improvement Method based on the Words Appearing in Effectefficacy Description

Hirotsugu Ishida, Keita Nabeta, Masaomi Kimura, Michiko Ohkura, Shibaura Institute of Technology, Japan; Fumito Tsuchiya, International University of Health and Welfare,

Appearance Similarity Index for **Medicinal Ampoule Labels**

Masaomi Kimura, Yutaro Furukawa, Akira Kojo, Hirotsugu Ishida, Keita Nabeta, Michiko Ohkura, Shibaura Institute of Technology, Japan; Fumito Tsuchiya, International University of Health and Welfare,

A Proposal of Contraindication **Database for Medicines**

Ryo Okuya, Hirotsugu Ishida, Keita Nabeta, Masaomi Kimura, Michiko Ohkura, Shibaura Institute of Technology, Japan; Fumito Tsuchiya, International University of Health and Welfare, Japan.

Construction and Analysis of Database on Outer Cases of Medicines

Hironori Yoshimi, Hiroki Muraoka, Akira Izumiya, Masaomi Kimura, Michiko Ohkura, Shibaura Institute of Technology, Japan; Fumito Tsuchiya, International University of Health and Welfare, Japan.

Mobile Reminder for Flexible and Safe Medication Schedule for Home Users

Chi-Sheng Shih, National Taiwan University, Taiwan: Pei-Hsuan Tsai, Jane W.-S. Liu, Academia Sinica,

What Label Design of Ampule for Injection, Do you want?

Hiroyuki Furukawa, Yamaguchi University, Japan.

EPCE S026

Industrial and Military Applications

Room: Palm Beach

Engineering Psychology and Cognitive Ergonomics Chair(s): Andrew Thatcher, University of the Witwatersrand, South Africa.

Effective Shift Handover

Tom Plocher, Honeywell Labs, United States; ShanQing Yin, Nanyang Technological University, Singapore; Jason Laberge, Honeywell Labs, United States; Brian Thompson, ENGEN Petroleum, Ltd., South Africa; Jason Telner, Honeywell Automation and Control Solutions, Canada.

Cognitive Engineering of Automated Assembly Processes

Marcel Maver, Barbara Odenthal, Carsten Wagels, Sinem Kuz, Bernhard Kausch, Christopher Schlick, RWTH Aachen University, Germany.

Pre-Validation of Nuclear Power **Plant Control Room Design**

Jari Laarni, Paula Savioja, Hannu Karvonen, Leena Norros, VTT Technical Research Centre of Finland.

An After Action Review Engine for Training in Multiple Areas

Glenn Martin, Jason Daly, Casey Thurston, University of Central Florida, United States.

A Generic After Action Review **Capability for Game-based** Training

Casey Thurston, Glenn Martin, University of Central Florida, United

Technological and Usabilitybased Aspects of Distributed After Action Review in a Gamebased Training Setting

Matt Fontaine, Glenn Martin, Jason Daly, Casey Thurston, University of Central Florida, United States.

UAHCI S027

The Future of Universal Access

Room: Union

Chair(s): Gisela Susanne Bahr, Florida Institute of Technology, United States; Ray Adams, Middlesex University, United Kingdom.

Integrating Human Modeling and Simulation with the Persona Method

Taro Kanno, Tomohiko Ooyabu, Kazuo Furuta, The University of Tokyo,

Understanding the Role of **Communication and Hands-On Experience in Work Process Design for All**

Christian Stary, Johannes Kepler University of Linz, Austria.

Eye Tracking and Universal Access: Three Applications and Practical Examples

Michael Bartels, Sandra Marshall, EyeTracking, Inc., United States.

Cyber Risks to Secure and **Private Universal Access**

Gisela Susanne Bahr, Florida *Institute of Technology, United* States; Liam Mayron, Harris Corp., United States; Hannah Gacey, Florida Institute of Technology, United States.

Design of a Multi-interface **Creativity Support Tool for the Enhancement of the Creativity**

George Sielis, George Papadopoulos, University of Cyprus, Cyprus; Andrina Granic, University of Split, Croatia.

S028 S029 S030 VMR S031 continues ▶

SMART Interfaces for Consumer Health Applications (I)

Room: Taylor

Chair(s): Josette Jones, *Indiana University*, *United States*.

Looking for an Accessible Life; while in Desktop, Mobile and Web

Room: Manatee

Chair(s): Evangelos Bekiaris, Centre for Research and Technology Hellas (CERTH), Greece.

Human, Computer and Environment

Room: Sarasota

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

Tracking Observations of Everyday Living with Smart Phones

Michelle Rogers, *Drexel University, United States*.

Design of a Paired Patient-Caregiver Support Application for People Coping with Cancer

Chris Newlon, Robert Comer, Kim Wagler-Ziner, Anna McDaniel, Indiana University, United States.

Design Lessons for Older Adult Personal Health Records Software from Older Adults

Juan Pablo Hourcade, Elizabeth Chrischilles, Brian Gryzlak, Blake Hanson, Don Dunbar, David Eichmann, Ryan Lorentzen, The University of Iowa, United States.

Patient-centered Connected Health: User Experience for People with Diverse Abilities and Needs

Douglas Dormer, White Pine Systems, LLC dba SPINNphr, United States.

Privacy, Security and Interoperability of Mobile Health Applications

Josette Jones, Sara Anne Hook, Seong Park, LaSha Scott, *Indiana University*, *United States*.

A Case Study of the Design and Evaluation of a Persuasive Healthy Lifestyle Assistance Technology: Challenges and Design Guidelines

Jie Xu, Ping-yu Chen, Scott Uglow, Alison Scott, Enid Montague, University of Wisconsin-Madison, United States.

Developing Accessible Mobile Phone Applications: The Case of a Contact Manager and Real Time Text Applications

Javier Cano Moreno, Maria Fernanda Cabrera-Umpierrez, Universidad Politecnica de Madrid, Spain; Jon Azpiroz, Vodafone Spain Foundation, Spain; Juan Bautista Montalva Colomer, Maria Teresa Arredondo, Adrian Rodriguez Castro, Universidad Politecnica de Madrid, Spain.

An End-user Evaluation Point of View Towards OSS Assistive Technology

Maria Gkemou, Evangelos Bekiaris, Centre for Research and Technology Hellas (CERTH), Greece; Karel Van Isacker, European Platform for Rehabilitation, Belgium.

Results of the Technical Validation of an Accessible Contact Manager for Mobile Devices

Jon Azpiroz, Vodafone Spain Foundation, Spain; Juan Bautista Montalva Colomer, Maria Fernanda Cabrera-Umpierrez, Maria Teresa Arredondo, Julio Gutierrez Rios, Universidad Politecnica de Madrid, Spain.

A Harmonised Methodology for the Components of Software Applications Accessibility and its Evaluation

Eleni Chalkia, Evangelos Bekiaris, Centre for Research and Technology Hellas (CERTH), Greece.

Enabling Accessibility Characteristics in the Web Services Domain

Dimitris Giakoumis, Dimitrios Tzovaras, Centre for Research and Technology Hellas (CERTH), Greece; George Hassapis, Aristotle University of Thessaloniki, Greece.

An Accessibility Assessment Framework for Improving Designers Experience in Web Applications

Theofanis Oikonomou, Nikolaos Kaklanis, Konstantinos Votis, Dimitrios Tzovaras, Centre for Research and Technology Hellas (CERTH), Greece.

Overview of 1st AEGIS Pilot Phase Evaluation Results

Maria Gkemou, Evangelos Bekiaris, Centre for Research and Technology Hellas (CERTH). Greece.

Numerical Analysys of Geometrical Features of 3D Biological Objects, for Three-Dimensional Biometric and

Anthropometric DatabaseMichal Rychlik, Witold Stankiewicz,
Marek Morzynski, *Poznan University*of Technology, *Poland*.

Integral Model of the Area of Reaches and Forces of a Disabled Person with Dysfunction of Lower Limbs as a Tool in Vitrual Assessment of Manipulation Possibilities in Selected Work Environments

Bogdan Branowski, Piotr Pohl, Michal Rychlik, Marek Zablocki, Poznan University of Technology, Poland.

Disabled Youth in Sport Rivalry. What are the Trends – Virtual or Real Competition?

Katarzyna Üjma-Wasowicz, Silesian University of Technology, Poland.

New Design – Integration of Art and Technology

Wojciech Bonenberg, *Poznan University of Technology, Poland*.

Spaces of Mutable Shape and the Human Ability to Adapt

Katarzyna Kubsik, Wroclaw University of Technology, Poland.

Machinery Design for Construction Safety in Practice Beata Mrugalska.

Aleksandra Kawecka-Endler, Poznan University of Technology, Poland.

Effect of Protective Coating on the Performance of Wearable Antennas

Minyoung Suh, Kate Carroll, William Oxenham, North Carolina State University, United States.

Body Buddies: Social Signaling

Digital Puppetry: Bringing Virtual

Chair(s): Charles Hughes, University of

Central Florida, United States.

Characters to Life

Room: Fulton

and

through Puppeteering
Magy Seif El Nasr, Simon Fraser
University, Canada; Katherine Isbister,
New York University-Poly, United States;
Jeffery Ventrella, Internet Archive, United
States; Bardia Aghabeigi, Simon Fraser
University, Canada; Chelsea Hash, New
York University, Poly, United States;
Mona Erfani, Simon Fraser University,
Canada; Jacquelyn Morie, University
of Southern California, United States;
Leslie Bishko, Emily Carr University of Art
and Design, Canada.

Geppetto: An Environment for the Efficient Control and Transmission of Digital Puppetry

Daniel Mapes, Peter Tonner, Charles Hughes, *University of Central Florida*, *United States*.

Leveraging Unencumbered Full Body Control of Animated Virtual Characters for Game-Based Rehabilitation

Belinda Lange, Evan Suma, Brad Newman, Thai Phan, Chien-Yen Chang, Albert "Skip" Rizzo, Mark Bolas, *University of Southern California*. *United States*.

Why Can't A Virtual Character Be More Like A Human: A Mixedinitiative Approach to Believable Agents

Jichen Zhu, J. Michael Moshell, University of Central Florida, United States; Santiago Ontanon, University of Barcelona, Spain; Elena Erbiceanu, Charles Hughes, University of Central Florida, United States.

Interactive Performance: Dramatic Improvisation in a Mixed Reality Environment for Learning

Jeff Wirth, Wirth Creative, United States; Anne Norris, Daniel Mapes, University of Central Florida, United States; Kenneth Ingraham, The Proposal Experts, LLC, United States; J. Michael Moshell, University of Central Florida, United States.

Integrating Multi-agents in a 3D Serious Game Aimed at Cognitive Stimulation

Priscilla Abreu, Rio de Janeiro State University, Brazil; Luis Carvalho, Federal University of Rio de Janeiro, Brazil; Vera Werneck, Rosa Costa, Rio de Janeiro State University, Brazil.

Automatic 3-D Facial Fitting Technique for A Second Life Avatar

Hiroshi Dohi, Mitsuru Ishizuka, The University of Tokyo, Japan.

VMR

S032

Interaction and Navigation in **Virtual Environments**

Room: Lexington

Chair(s): Scott Frees, Ramapo College of New Jersey, United States.

Evaluation of Human Performance Using Two Types of Navigation Interfaces in Virtual

Luis Teixeira, Technical University of Lisbon, Portugal; Emilia Duarte, UNIDCOM/IADE, Portugal; Julia Teles, Francisco Rebelo, *Technical University* of Lisbon, Portugal.

Effects of Menu Orientation on Pointing Behavior in Virtual Environments

Nguyen-Thong Dang, Daniel Mestre, CNRS and University of Aix Marseille

Panoramic Image-based Navigation for Smart-phone in **Indoor Environment**

Van Vinh Nguyen, Jin Guk Kim, Jong Weon Lee, Sejong University, Korea.

Object Selection in Virtual Environments: Performance, Usability and Interaction with Spatial Abilities

Andreas Baier, University of Reaensbura, Germany: David Wittmann, Martin Ende, Cassidian Air Systems, Germany.

Some Evidences of the Impact of **Environment's Design Features** in Routes Selection in Virtual **Environments**

Emilia Duarte, UNIDCOM/ IADE, Portugal; Elisangela Vilar, Francisco Rebelo, Julia Teles, Technical University of Lisbon, Portugal; Ana Almeida, UNIDCOM/ IADE, Portugal.

Workspace-Driven, Blended **Orbital Viewing in Immersive Environments**

Scott Frees, David Lancellotti, Ramapo College of New Jersey, United

Active Location Tracking for Projected Reality Using Wiimotes

Siam Charoenseang, Nemin Suksen, King Mongkut's University of Technology Thonburi (KMUTT), Thailand.

IDGD

S033

Designing "Friendship" into Modern Products (I)

Room: Jackson

Chair(s): Rungtai Lin, National Taiwan University of Arts, Taiwan.

S034

User Experience Design and Research in Multinational Companies

Room: Escambia

Chair(s): Paul Fu, Alibaba.com Inc, United States; Esin Kiris, CA Technologies, United States.

The Importance of "Feel" in **Product Design Feel - The** Neglected Aesthetic "Do Not Touch"

John Kreifeldt, Tufts University, United States; Rungtai Lin, National Taiwan University of Arts, Taiwan; Ming-Chuen Chuang, National Chiao Tung University, Taiwan.

Applying Local Culture Features into Creative Craft Products Design

Mo-Li Yeh, MingDao University, Taiwan; Po-Hsien Lin, National Taiwan University of Arts, Taiwan.

Friendship Display Medium in **Response to Academic Major** Influences in Visuospatial **Abilities**

Yen-Yu Kang, National Kaohsiung Normal University, Taiwan; Chih-Long Lin, Shu-Hsuan Chang, National Taiwan University of Arts. Taiwan; Mao-Jiun Wang, National Tsing Hua University, Taiwan.

A Study of Framework and **Process Development for Cultural Product Design**

Chi-Hsien Hsu, Chih-Long Lin, Rungtai Lin, National Taiwan University of Arts, Taiwan.

Design and Evaluation of a **Novel Trackball Input Device for** Middle-aged Users

Fong-Gong Wu, Jack Chuang, Chien-Hsu Chen, Li-Ru Lai, National Cheng Kung University, Taiwan.

The Entwined Economic and **Cultural Issues in the Production** of Barbie in Taiwan, Taishan.

Ju-Joan Wong, National Yunlin University of Science and Technology, Taiwan; Rungtai Lin, National Taiwan University of Arts, Taiwan; Zhe-An Lin, Chang Gung University, Taiwan.

Creating Effective Personas for **Product Design: Insights from a** Case Study

Frank Guo, BlackRock, United States; Saniav Shamdasani, Bruce Randall, Spring Studio, United States.

Mobile Research: Benefits, **Applications, and Outlooks** Gloria Chen, King Brown Partners, Inc., United States.

A Case Study: Behavior Study of **Chinese Users on the Internet** and Mobile Internet

Marsha Yang, Hongwei Li, Grace Deng, YiLe Information Ltd, P.R.

Designing Web Marketing that Works for Users: Finding Best Practices through Evaluation and Conversation

Kate Welker, Spring Studio, United States; Frank Guo, BlackRock, United States; Sanjay Shamdasani, Spring Studio, United States.

Testing Touch: Emulators vs. Devices

Rebecca Baker, Xiaoning Sun, Bob Hendrich, CA Technologies, United States.

Heuristic Evaluation and Usability Testing: Case Study

Mahmut Eksioglu, Bogazici University, Turkey; Esin Kiris, CA Technologies, United States; Burak Capar, Murat Selcuk, Selen Ouzeir, Bogazici University, Turkey.

AC **S035**

Brain Computer Interfaces

Chair(s): Peter Brunner, Wadsworth Center, NYSDOH, United States.

Welcome and BCI Primer

Jeremy Hill, Wadsworth Center, NYSDÓH, United States.

Communicating with Functional Near Infrared Imaging

lan McClendon, Georgia Institute of Technology, United States.

The Challenges of Using Scalp-EEG Input Signals for **Continuous Device Control**

Garett Johnson, Nicholas Waytowich, Dean Krusienski, Old Dominion University, United States.

Interface Design Challenge for **Brain-Computer Interaction**

Jeremy Hill, Peter Brunner, Theresa Vaughan, Wadsworth Center, NYSDOH, United States.

The Barriers of Moving Brain-Computer Interface Technology from Bench to Bedside

Eric Sellers, East Tennessee State University, United States.

Designing Intuitive Human-**Computer Interfaces for BCI** and Other Access Methods for **Individuals with Severe Physical** and Cognitive Impairments

Debra Zeitlin, Helen Hayes Rehabilitation Hospital, United States.

Neural Point-and-click Control of Virtual Keyboard Interfaces by an Individual with Tetraplegia in the BrainGate2 Clinical Trial

Daniel Bacher, Brown University, United States.

The Mutual Benefits of **Combining BCI and HCI Technologies: Learning by** Example

Thorsten Zander, *The Max Planck* Institute for Biological Cybernetics, Germany.

Operational Issues in a BCI realworld Environment

Cali Fidopiastis, University of Alabama, Birmingham, United States.

The HCI Challenge

Jeremy Hill, Wadsworth Center, NYSDOH, United States.

DUXU **S036 S037**

Persuasion Design

Room: Lake

Chair(s): Susan Weinschenk, Human Factors International, United States.

Focus on Visual Innovation

Room: Dixie

Chair(s): Michael Renner, The Basel School of Design, FHNW HGK, Switzerland.

Clout: The Role of Content in **Persuasive Experience** Colleen Jones, Content Science,

United States.

The Nature of Adaptive **Interactions and Potential for Strategic Application**

Justin Davis, Madera Labs, United

All Online Interactions are Social Interactions

Susan Weinschenk, Human Factors International, United States.

Persuasive Design: It's Not Just **About Selling Stuff**

Jeff Horvath, Human Factors International, United States.

Designing the Personalized Nostalgic Emotion Value of a **Product**

Yu-Shan Tseng, Ming-Chyuan Ho, National Yunlin University of Science and Technology, Taiwan.

The Essence of Enjoyable **Experiences: The Human Needs** (A Psychological Needs-Driven **Experience Design Approach)**

Joonhwan Kim, Sung Park, SAMSUNG Electronics, Korea; Marc Hassenzahl, Kai Eckoldt, Folkwang University of Arts, Germany.

First Validation of Persuasive Criteria for Designing and **Evaluating the Social Influence** of User Interfaces: Justification of a Guideline.

Alexandra Nemery, University Paul Verlaine of Metz / SAP, France; Eric Brangier, University Paul Verlaine of Metz, France; Steve Kopp, SAP, France.

Image, Imagination, Innovation. How Can we Overcome the Common Ground in the Processes of Visual Design?

Michael Renner, The Basel School of Design, FHNW HGK, Switzerland.

Precise Mishandling of the Digital Image Structure

Theodore Davis, The Basel School of Design, FHNW HGK, Switzerland.

What You See Is What You Don't **Get - Addressing Implications** of Information Technology through Design Fiction

Ludwig Zeller, Royal College of Art, United Kingdom.

Implied Aesthetics: A Sensorbased Approach towards **Mobile Interfaces**

Daniel Sauter, University of Illinois at Chicago, United States.

Why History Matters - Visual Innovation and the Role of Image Theory in HCI

Margarete Pratschke, ETH Zurich, Switzerland.

Visual Innovation through **Findings in Perception**

Paul Mike Zender, University of Cincinnati, United States.

HIMI **S038**

Supporting Communication and Collaboration

Tuesday, 12 July

Room: Madison

Human Interface and the Management of Information

Chair(s): Sarah Swierenga, Michigan State University, United States.

MoPaCo: Pseudo 3D Video **Communication System**

Ryo Ishii, Shiro Ozawa, Takafumi Mukouchi, Norihiko Matsuura, NTT Corporation,

The Effects Visual Feedback on **Social Behavior during Decision Making Meetings**

Merel Brandon, T-Xchange/ University of Twente, Netherlands; Simon Eskamp, University of Twente, Netherlands; Thomas De Groot, T-Xchange / University of Twente, Netherlands; Tim Franssen, Bart Van Gennep, Thomas Visser, University of Twente, Netherlands.

From Personal to Collaborative **Information Management: A** Design Science's Approach Mei Lu, Samsung

Telecommunications America. United States; Philip Corriveau, Intel Corporation, United States.

Real-World User-Centered Design: The Michigan Workforce Background Check System

Sarah Swierenga, Michigan State University, United States; Fuad Abujarad, Yale University, United States; Toni Dennis, State of Michigan, United States; Lori Post, Yale University, United States.

Dodging Window Interference to Freely Share Any Off-theshelf Application among **Multiple Users in Co-located** Collaboration

Shinichiro Sakamoto, Makoto Nakashima, Tetsuro Ito, Oita University, Japan.

Design Effective Voluntary Medical Incident Reporting Systems: a Literature Review

Lei Hua, Yang Gong, University of Missouri, United States.

Towards Argument Representational Tools for Hybrid Argumentation Systems

Maria Gonzalez, Sebastian Gottifredi, Alejandro Garcia, National Council of Scientific and Technical Research (CONICET) and Universidad Nacional del Sur, Argentina; Guillermo Simari, Universidad Nacional del Sur, Argentina.

HCI **S039**

Towards Integrating Haptic Experiences: Does Touch Really Matter?

Room: Escambia

Chair(s): Chang Nam, University of Arkansas, United States.

What You Feel Is What I DO: A study of dynamic haptic interaction in distributed collaborative virtual environment

Sehat Ullah, University of Evry, France; Xianging Liu, Tokyo Institute of Technology, Japan; Samir Otmane, University of Evry, France; Paul Richard, University of Angers, France; Malik Mallem, University of Evry, France.

Development of a High Definition Haptic Rendering for Stability and Fidelity

Katsuhito Akahane, Takeo Hamada, Tokyo Institute of Technology, Japan; Takehiko Yamaguchi, *University of* Angers, France; Makoto Sato, Tokyo Institute of Technology, Japan.

The Effect of Haptic Cues on Working Memory in 3D Menu Selection

Takehiko Yamaguchi, Damien Chamaret, Paul Richard, University of Angers, France.

Haptically Enhanced User Interface to Support Science Learning of Visually Impaired

Yueqing Li, Steve Johnson, Chang Nam, University of Arkansas, United States.

Analyzing User Behavior within a Haptic System

Steve Johnson, Yueging Li, Chang Nam, University of Arkansas, United States; Takehiko Yamaguchi, University of Angers, France.

More than Speed? An Empirical Study of Touchscreens and **Body Awareness on an Object Manipulation Task**

Rachelle Hippler, Dale Klopfer, Laura Leventhal, G Michael Poor, Brandi Klein, Samuel Jaffee, Bowling Green State University, United States.

Usability Testing of the Interaction of Novices with a Multi-touch Table in Semi **Public Space**

Markus Jokisch, Thomas Bartoschek, Angela Schwering, University of Muenster, Germany.

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HCI EPCE **S040 S041 S042 S043** Signal and Image Processing for Spatial Interaction Design (I) **Gesture-based Interaction (I)** Cognitive Issues in Interaction (I) HCI(I) Room: Park Room: Manatee Room: Liberty Room: Dixie Chair(s): Teng-Wen Chang, National Chair(s): Dimitris Grammenos, Chair(s): Liam Mayron, Harris Corp., and Cognitive Ergonomics Chair(s): Ping Guo, Beijing Normal Yunlin University of Science and Foundation for Research & Technology **United States** - Hellas (FORTH), Greece. University, P.R. China. Technology, Taiwan. A Cubic Polynomial Model for moio iCuisine: The Design **Hand Gesture for Taking Self Personalized Emotional Prediction Method for Real-life Fisheye Camera** and Implementation of an **Portrait** Haijiang Zhu, Xiupu Yin, **Interactive Restaurant Tabletop** Shaowei Chu, Jiro Tanaka, University **Objects Based on Collaborative** Jinglin Zhou, Beijing University of of Tsukuba, Japan. Chemical Technology, P.R. China. Ting-Han Chen, Hsin-Hou Lin, Yi-Hyeong-Joon Kwon, Hyeong-**Gesture Based Automating** Di Yen, XXtraLab DESIGN Co., Taiwan. Oh Kwon, Kwang-Seok Hong, **High-quality Fast Image Household Appliances** Sungkyunkwan University, Korea. **Upsampling Algorithm Based** Wei Lun Ng, Chee Kyun Ng, **Designing Poetic Interaction in** on CUDA **Space** Nor Kamariah Noordin, **Differences between Students** Borhanuddin Mohd Ali, Universiti and Professionals While Using a Qingqing Xu, Xin Zheng, Beijing Yi-Chu Lin, National Taiwan University Putra Malaysia, Malaysia. Normal University, P.R. China; of Science and Technology, Taiwan; **GPS** based GIS in an Emergency Jie Chen, CITIC Guoan Group, P.R. Huang-Ming Chang, Eindhoven Response Study 3D-Position Estimation for Hand China University of Technology, Netherlands; Rego Granlund, Santa Anna **Gesture Interface Using a Single** Rung-Huei Liang, National Taiwan IT Research Institute, Sweden; **Face Sketch Synthesis via** University of Science and Technology, Helena Granlund, Santa Anna **Multivariate Output Regression** Seung-Hwan Choi, Ji-Hyeong Han, IT Research Institute / Swedish Liang Chang, Mingquan Zhou, Jong-Hwan Kim, Korea Advanced Defence Research Agency, Sweden; Beijing Normal University, P.R. China; The Effort of Social Networking *Institute of Science and Technology* Nils Dahlback, Linkoping University, Xiaoming Deng, Chinese Academy on Social Behavior - Integrating (KAIST), Korea. Sweden. of Sciences, P.R. China; Zhongke Wu, Twitter, Mobile Devices, and **Multi-User Pointing and Gesture** Beijing Normal University, P.R. China; Wearable Clothing as an **Using Uncertainty to Inform Interaction for Large Screen** Yanjun Han, Chinese Academy of Information Sufficiency in **Using Infrared Emitters and** Sciences, P.R. China. **Decision Making** Chenwei Chiang, Kiyoshi Tomimatsu, Accelerometers Xiao Dong, Caroline Hayes, *University* Kyushu University, Japan. A Global Optimal Algorithm for Leonardo Angelini, Maurizio Caon, of Minnesota, United States. Camera Calibration with One-College of Engineering and **GoCoBa: Interactive Installation Dimensional Objects Design Applied on Combination** Architecture of Fribourg, Switzerland; **Interpretation of Metaphors** Liang Wang, Beijing University of Stefano Carrino, University of of Context and People with Perceptual Features Using Technology, P.R. China; Fuqing Duan, Fribourg & College of Engineering and WordNet Jia-Xuan Zhan, Fan Kuo-Kuang, Beijing Normal University, P.R. China; Architecture of Fribourg, Switzerland; National Yunlin University of Science Rini Bhatt, Amitash Ojha, Chao Liang, Beijing University of and Technology, Taiwan. Omar Abou Khaled, Elena Mugellini, Bipin Indurkhya, *International* Technology, P.R. China. College of Engineering and *Institute of Information Technology,* A Formal Model of Mixed-Architecture of Fribourg, Switzerland. LSCM based Non-rigid Initiative Interaction in Design TUESDAY 13:30 - 15:30 **Registration for Craniofacial Web-based Nonverbal Operational Characteristics Exploration** Communication Interface using Surfaces **Related to Memory in Operating** Sambit Datta, Curtin University, Wenkui Xie, Fuging Duan, **3DAgents with Natural Gestures Information Devices with** Australia; Michael Hobss, Deakin Qingqiong Deng, Mingquan Zhou, Toshiya Naka, Panasonic Corporation, University, Australia. **Hierarchical Menu** Zhongke Wu, Liang Chang, Beijing Japan; Toru Ishida, Kyoto University, Norikazu Sasaki, Motoki Shino, Normal University, P.R. China. Minoru Kamata, The University of Head-pose Recognition for a **Gesture Identification Based on** Tokyo, Japan. Game System Based on Nose's **Zone Entry and Axis Crossing** Effects of Paper on Page **Relative Position** Ryosuke Aoki, NTT Corporation, **Turning: Comparison of Paper** Qingjie Zhao, Xiaoming Shi, Japan; Yutaka Karatsu, Keio and Electronic Media in Reading Yuxia Wang, Beijing Institute of University, Japan; Masayuki Ihara, **Documents with Endnotes** Technology, P.R. China. Atsuhiko Maeda, Minoru Kobayashi, Hirohito Shibata, Kengo Omura, Fuii NTT Corporation, Japan; **Experimental Studies of Visual** Xerox Co., Ltd., Japan. Shingo Kagami, Tohoku University, **Models in Automatic Image** Spatial Tasks on a Large, High-Japan. Annotation resolution, Tiled Display: A Male Ping Guo, Tao Wan, Jin Ma, Beijing **Musical Skin: A Dynamic** Inferiority in Performance with a Normal University, P.R. China. **Interface for Musical Mental Rotation Task Performance** Bernt Ivar Olsen, University of Tromso, Heng Jiang, Teng-Wen Chang, Norway; Bruno Laeng, University of National Yunlin University of Science Oslo, Norway; Kari-Ann Kristiansen, and Technology, Taiwan; Cha-Lin Liu, University Hospital of Northern National Taiwan University of Arts, Norway, Norway; Gunnar Hartvigsen, Taiwan University of Tromso, Norway.

UAHCI **S044 S045 S046 S047 Social Inclusion** Intelligent Interfaces and **Multimodal and Multicultural Universal Access Methods and** Functionality, Adaptation, and Communicative Agent (MMMCA) **Tools** Room: Palm Beach Personalization Room: Union Room: Nassau Chair(s): Vicki Hanson, University of Room: Taylor Dundee, United Kingdom. Chair(s): Kristiina Jokinen, University Chair(s): Margherita Antona, of Helsinki, Finland; Matthias Rehm, Foundation for Research & Technology Chair(s): Stefan Carmien, Tecnalia Research, Spain. Aalborg University, Denmark; - Hellas (FORTH), Greece. Yukiko Nakano, Seikei University, **Social Inclusion Through Digital** A Generic OSGi-based Model **Dialog Behaviors across Culture** Classifying Interaction Methods **Engagement** Framework for Delivery Context and Group Size to Support Intuitive Interaction Vicki Hanson, University of Dundee, **Properties and Events** David Herrera, David Novick, The **Devices for Creating User-**Jaroslav Pullmann, Yehya Mohamad, University of Texas at El Paso, United United Kingdom. **Centered-Systems** States; Dusan Jan, David Traum, Dirk Burkhardt, Matthias Breyer, Carlos Velasco, Fraunhofer, Germany: **Narrating Past to Present:** Stefan Carmien, Tecnalia Research, University of Southern California, Christian Glaser, Kawa Nazemi, **Conveying the Needs and Values** United States. Arjan Kuijper, Fraunhofer, Germany. of Older People to Young Digital Head Movements, Facial Some Issues Regarding the A Survey on Guiding Logic **Technology Designers Expressions and Feedback** Elizabeth Valentine, Ania Bobrowicz, Design of Adaptive Interface for Automatic User Interface University of Kent, United Kingdom; **Generation Systems** in Danish First Encounters Generation Graeme Coleman, Lorna Gibson, Julio Abascal, Ámaia Aizpurua, Interactions: a Culture-Specific Gaurav Dubey, Pennsylvania State Vicki Hanson, University of Dundee, Idoia Cearreta, Borja Gamecho, Analysis University, United States. United Kinadom: Saikat Kundu. Nestor Garay-Vitoria, Raul Minon, Patrizia Paggio, Costanza Navarretta, **Search Intention Analysis** University of the Basque Country, Alison McKay, Raymond Holt, University of Copenhagen, Denmark. for User-Centered Adaptive University of Leeds, United Kingdom. Learning Culture-Specific **Visualizations** Adaptive Interfaces: A Little Issues in Web Presentation for Dialogue Models from Non Dirk Burkhardt, Matthias Breyer, Learning is a Dangerous Thing Cognitive Accessibility Culture-Specific Data Kawa Nazemi, Arjan Kuijper, Kyle Montague, Vicki Hanson, Clayton Lewis, University of Colorado, Kallirroi Georgila, David Traum, Fraunhofer, Germany. Andy Cobley, University of Dundee, United States. University of Southern California, **Visual Mediation Mechanisms** United Kingdom. United States. **Inclusive Scenarios to Evaluate** for Collaborative Design and Use of Speech Technology in an Open and Standards-based Cultural Difference in Nonverbal Development **Real Life Environment** Framework that Supports Behaviors in Negotiation Carmelo Ardito, *Universita* Accessibility and Personalization Ruimin Hu, Towson University, United Conversations: Towards a degli Studi di Bari, Italy; Barbara States; Shaojian Zhu, UMBC, United at Higher Education Model for Culture-adapted Rita Barricelli, Universita degli States; Heidi Feng, Towson University, Alejandro Rodriguez-Ascaso, Studi di Milano, Italy; Paolo Buono, **Conversational Agents** United States; Andrew Sears, UMBC, Jesus Boticario, Cecile Finat, Maria Francesca Costabile, Fumie Nori, Afia Lipi, Yukiko Nakano, United States. Elena Del Campo, Mar Saneiro, Antonio Piccinno, Universita degli Seikei University, Japan.

Collecting an American Sign Language Corpus through the **Participation of Native Signers**

Pengfei Lu, Matt Huenerfauth, City University of New York, United States. **Preliminary Findings of an Ethnographical Research**

on Designing Accessible **Geolocated Services with Older** People

Valeria Righi, Guiller Malon, Susan Moler, Interactive Technologies Group Universitat Pompeu Fabra, Spain; Sergio Sayago, University of Dundee, United Kingdom; Josep Blat, Interactive Technologies Group Universitat Pompeu Fabra, Spain.

Extending Predictive Models of Exploratory Behavior to Broader Populations

Shari Trewin, John Richards, Rachel Bellamy, Bonnie John, Cal Swart, IBM T.J. Watson Research Center, United States; David Sloan, University of Dundee, United Kingdom. Eva Alcocer, Emmanuelle Gutierrez y Restrepo, Emanuela Mazzone, UNED, Spain.

Patient-Centered Design: Interface Personalization for Individuals with Brain Injury Elliot Cole, Institute for Cognitive Prosthetics, United States.

Using a Visual Assistant to Travel Alone within the City

Yves Lachapelle, Dany Lussier-Desrochers, Martin Caouette, Martin Therrien-Belec, Universite du Quebec a Trois-Rivieres, Canada.

Modeling Users for Adaptive Semantics Visualizations

Kawa Nazemi, Dirk Burkhardt, Matthias Breyer, Arjan Kuijper, Fraunhofer, Germany.

Intercultural Dynamics of Fist **Acquaintance: Comparative** Study of Swedish, Chinese and Swedish-Chinese First Time Encounters

Jens Allwood, University of Gothenburg, Sweden; Nataliya Lindstrom, Center SSKKII// SCCIIL, Chalmers and University of Gothenburg, Sweden; Jia Lu, University of Gothenburg, Sweden.

Embedded Cultural Features in the Design of an Accessibility Agent for the Web

Ingrid Teixeira Monteiro, Clarisse Sieckenius De Souza, PUC -Rio de Janeiro, Brazil.

Studi di Bari, Italy; Stefano Valtolina, Li Zhu, *Universita degli Studi di* Milano, Italy.

Tactics Choice Behaviors Represented in a Programming Language in the Map Tracing **Problems**

Nobuhito Yamamoto, University of Tsukuba, Japan; Syoko Shiroma, Ehime University, Japan; Tomoyuki Nishioka, Tsukuba University of Technology, Japan.

Exact Compensation of Color-Weakness with Discrimination Threshold Matching

Rika Mochizuki, NTT Corporation, Japan; Satoshi Oshima, Chuo *University, Japan*; Reiner Lenz, Linkoping University, Sweden; Jinhui Chao, Chuo University, Japan.

Supporting Inclusive Design of User Interfaces with a Virtual **User Model**

Pierre Kirisci, Patrick Klein, Markus Modzelewski, Michael Lawo, University of Bremen, Germany; Yehya Mohamad, Fraunhofer, Germany; Thomas Fiddian, Chris Bowden, Royal National Institute for Deaf People, United Kingdom; Antoinette Fernnell, Joshue O Connor, National Council for the Blind of Ireland (NCBI), Ireland.

VMR S048

Human Behaviour in Virtual and Augmented Environments

Room: Lexington

Chair(s): Nadia Garcia-Hernandez, Istituto Italiano di Tecnologia (IIT), Italy

Intercepting Virtual Ball in Immersive Virtual Environment

Massimiliano Valente, Davide Sobrero, Andrea Brogni, Darwin Caldwell, Istituto Italiano di Tecnologia (IIT), Italy.

Evaluating Human-Robot Interaction During a **Manipulation Experiment Conducted in Immersive Virtual** Reality

Mihai Duguleana, Grigore Florin Barbuceanu. Gheorghe Mogan, Transilvania University of Brasov, Romania.

An Indirect Measure of the Implicit Level of Presence in **Virtual Environments**

Steven Nunnally, University of Pittsburgh, United States; Durell Bouchard, Roanoke College, United States.

Whole Body Interaction using the Grounded Bar Interface

Bong-gyu Jang, HyunSeok Yang, Gerard Kim, Korea University, Korea.

Use of Neurophysiological Metrics within a Real and Virtual Perceptual Skills Task to **Determine Optimal Simulation Fidelity Requirements**

Jack Vice, Anna Skinner, Anthrotronix, Inc., United States; Chris Berka, Advanced Brain Monitoring, Inc., United States; Lauren Reinerman-Jones, Daniel Barber, University of Central Florida, United States; Nicholas Pojman, Veasna Tan, Advanced Brain Monitoring, Inc., *United States*; Marc Sebrechts, Catholic University of America, United States; Corinna Lathan, Anthrotronix, Inc., United States.

Effectiveness of a Tactile Display for Providing Orientation Information of 3d-patterned **Surfaces**

Nadia Garcia-Hernandez, Ioannis Sarakoglou, Nikos Tsagarakis, Darwin Caldwell, Istituto Italiano di Tecnologia (IIT), Italy.

Synchronous vs. Asynchronous **Control for Large Robot Teams**

Huadong Wang, Andreas Kolling, University of Pittsburgh, United States; Nathan Brooks, Carnegie Mellon University, United States; Michael Lewis, University of Pittsburgh, United States; Katia Sycara, Carnegie Mellon University, United States.

IDGD S049

Designing "Friendship" into **Modern Products (II)**

Room: Jade

Chair(s): Rungtai Lin, National Taiwan University of Arts, Taiwan.

Friendly Design and Interaction Relationship Study on Sitou **Tea-Sipping Design of Cultural** Product

Chi-Hsiung Chen, Being-Chenem Chen, National Yunlin University of Science and Technology, Taiwan.

An Exploration of the Cultural **Product Design of National** Palace Museum from Qualia Viewpoint

Mei-Hsien Huang, National Taiwan University of Arts, Taiwan; Wanyu Houng, National Palace Museum, Taiwan; Rungtai Lin, National Taiwan University of Arts, Taiwan.

The Effect of Music on Spatial Ability

Hanyu Lin, National Kaohsiung Normal University, Taiwan; Hui Yueh Hsieh, Ming Chi University of Technology, Taiwan.

A Study of Producing Ceramic Glaze Utilizing Shihmen Reservoir Silt

Chi-Chang Lu, Po-Hsien Lin, National Taiwan University of Arts, Taiwan.

Identifying the Features of Friendly User Interfaces from **Emotional Perspectives**

Li-Chieh Chen, Po-Ying Chu, Yun-Maw Cheng, Tatung University,

Design for Aesthetic Experience

Po-Hsien Lin, Chi-Chang Lu, National Taiwan University of Arts, Taiwan; Mo-Li Yeh, MingDao University, Taiwan.

OCSC **S050**

Electronic Business

Room: Hamilton

Chair(s): June Wei, University of West Online Communities and Social Computing Florida, United States.

E-Business Solutions in the Cable TV Industry

Viorica Harrison, June Wei, *University* of West Florida, United States.

Business-to-Business Solutions for the Cosmetic Industry

Manami Koblentz, June Wei, University of West Florida, United

An M-Pill Framework in the Electronic Healthcare

Nien Chieh Lee, Hi Tran, Albert Yin, June Wei, University of West Florida, United States

Handshake: A Case Study for **Exploring Business Networking** for the Enterprise, Inside and

Laurie Damianos, Donna Cuomo, Stan Drozdetski, The MITRE Corporation, United States.

Productivity Improvement by Using Social-Annotations about Design Intent in CAD Modelling **Process**

Gerardo Alducin-Quintero, Manuel Contero, Universidad Politecnica de Valencia, Spain; Jorge Martin-Gutierrez, *Universidad* de La Laguna, Spain; David Guerra Zubiaga, Centro de Ingenieria y Desarrollo Industrial (CIDESI), Mexico; Michael Johnson, Texas A&M University, United States.

Measuring the Success of On-line Communities in an **Enterprise Networking Tool**

Lester Holtzblatt, Laurie Damianos, The MITRE Corporation, United States.

S051

Computational Neuroscience & Predicting Cognitive & Affective

Room: Lake

Chair(s): Chris Forsythe, Sandia National Laboratories, United States.

Mapping Cognitive Attractors onto the Dynamic Landscapes of Teamwork

Ron Stevens, UCLA IMMEX Project, United States: Jamie Gorman, Texas Tech University, United States.

A Dynamic Approach to the **Physiological-Based Assessment** of Resilience to Stressful Conditions

Michael Zotov, Saint-Petersburg State University, Russia; Chris Forsythe, Sandia National Laboratories, United States; Alexey Voyt, Inga Akhmedova, Vladimir Petrukovich, Saint-Petersburg State University, Russia.

The Frustration Status and Noise **Proof Feature during Perception** of the Auditory Images

Sergey Lytaev, Yuliaj Surovitskaj, Saint Petersburg State Pediatric Medical Academy, Russia.

Using Computational Modeling to Assess Use of Cognitive Strategies

Michael Haass, Laura Matzen, Sandia National Laboratories, United States.

Brain Signatures of Team Performance

Silke Dodel, Florida Atlantic University, United States; Joseph Ćohn, Office of Naval Research, United States; Jochen Mersmann, CodeBox Computerdienste GmbH, Germany; Phan Luu, Electrical Geodesics, Inc., United States; Chris Forsythe, Sandia National Laboratories, United States; Viktor Jirsa, Florida Atlantic University, United States.

Analyzing Neural Correlates of Attentional Changes during the Exposure to Virtual **Environments: Application of Transcranial Doppler Monitoring**

Beatriz Rey, Universidad Politecnica de Valencia, Spain; Vera Parkhutik, Jose Tembl, Hospital Universitari La Fe, Spain; Mariano Alcaniz, Universidad Politecnica de Valencia, Spain.

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DHM S052

Posture and Comfort

Room: Fulton

Chair(s): Tim Marler, *The University of Iowa, United States*.

Predicting Support Reaction Forces for Standing and Seated Tasks with Given Postures-A Preliminary Study

Brad Howard, Jingzhou (James) Yang, Texas Tech University, United States.

Research on Digital Human Model Used in Human Factor Simulation and Evaluation of Load Carriage Equipment

Dayong Dong, Snanghai Jiaotong University, P.R. China; Lijing Wang, Xiugan Yuan, Beihang University, P.R. China; Shan Fu, Shanghai Jiaotong University, P.R. China.

An Alternative Formulation for Determining Weights of Joint Displacement Objective Function in Seated Posture Prediction

Qiuling Zou, Texas Tech University, United States; Qinghong Zhang, Northern Michigan University, United States; Jingzhou (James) Yang, Robyn Boothby, Jared Gragg, Aimee Cloutier, Texas Tech University, United States.

Posture Reconstruction Method for Mapping Joint Angles of Motion Capture Experiments to Simulation Models

Jared Gragg, Jingzhou (James) Yang, Robyn Boothby, *Texas Tech University, United States*.

Contact Area Determination between a N95 Filtering Facepiece Respirator and a Headform

Zhipeng Lei, Jingzhou (James) Yang, Texas Tech University, United States.

HCD S053

Novel Design Approaches

Room: Empire

Human Centered Design

Chair(s): Masahiro Hori, Kansai University, Japan

Knowledge Based Design of User Interface for Operating an Assistive Robot

Rebekah Hazlett-Knudsen, Melissa Smith, Aman Behal, University of Central Florida, United States.

Towards Compositional Design and Evaluation of Preference Elicitation Interfaces

Alina Pommeranz, Pascal Wiggers, Catholijn Jonker, *Delft University of Technology*, *Netherlands*.

A Design-Supporting Tool for Implementing the Learning-Based Approach: Accommodating Users' Domain Knowledge into Design Processes

Jung-Min Choi, Seoul National University, Korea; Keiichi Sato, Illinois Institute of Technology, United States.

A Three-Fold Integration Framework to Incorporate User-Centered Design into Agile Software Development

Shah Rukh Humayoun, SAPIENZA - Universita di Roma, Italy; Yael Dubinsky, IBM Research – Haifa, Israel; Tiziana Catarci, SAPIENZA -Universita di Roma, Italy.

Quantitative Evaluation of the Effectiveness of Idea Generation in the Wild

Lassi Liikkanen, Helsinki Institute for Information Technology (HIIT), Finland; Matti Hamalainen, Aalto University, Finland; Anders Haggman, Massachusetts Institute of Technology (MIT), United States; Tua Bjorklund, Mikko Koskinen, Aalto University, Finland.

DUXU S054

User Experience in Online Communication

Room: Jackson

Experience,

Design,

Chair(s): Lorenzo Cantoni, Alessandro Inversini, *Universita della Svizzera Italiana, Switzerland*.

Globalization / Localization of DUXU

S055

Room: Sarasota

Chair(s): Rudiger Heimgartner, Intercultural User Interface Consulting (IUIC), Germany.

Context-Aware Places of Interest Recommendations for Mobile Users

Linas Baltrunas, Free University of Bozen Bolzano, Italy; Bernd Ludwig, University of Erlangen-Nurnberg, Germany; Stefan Peer, Francesco Ricci, Free University of Bozen-Bolzano, Italy.

Connecting Usages with Usability Analysis through the User Experience Risk Assessment Model: A Case Study in the Tourism Domain

Alessandro Inversini, Lorenzo Cantoni, *Universita della Svizzera Italiana, Switzerland*; Davide Bolchini, *Indiana University, United States*.

Challenges and Opportunities of Hotel Online Booking in China Wei Ding, Marriott, United States.

A Systematic Evaluation of the Communicability of Online Privacy Mechanisms with Respect to Communication Privacy Management

Periambal Coopamootoo, Debi Ashenden, *Cranfield University, United Kingdom*.

How to Improve User Experience in Mobile Social Networking: A User-Centered Study with Turkish Mobile Social Network Site Users

Ozgurol Ozturk, Kerem Rizvanoglu, Galatasaray University, Turkey.

Peru Digital: Approaching Interactive Digital Storytelling and Collaborative Interactive Web Design through Digital Ethnography, HCI, and Digital Media

Si Jung «Jun» Kim, Natalie Underberg, University of Central Florida, United States.

Towards Future Methods to Take into Account Crosscultural Differences in Design: An Example with the "Expert Community Staff" (ECS)

Jerome Dinet, Robin Vivian, Eric Brangier, *University Paul Verlaine* of Metz, France.

A Culturally Driven Approach for the Development of Innovative User Interface Design Concepts Andre Liem, Norwegian University of Science and Technology, Norway.

Guidelines on Website Design and Colour Selection for International Acceptance

Martin Maguire, Loughborough University, United Kingdom.

Leading International UX Research Projects

Jakob Biesterfeldt, UID (User Interface Design), Germany; Miranda Capra, HumanCentric, United States.

Conformity with User Expectations on the Web: Are there Cultural Differences for Design Principles?

Andreas Auinger, Anna Aistleithner, Harald Kindermann, *Upper Austria University of Applied Sciences, Austria*; Andreas Holzinger, *Medical University of Graz, Austria*.

Empathy as a Key Factor for Successful Intercultural HCI Design

Rudiger Heimgartner, Intercultural User Interface Consulting (IUIC), Germany; Lutz-Wolfgang Tiede, Helmut Windl, Continental Automotive GmbH, Germany.

Company Culture Audit to Improve Development Team's Collaboration, Communication, and Cooperation

Emilie Gould, State University of NY at Albany, United States; Aaron Marcus, Aaron Marcus and Associates, Inc. (AM+A), United States.

EHAWC S056

Light and Display

Room: Jackson

Chair(s): Oliver Stefani, Fraunhofer, Germany.

Multi-Resolution-Display System for Virtual Reality Setups

Jurgen Gruninger, German Research Center for Artificial Intelligence (DFKI) / Intel Visual Computing German Research Center for Artificial Intelligence (DFKI), Germany; Uwe Kloos, Reutlingen University, Germany; Jens Kruger, DFKI / Intel Excellence Multimodal Computing &

Katrin Moller, Kompetenzzentrum Germany; Maximilian Moser, Medical

Dragan Sekulovski, Ingrid Vogels,

Ergonomics Through Colored

Milind Mahale, Stuttgart State Academy of Art and Design, Germany; Achim Pross, Matthias Bues,

LED Display Signs on Different

Jeih-Jang Liou, Li-Lun Huang, Chih-Fu Wu, Chih-Lung Yeh, Yung-Hsiang Chen, Tatung University,

Measuring Corrective Reaction Time with the Intermittent

Jui-Feng Lin, Yuan Ze University, Taiwan; Colin Drury, State University of NY at Buffalo, United States; Chin-Mei Chou, Yu-De Lin, Yi-Quan Lin, Yuan Ze University, Taiwan.

HIMI

S057 Novel Devices and Techniques for Interacting with Information

Chair(s): Martin Klima, Czech Technical University in Prague, Czech Republic

Comfortable Design of Task-

Using Optical See-Through

University, Japan; Tomohiro Sato,

Ltd., Japan; Miwa Nakanishi, Keio

Makoto Nomura, Brother Industries,

Big Fat Wand: A Laser Projection

System for Information Sharing

Toru Takahashi, Takao Terano, Tokyo

Vector Keyboard for Android

Martin Klima, Pavel Slavik, Czech

Technical University in Prague, Czech

A Comparison between Single

and Dual Monitor Productivity

and the Effects of Window

Alex Stegman, Federal Aviation

Chen Ling, Randa Shehab, University

Adaptation Model to Vibration

What Maps and What Displays

for Remote Situation Awareness

Ryad Chellali, Khelifa Baizid, Istituto

Object and Scene Recognition

Volkan Bagci, Mariofanna Milanova,

University of Arkansas at Little Rock,

United States; Roumen Kountchev,

Vladimir Todorov, T&K Engineering

Technical University of Sofia, Bulgaria: Roumiana Kountcheva,

Using Color Descriptors and

Italiano di Tecnologia (IIT), Italy.

Administration, United States:

of Oklahoma, United States.

Design of Vibration Alert

Interface Based on Tactile

Yuki Mori, Takayuki Tanaka,

Shun'ichi Kaneko, Hokkaido

and ROV Localization?

Adaptive Color KLT

Co., Bulgaria.

Management Styles on

Performance

Stimulation

University, Japan

Institute of Technology, Japan.

Platform-based Devices

Head-Mounted Display

Kazuhiro Tanuma, Keio

University, Japan.

in a Workspace

Related Information Displayed

S058

Room: Lexington

Chair(s): Alan Chan, City University of

Education and Training

Hong Kong, Hong Kong.

Transforming a Standard Lecture into a Hybrid Learning Scenario

Hans-Martin Pohl, Jan-Torsten Milde, Jan Lingelbach, Fulda University of Applied Sciences, Germany.

Learner-Centered Methodology for Designing and Developing **Multimedia Simulation for Biology Education**

Chi-Cheng Lin, Winona State University, United States; Mark Bergland, Karen Klyczek, University of Wisconsin - River Falls, United States.

Development of a Tracking Sound Game for Exercise Support of Visually Impaired

Yoshikazu Ikegami, Keita Ito, Hironaga Ishii, Michiko Ohkura, Shibaura Institute of Technology,

Developing Optimum Interface Design for On-screen Chinese Proofreading Tasks

Alan Chan, City University of Hong Kong, Hong Kong; Joey Chung Yin So, Purdue University, United States; Steve Ngai Hung Tsang, City University of Hong Kong, Hong Kong.

Enhancing English Learning Website Content and User Interface Functions Using Integrated Quality Assessment Dylan Sung, Chung Yuan Christian University, Taiwan.

Visual Programming of Location-Based Services

Antonio Bottaro, SOGEI Spa, Italy; Enrico Marino, Franco Milicchio, Alberto Paoluzzi, Roma Tre University, Italy; Maurizio Rosina, SOGEI Spa, Italy; Federico Spini, Roma Tre University, Italy.

HCI **S059**

Facial Gesture Recognition and Gaze Tracking

Room: Madison

Chair(s): Csaba Antonya, Transilvania University of Brasov, Romania.

Face Recognition using Local Graph Structure (LGS)

Eimad Eldin Abdu Abusham, Housam Khalifa Bashier, Multimedia University, Malaysia.

Facial Expression Recognition using AAMICPF

Jun-Sung Lee, Chi-Min Oh, Chil-Woo Lee, Chonnam National University, Korea.

Facial Expression Recognition for Learning Status Analysis

Mau-Tsuen Yang, Yi-Ju Cheng, Ya-Chun Shih, National Dong-Hwa University, Taiwan.

Head-Computer Interface: A Multimodal Approach to Navigate Through Real and **Virtual Worlds**

Francesco Carrino, University of Fribourg & College of Engineering and *Architecture of Fribourg, Switzerland;* Julien Tscherrig, Elena Mugellini, Omar Abou Khaled, College of Engineering and Architecture of Fribourg, Switzerland; Rolf Ingold, University of Fribourg, Switzerland.

Eye-gaze Detection by Image Analysis Under Natural Light Kiyohiko Abe, Kanto Gakuin

University, Japan; Shoichi Ohi, Minoru Ohyama, Tokyo Denki University, Japan.

Attentive User Interface for **Interaction within Virtual Reality Environments based on Gaze**

Grigore Florin Barbuceanu, Csaba Antonya, Mihai Duguleana, Transilvania University of Brasov, Romania; Zoltan Rusak, Delft University of Technology, Netherlands.

Manual and Accelerometer Analysis of Head Nodding Patterns in Goal-oriented **Dialogues**

Masashi Inoue, Yamagata University, Japan; Toshio Irino, Wakayama University, Japan; Nobuhiro Furuyama, National Institute of Informatics, Japan; Ryoko Hanada, Takako Ichinomiya, Kyoto University of Education, Japan; Hiroyasu Massaki, Sokendai, Japan.

Institute, Germany; Hilko Hoffmann, Visual Computing Institute / Cluster of *Interaction / SCI Institute, Germany.*

LED Office Lighting to Promote Performance and Well-being

Licht GmbH, Austria; Vincent Grote, Human Research GmbH, Austria; Katharina Keller, Zumtobel Lighting, Austria; Dieter Lorenz, Fachhochschule Giessen-Friedberg, University of Graz, Austria; Tran Quoc Khanh, Technical University of Darmstadt, Germany.

Changing Color over Time

Ramon Clout, Malgorzata Perz, Philips Research Europe, Netherlands.

SmartHeliosity: Emotional Light

Oliver Stefani, Fraunhofer, Germany; Fraunhofer, Germany.

A Study of Vision Ergonomic of Environment Illuminance

Illumination Model

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EPCE UAHCI continues >> **S060 S061 S062 S063**

Research Institute, Sweden

Cognitive Issues in Interaction (II)

Chair(s): Rego Granlund, Santa Anna IT

Brain Interfaces and Electromyography

Room: Park

Chair(s): Giuseppe Andreoni, Politecnico di Milano, Italy.

Advanced HCI Applications

Room: Fulton

Chair(s): Lawrence Henschen, Northwestern University, United

A Hybrid Brain-Computer **Interface for Smart Home** Control

Gunter Edlinger, Clemens Holzner, Christoph Guger, q.tec medical engineering GmbH and Guger Technologies OG, Austria.

Psychometric Evaluation with Brain-Computer Interface

Paolo Perego, Politecnico di Milano, Italy; Anna Carla Turconi, Chiara Gagliardi, IRCCS E. Medea, Italy; Giuseppe Andreoni, Politecnico di Milano, Italy.

Uni-model Human System Interface using sEMG

Srinivasan Jayaraman, TATA Consultancy Services, Ltd., India; Venkatesh Balasubramanian, IIT-Madras, India.

Spectral Subtraction based Emotion Recognition Using

Jin-Hong Min, Hyeong-Oh Kwon, Kwang-Seok Hong, Sungkyunkwan University, Korea.

Low Power Wireless EEG Headset for BCI Applications

Shrishail Patki, Bernard Grundlehner, Holst Center/Imec-NL, Netherlands; Toru Nakada, Panasonic Corporation, Netherlands; Julien Penders, Holst Center/Imec-NL, Netherlands.

Design of Shadows on the OHP **Metaphor-based Presentation** Interface which Visualizes a **Presenter's Actions**

Yuichi Murata, University of Tsukuba, Japan; Kazutaka Kurihara, National Institute of Advanced Industrial Science & Technology (AIST), Japan; Toshio Mochizuki, Senshu University, Japan; Buntarou Shizuki, Jiro Tanaka, University of Tsukuba, Japan.

Evaluation of User Support of a Hemispherical Sub-Display with **GUI Pointing Functions**

Shinichi Ike, Saya Yokoyama, Yuya Yamanishi, Naohisa Matsuuchi, Kochi National College of Technology, Japan; Kazunori Shimamura, Kochi University of Technology, Japan; Takumi Yamaguchi, Haruya Shiba, Kochi National College of Technology,

Assessing the Effect of a **Power-Flow Gauge on Driving Behaviors Affecting Energy** Consumption

Sang-Hwan Kim, University of Michigan - Dearborn, United States; Heramb Dandekar, Chrysler Group LLC., United States; Edgar Camez, Ford Motor Company, United States; Heather Harrelson, University of Michigan - Dearborn, United States.

An Analytical Alarm Flood Reduction to Reduce Operator's Workload

Jens Folmer, Dorothea Pantforder, Birgit Vogel-Heuser, Technische Universitat Munchen, Germany.

The Virtual Workplace of a Mobile Employee – How Does Vischer`s Model Function in **Identifying Physical, Functional** and Psychosocial Fit?

Ursula Hyrkkanen, Turku University of Applied Sciences, Finland; Suvi Nenonen, Aalto University / Helsinki University of Technology.

The H-Metaphor as an example for Cooperative Vehicle Driving

Daniel Damboeck, Martin Kienle, Klaus Bengler, Heiner Bubb, Technische Universitat Munchen, Germany.

A Proposal of an Interactive **Music Composition System** using Gibbs Sampler

Akira Shirai, Tadahiro Taniguchi, Ritsumeikan University, Japan.

Rule Fragmentation in the Airworthiness

Don Harris, HFI Solutions Ltd, United Kingdom.

Regulations: A Human Factors

Perspective

The Number of Trials with Target Affects the Mental Models: Have Users' Mental Models of Search Engines Improved in the Last Ten Years?

Sifiso Mlilo, Andrew Thatcher, University of the Witwatersrand, South Africa.

Modeling Visual Attention for Rulebased Usability Simulations of Elderly

Aaron Russ, German Research Center for Artificial Intelligence (DFKI), Germany.

Preferred Temporal Characteristics of an Advance Notification System for **Autonomous Powered Wheelchair**

Takuma Ito, Minoru Kamata, The University of Tokyo, Japan.

Kansei Evaluation of HDR Color Images with Different Tone Curves and Sizes -**Foundational Investigation of Difference** between Japanese and Chinese -

Tomoharu Ishikawa, Yunge Guan, Yi-Chun Chen, Utsunomiya University, Japan; Hisashi Oguro, Toppan Printing Co., Ltd., Japan; Masao Kasuga, Miyoshi Ayama, Utsunomiya University, Japan.

Information Searching on the Web: the Cognitive Difficulties Experienced by Older Users in Modifying Unsuccessful Information Searches

Aline Chevalier, Universite de Toulouse, France; Aurelie Dommes, IFSTTAR, France: Jean-Claude Marquie, Universite de Toulouse, France.

Template for Website Browsing

Fong-Ling Fu, National Chengchi University, Taiwan; Chiu Hung Su, Hwa Hsia Institute of Technology, Taiwan. Low Prevalence Effect Fan Yang, Xianghong Sun, Kan Zhang, Biyun Zhu, Chinese Academy of Sciences, P.R.

Applied Cognitive Ergonomics Design Principles for Fighter Aircraft

Jens Alfredson, Johan Holmberg, Rikard Andersson, Maria Wikforss, Saab, Sweden.

Exploring the Relationship among **Dimensions of Flight Comprehensive** Capabilities Based on SEM

Ruishan Sun, Yang Li, Civil Aviation University of China, P.R. China.

Analysis of Mental Workload during Enroute Air Traffic Control Task Execution based on Eye-Tracking Technique

Caroline Martin, Universite de Toulouse / DGAC, DTI R&D, France; Julien Cegarra, Universite de Toulouse, France; Philippe Averty, DGAC, DTI R&D, France.

Universal Access in Practice

Room: Palm Beach

Chair(s): Simeon Keates, University of Abertay Dundee, United Kingdom; Ray Adams, Middlesex University, United Kingdom.

Using Motion-Sensing Remote **Controls with Older Adults**

Thomas von Bruhn Hinne, IT University of Copenhagen, Denmark; Simeon Keates, University of Abertay Dundee, United Kingdom.

The Barriers to and Benefits of Use of ICT for People with Visual Impairment

Kristin Fuglerud, Norwegian Computing Center, Norway.

A study of Accessibility **Requirements for Media Players** on the Web

Lourdes Moreno, Maria Gonzalez, Paloma Martinez, Ana Iglesias, Universidad Carlos III de Madrid. Spain.

A Method to Automate the **Ranking of Web Pages According** to User Defined Accessibility Ratings

Alice Good, University of Portsmouth, United Kingdom.

Examining the Current State of Group Support Accessibility - A Focus Group Study

John Schoeberlein, Yuangiong Wang, Towson University, United States.

An Investigation of a Personasbased Model Assessment for **Experiencing User-centred** Design

Wen Cing-Yan Nivala, De Montfort University, United Kingdom; De-Lai Men, South China University of Technology, P.R. China; Tin-Kai Chen, Shu-Te University, Taiwan: Robert Chen, De Montfort University, United Kingdom.

Evaluation of Expert Systems: The Application of a Reference Model to the Usability **Parameter**

Paula Miranda, Polytechnic Institute of Setubal (IPS), Portugal; Pedro Isaias, Universidade Aberta, Portugal; Manuel Crisostomo, Universidade de Coimbra, Portugal.

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Internationalization,

Parallel Sessions 16:00 - 18:00 Tuesday, 12 July **UAHCI VMR IDGD S064 S065 S066 S067** 3D Technology for HMD and LCD **Design Access in Ergonomics** Distributed Intelligence and the and Interaction Web as a Human Interface **Complex Systems** Room: Hamilton Room: Lake Room: Escambia Room: Manatee Virtual and Mixed Reality **Design and Global Development** Chair(s): Fong-Gong Wu, National Chair(s): Pier Luigi Emiliani, Consiglio Chair(s): Masaru Miyao, Nagoya Chair(s): Qin Gao, Zhizhong Li, University, Japan; Sina Fateh, United Cheng Kung University, Taiwan. *Nazionale delle Ricerche (CNR), Italy.*

Use-state Analysis to Find Domains to Be Re-designed

Masami Maekawa, Sosa Design Inc. / Wakayama University, Japan; Toshiki Yamaoka, Wakayama University, Japan.

Modeling the Role of Empathic Design Engaged Personas: An **Emotional Design Approach**

Robert Chen, Wen Cing-Yan Nivala, Chien-Bang Chen, De Montfort University, United Kingdom.

Digitizing Interaction: the Application of Parameter-**Oriented Design Methodology** to the Teaching/ Learning of Interaction Design

Shu-Wen Tzeng, Auburn University, United States.

Using Interface Design with **Low-cost Interactive Whiteboard Technology to Enhance Learning** for Children

Chien-Yu Lin, National University of Tainan, Taiwan; Fong-Gong Wu, National Cheng Kung University, Taiwan; De-Shiung Chen, National Tainan School for Hearing Impaired, Taiwan; Yan-Jin Wu, National University of Tainan, Taiwan; Kenendy Huang, Ta-Nai Elementary School, Taiwan; Chia-Pei Liu, Municipal Jinsyue Elementary School, Taiwan; Shu-Ying Chou, Tainan Municipal Heshun Elementary School, Taiwan.

The Relationships between Morphology and Work for the **Nursing Performance of Hand** Controls in Emergency Surgery

Chao-Yuan Tseng, Fong-Gong Wu, National Cheng Kung University,

Observe the User Interactive Behavior with a Large Multi-Touch Display in Public Space

Chien-Hsu Chen, Hsiao-Mei Hung, I-Jui Lee, Yu-Wen Chen, Fong-Gong Wu, National Cheng Kung University, Taiwan.

A Study on An Usability Measurement Based on The Mental Model

Yuki Yamada, Keisuke Ishihara, Toshiki Yamaoka, Wakayama University, Japan.

Adaptations Based on Ontology Evolution as a Mean to Exploit Collective Intelligence

Laura Burzagli, Francesco Gabbanini, Pier Luigi Emiliani, Consiglio Nazionale delle Ricerche (CNR), Italy.

GeoDrinking: How to Extract Value from an Extended Social **Wine Drinking Experience**

Alessandro Marcengo, Telecom Italia, Italy; Amon Rapp, Telecom Italia / Universita di Torino / "Progetto *Lagrange, Fondazione C.R.T.*, *Italy.*

Technology Support via Telephone – to Elderly and **People with Disability**

Lars Johansson, Claes Tjader, Swedish Institute for Assistive Technology (SIAT), Sweden.

Virtual Structured Dialogic Design as Tool for Analysis of Threats before Implementing **European Dialogues Aiming to Identify R&D Gaps in Assistive**

Yiannis Laouris, Georgina Siitta, Cyprus Neuroscience & Technology Institute (CNTI), Cyprus; Patrick Roe, Ecole Polytechnique Federale de Lausanne, Switzerland; Pier Luigi Emiliani, Consiglio Nazionale delle Ricerche (CNR), Italy; Aleco Christakis, Cyprus Neuroscience & Technology Institute (CNTI), Cyprus.

An Intelligent Task Assignment and Personalization System for **Students' Online Collaboration**

Asterios Leonidis, George Margetis, Margherita Antona, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

Creating a Global Public Inclusive Infrastructure

Gregg Vanderheiden, University of Wisconsin-Madison, United States; Jutta Treviranus, OCAD University, Canada.

Virtual User Concept for Inclusive Design of Consumer Products and User Interfaces

Yehya Mohamad, Carlos Velasco, Jaroslav Pullmann, Fraunhofer, Germany; Michael Lawo, Pierre Kirisci, University of Bremen, Germany.

Stereoscopic Vision Induced by Parallax Images on HMD and its Influence on Visual Functions

Satoshi Hasegawa, *Nagoya Bunri* University, Japan; Akira Hasegawa, Nagoya University, Japan; Masako Omori, Kobe Women's University, Japan; Hiromu Ishio, Nagoya University, Japan; Hiroki Takada, University of Fukui, Japan; Masaru Miyao, Nagoya University, Japan.

Comparison in Degree of the Motion Sickness Induced by a 3-D Movie on an LCD and an HMD

Hiroki Takada, University of Fukui, Japan; Yasuyuki Matsuura, Nagoya University, Japan; Masumi Takada, Aichi University of Medicine, Japan; Masaru Miyao, Nagoya University, Japan.

Simultaneous measurement of lens accommodation and convergence to real objects

Tomoki Shiomi, Hiromu Ishio, Hiroki Hori, Nagoya University, Japan; Hiroki Takada, University of Fukui, Japan; Masako Omori, Kobe Women's University, Japan; Satoshi Hasegawa, Nagoya Bunri University, Japan; Shohei Matsunuma, Nagoya Industrial Science Research Institute, Japan; Akira Hasegawa, Tetsuya Kanda, Masaru Miyao, Nagoya University, Japan.

Comparison of Accommodation and Convergence by Simultaneous Measurements during 2D and 3D **Vision Gaze**

Hiroki Hori, Tomoki Shiomi, Tetsuya Kanda, Akira Hasegawa, Hiromu Ishio, Yasuyuki Matsuura, Nagoya University, Japan; Masako Omori, Kobe Women's University, Japan; Hiroki Takada, University of Fukui, Japan; Satoshi Hasegawa, Nagoya Bunri University, Japan; Masaru Miyao, Nagoya University, Japan.

Effect of Weak Hyperopia on **Stereoscopic Vision**

Masako Omori, Kobe Women's University, Japan; Asei Sugiyama, Hiroki Hori, Tomoki Shiomi, Tetsuya Kanda, Akira Hasegawa, Hiromu Ishio, Nagoya University, Japan; Hiroki Takada, University of Fukui, Japan; Satoshi Hasegawa, Nagoya Bunri University, Japan; Masaru Miyao, Nagoya University, Japan.

Visibility Experiment and **Evaluation of 3D Character Representation on Mobile Displays** Hiromu Ishio, Nagoya University, Japan.

Human Factors and Control of

Tsinghua University, P.R. China.

Driving Distraction Analysis by ECG Signals: an Entropy Analysis

Lu Yu, Xianghong Sun, Kan Zhang, Chinese Academy of Sciences, P.R.

Toward Understanding the Relationship between **Task Complexity and Task** Performance

Peng Liu, Zhizhong Li, Tsinghua University, P.R. China.

Attribute Description Service for Large-Scale Networks

Donald Kline, John Quan, University of Alaska Fairbanks, United States.

The Application of Human **Models in the Thermal Comfort** Assessment of Fighter Plane's

Haifeng Shen, Beijing University of Aeronautics & Astronautics, P.R. China.

Application of Human Modeling in Multi-Crew Cockpit Design

Xiaohui Sun, Feng Gao, Xiugan Yuan, Jingquan Zhao, Beihang University, P.R. China.

Accommodating Both Expert **Users and Novice Users in One** Interface by Utilizing Multi-Layer Interface in Complex **Function Products**

T. K. Philip Hwang, Horng-Yi Yu, National Taipei University of Technology, Taiwan.

Study on Synthetic Evaluation of Human Performance in **Manually Controlled Spacecraft Rendezvous and Docking Tasks**

Ting Jiang, Chunhui Wang, Zhiqiang Tian, China Astronaut Training and Research Center, P.R. China; Yongzhong Xu, National Laboratory of Human Factors Engineering, P.R. China; Zheng Wang, China Astronaut Training and Research Center, P.R. China.

OCSC

S068 Higher Education and Social

Computing Applications Room: Liberty

Chair(s): Gabriele Meiselwitz, Towson University, United States.

Gaining Insight into the Application of Second Life in a Computing Course: Students' Perspectives

James Braman, Alfreda Dudley, Towson University, United States; Kidd Colt, Independent Consultant, United States; Giovanni Vincenti, Yuangiong Wang, Towson University, United States.

Is Your Social Networking **Privacy Reliant on Intuitive** Interfaces?

Deborah Carstens, Veronica Giguere, Florida Institute of Technology, United States.

Recent Trends in Software Support for Online Communities for Teaching and **Research Projects in Higher Education**

Daniel Kadenbach, Carsten Kleiner, University of Applied Sciences & Arts Hannover, Germany.

Teacher Agents: The Current State, Future Trends, and Many Roles of Intelligent Agents in **Education**

Kevin Reed, Northern Virginia Community College, United States; Gabriele Meiselwitz, Towson University, United States.

Assessments in Large- and Small-scale Wiki Collaborative **Learning Environments:** Recommendations for **Educators and Wiki Designers**

Portia Pusey, Gabriele Meiselwitz, Towson University, United States.

Third Agers and Social Networking in Higher Education

Christopher Connolly, Gabriele Meiselwitz, Towson University, United States.

Meet Researcher in the Real World using the ConAR:Context-Aware Researcher

Sung-Wook Baek, Jong-Hoon Seo, Tack-Don Han, Yonsei University, Korea.

AC **S069**

AugCog Overview

Room: Nassau

Chair(s): Kay Stanney, Design Interactive, Inc., United States.

A Hierarchical Adaptation Framework for Adaptive **Training Systems**

Sven Fuchs, Angela Carpenter, Meredith Carroll, Kelly Hale, Design Interactive, Inc., United States.

Theoretical Transpositions in Brain Function and the **Underpinnings of Augmented** Cognition

Cali Fidopiastis, University of Alabama, Birmingham, United States.

Facial Recognition: An Enabling Technology for Augmented Cognition Applications

Denise Nicholson, Christine Podilchuk, Kathleen Bartlett, DSCI, United

The Evolution of Human **Systems: A Brief Overview**

Jefferson Grubb, Naval Air Warfare Center Training Systems Division, United States; Joseph Cohn, Office of Naval Research, United States.

Trust in Human-Computer Interactions as Measured by Frustration, Surprise, and Workload

Leanne Hirshfield, Stuart Hirshfield, Samuel Hincks, Matthew Russell, Rachel Ward, Tom Williams, Hamilton College, United States.

An Intelligent Infrastructure for **In-Flight Situation Awareness** of Aviation Pilots

Alessandro Di Nuovo, Rosario Bruno Cannavo, Santo Di Nuovo, Universita degli Studi di Catania,

Characterizing the Performance Limits of High Speed Image Triage using Bayesian Search Theory

Santosh Mathan, Honeywell Labs, United States; Kenneth Hild, Yonghong Huang, Misha Pavel, Oregon Health and Science University, United States.

DHM **S070**

Applications of Digital Human Modelling

Room: Empire

Chair(s): Cornelius Malerczyk, University of Applied Science Friedberg-Giessen, Germany.

A Framework for Automatic **Simulated Accessibility Assessment in Virtual Environments**

Nikolaos Kaklanis, Panagiotis Moschonas, Konstantinos Moustakas. Dimitrios Tzovaras, Centre for Research and Technology Hellas (CERTH), Greece.

Second Life as a Platform for **Creating Intelligent Virtual** Agents

Larry Hodges, Clemson University, United States; Amy Ulinski, University of Wyoming, United States; Toni Bloodworth, Austen Hayes, John Mark Smotherman, Clemson University, United States; Brandon Kerr, University of North Carolina at Charlotte, United States.

Polymorphic Cumulative Learning in Integrated **Cognitive Architectures for Analysis of Pilot-Aircraft Dynamic Environment**

Yin Tangwen, Shan Fu, Shanahai Jiaotong University, P.R. China.

The Research of Crew Workload **Evaluation Based on Digital Human Model**

Yiyuan Zheng, Shan Fu, Shanghai Jiaotona University, P.R. China.

Planar Vertical Jumping Simulation-A Pilot Study

Burak Ozsoy, Jingzhou (James) Yang, Texas Tech University, United States.

HCD **S071**

Objective Aspects and Subjective Aspects in User **Experience**

Room: Sarasota

Chair(s): Masaaki Kurosu, The Open University of Japan, Japan.

Descriptive Words for Expressing the User Experience Masaaki Kurosu, The Open University of Japan, Japan.

Real User Experience of ICT Devices among Elderly People Ayako Hashizume,

Toshimasa Yamanaka, University of Tsukuba, Japan; Masaaki Kurosu, The Open University of Japan, Japan.

Idea Creation Method for HCD Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

Vision-proposal Design Method

Koji Yanagida, Kurashiki University of Science and the Art, Japan; Yoshihiro Ueda, Fujitsu Design, Ltd., Japan; Kentaro Go, University of Yamanashi, Japan; Katsumi Takahashi, Holon Create Inc., Japan; Seiji Hayakawa, Ricoh, Japan; Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

Study of Honest Signal: **Bringing Unconscious Channel** of Communication into Awareness through Interactive Prototype

Youn Jung Kwak, Seoul National University, Korea; Tiia Suomalainen, Jussi Mikkonen, Aalto University,

Investigation of Indirect Oral Operation Method for Think Aloud Usability Testing

Masahiro Hori, Yasunori Kihara, Takashi Kato, Kansai University,

Investigating Users' Interaction with Physical Products -Applying Qualitative and **Quantitative Methods**

Chun-Juei Chou, National Cheng Kung University, Taiwan; Chris Conley, Gravitytank (Innovation Consulting Firm), United States.

DUXU

S072

S073

Promoting Design Quality, Design Culture and Innovative Thinking within the Enterprise

Room: Taylor

Design, User Experience,

Chair(s): Sabine Kabel-Eckes, SAP Labs, LLC, United States.

Sustainability: Future Roles, Responsibilities, and Opportunities for the HCI Profession

Room: Union

Chair(s): Christine Ronnewinkel, SAP, Germany; Janaki Kumar, SAP Labs, LLC., United States.

Design Innovation for Enterprise Software

Mark Detweiler, Liam Friedland, Informatica, United States.

Why Enterprises Can't Innovate: **Helping Companies Learn Design Thinking**

Jon Innes, UX Innovation LLC, United

Designing the AR Experience: **Tools and Tips for Mobile** Augmented Reality UX Design

Gini Keating, Daniel Guest, Anne Konertz, Niccolo Padovani, Andrea Villa, Qualcomm, United

The Necessity of Personal Freedom to Increase HCI Design

Rudiger Heimgartner, Intercultural User Interface Consulting (IUIC), Germany; Helmut Windl, Alkesh Solanki, Continental Automotive GmbH, Germany.

Scalability of UX Activities in Large Enterprises: An **Experience Report from SAP AG** Boris Hecker, Matthias Berger, SAP AG, Germany.

Make Space for the Customer: The Shift Towards Customer Centricity

Kostanija Petrovic, OpenText Corporation, Germany; Melanie Siegmann, SAP AG, Germany.

Make User-Centered Design Sustainable in China

JunJie (Jeff) Zhu, SAP Labs China, P.R. China.

Future Centered Design: Designing for Sustainable Business

Janaki Kumar, Peter Graf, SAP Labs, LLC., United States.

Managing a Green Giant: **Sustainability Performance** Management, a User Experience Perspective

Benjamin Tomsky, Angad Manco, SAP Labs, LLC., United States.

What Sustainability Brings to the Research Table

Niyati Bedekar, Sally Lawler Kennedy, SAP Labs, LLC., United States.

The Grid Intelligent Planning Framework: Planning Electric Utility Investments in a Time of **Accelerating Change**

Geoff Ryder, Fatimah Shahid, Sui Yan, SAP Labs, LLC., United States.

User-Experience for Personal Sustainability Software: Determining Design Philosophy and Principles

Aaron Marcus, Jennifer Dumpert, Laurie Wigham, Aaron Marcus and Associates, Inc. (AM+A), United States.

16:00 - 18:00

continues >>



HCI HIMI **S074 S075 S076 S077 Communication Enhancement Designing Web Sites and Advanced System Architecture Tabletop and Surface Interaction Interfaces to Optimize HCI** in the Social Context (II) Room: Jackson Room: Park Room: Liberty Room: Sarasota Chair(s): Yutaka Ishii, Okayama Chair(s): Karsten Nebe, University of Prefectural University, Japan; Chair(s): Robert Proctor, Purdue Chair(s): Yoshio Nakatani, Paderborn, Germany. Momoko Nakatani, NTT Corporation, University, United States. Ritsumeikan University, Japan; Japan. Shogo Nishida, Osaka University, Japan. **How Do Real or Virtual Designing Web Sites and** Influence of Prior Knowledge uPlatform: a Customizable **Multi-user Windowing System Agent's Body and Instructions Interfaces to Optimize** and Embodiment on Human-Contribute to Task **Successful User Interactions: Agent Interaction** for Interactive Tabletop Yugo Hayashi, Victor Kryssanov, Achievement? **Symposium Overview** Chenjun Wu, Yue Suo, Chun Yu, Ritsumeikan University, Japan; Yuanchun Shi, Yonggiang Qin, Yugo Takeuchi, Hisashi Naito, Robert Proctor, Purdue University, Kazuhisa Miwa, Nagoya University, Shizuoka University, Japan. United States; Kim-Phuong Vu, Tsinghua University, P.R. China. Japan; Hitoshi Ogawa, Ritsumeikan California State University, Long **Multimodal Conversation Scene** A Tabletop-based Real-World-University, Japan. Beach, United States. **Analysis for Understanding Oriented Interface** A Study and Evaluation on Route **Advances in E-commerce User** Hiroshi Takeda, Hidetoshi Miyao, **People's Communicative Behaviors in Face-to-Face** Interface Design **Guidance of a Car Navigation** Minoru Maruyama, David Asano, Lawrence Najjar, TandemSeven, Inc., System based on Augmented Shinshu University, Japan. Meetings United States. Reality Kazuhiro Otsuka, NTT Corporation, uMeeting, an Efficient Co-Kengo Akaho, Takashi Nakagawa, **Does Privacy Information Located Meeting System On the** Yoshihisa Yamaguchi, Katsuya Kawai, **Influence Users' Online** Large-Scale Tabletop Visual Feedback to Reduce Mitsubishi Electric Corporation, Jie Liu, Yuanchun Shi, *Tsinghua* **Purchasing Behavior?** Influence of Delay on Video Japan; Hirokazu Kato, Nara Institute University, P.R. China. Jimmy Nguyen, Kim-Phuong Vu, Chatting of Science and Technology, Japan; California State University, Long Kazuyoshi Murata, **Effect of Aesthetic Design** Shogo Nishida, Osaka University, Beach, United States. Masatsugu Hattori, Yu Shibuya, Kyoto **Elements on Tabletop Display** Japan. Institute of Technology, Japan. Riding the Technology Wave: Interaction **Developing a User Interaction Mediate Agent Effective Dashboard Data** Hyunglae Lee, Massachusetts **Recommendation Engine on** Institute of Technology (MIT), United based on User Interruptibility Visualization **Twitter Using Estimated Latent** Lisa Pappas, Lisa Whitman, SAS States; Hyunjn Shin, Ji-Hyung Park, **Estimation** Topics Korea Institute of Science and Institute, United States. Takahiro Tanaka, Kinya Fujita, Hiroyuki Koga, Tadahiro Taniguchi, Technology (KIST), Korea. Tokyo University of Agriculture and A Conceptual Model of the Ritsumeikan University, Japan. Technology, Japan. An Investigation on **Axiomatic Usability Evaluation Recall and Communication Requirements for Co-located** Method A Digital Archive System for **Support System for Preserving Audio and Visual** Yinni Guo, Robert Proctor, Group-Work using Multitouch-, Reminiscence Triggered by Pen-based- and Tangible-Purdue University, United States; Humming Gavriel Salvendy, Purdue University Interaction Makoto Uesaka, Yusuke Ikegaya, Yusuke Kita, Yoshio Nakatani, /Tsinghua University (P.R. China), Karsten Nebe, Tobias Muller, Tomohito Yamamoto, Kanazawa Ritsumeikan University, Japan. United States. Florian Klompmaker, University of Institute of Technology, Japan. A Haptic Emotional Model for Paderborn, Germany. **Usability Issues in Introducing** Care Giving System Based on **Audio System Interface Capacitive Interaction into Saving and Restoring Consciousness Recognition** Yuki Ichiyanagi, Eric Cooper, Mechanisms for Tangible User **Mobile Navigation** Noriko Yokoyama, Victor Kryssanov, Hitoshi Ogawa, Shuang Xu, Keith Bradburn, Lexmark Tomoyuki Yamaguchi, Waseda **Interfaces through Tangible** Ritsumeikan University, Japan. International, United States. **Active Objects** University, Japan; Shuji Hashimoto, Can Twitter be an Alternative of NTT Corporation / Waseda University, Eckard Riedenklau, **Movement Time for Different** Japan. **Real-world Sensors?** Thomas Hermann, Helge Ritter, **Input Devices** Tetsuro Takahashi, Shuya Abe, Bielefeld University, Germany. **Development of an Eye-Tracking** L. Paige Bacon, Kim-Phuong Vu, Nobuyuki Igata, Fujitsu Laboratories, California State University, Long Pen Display for Analyzing Ltd., Japan. **Embodied Interaction** Beach, United States. **Recommendation System Based** Michiya Yamamoto, Hiroshi Sato, Keisuke Yoshida, Kwansei on Interaction with Multiple Agents for Users with Vague Gakuin University, Japan; Takashi Nagamatsu, Kobe University, Intention Itaru Kuramoto, Atsushi Yasuda, Japan; Tomio Watanabe, Okayama Prefectural University, Japan. *Kyoto Institute of Technology, Japan;*

Mitsuru Minakuchi, Kyoto Sangyo University, Japan; Yoshihiro Tsujino, Kyoto Institute of Technology, Japan.



Engineering Psychology and Cognitive Ergonomics

Parallel Sessions

Text, Human Languages and **Translation**

S078

Room: Lexington

HCI

Chair(s): Sven Schmeier, German Research Center for Artificial Intelligence (DFKI), Germany.

Health and Well-being Applications

Room: Jade

Chair(s): Marko Nieminen, Aalto University, Finland.

S079

Computer Assistance in Bilingual Task-Oriented Human-Human Dialogues

Sven Schmeier, Matthias Rebel, Renlong Ai, German Research Center for Artificial Intelligence (DFKI), Germany.

Can Indicating Translation Accuracy Encourage People to Rectify Inaccurate Translations? Mai Miyabe, Takashi Yoshino,

Design of a Face-to-face **Multilingual Communication** System for a Handheld Device in the Medical Field

Wakayama University, Japan.

Shun Ozaki, Takuo Matsunobe, Takashi Yoshino, Wakayama University, Japan; Aguri Shigeno, Center for Multicultural Society Kyoto,

Developing and Exploiting a Multilingual Grammar for **Human-Computer Interaction**

Xian Zhang, Rico Andrich, Dietmar Rosner, University of Magdeburg, Germany.

VOSS - A Voice Operated Suite for the Barbadian Vernacular

David Byer, Colin Depradine, University of the West Indies, Barbados.

New Techniques for Merging Text Versions

Darius Dadgari, Wolfgang Stuerzlinger, York University, Canada.

MusicTagger: Exploiting User **Generated Game Data for Music** Recommendation

Hannes Olivier, Marc Waselewsky, Niels Pinkwart, Technical University of Clausthal, Germany.

Clinical Communication: Human-Computer and Human-Human Interactions

Saif Khairat, Yang Gong, University of Missouri, United States.

A User-Friendly Tool for Detecting the Stress Level in a Person's Daily Life

Irene Zaragoza, Beatriz Rey, Universidad Politecnica de Valencia, Spain; Cristina Botella, Universitat Jaume I, Spain; Rosa Banos, Universitat de Valencia, Spain; Ines Moragrega, Diana Castilla, Universitat Jaume I, Spain; Mariano Alcaniz, Universidad Politecnica de Valencia, Spain.

mediRobbi: An Interactive **Companion for Pediatric Patients During Hospital Visit**

Szu-Chia Lu, Nicole Blackwell, Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

A Real-Time Interactive MIDI Glove for Domicile Stroke Rehabilitation

Nizan Friedman, David Reinkensmeyer, Mark Bachman, University of California, Irvine, United States.

Report on a Preliminary Study Using Breath Control and a Virtual Jogging Scenario as **Biofeedback for Resilience Training**

Jacquelyn Morie, Eric Chance, J. Galen Buckwalter, University of Southern California, United States.

The Design of an Interactive **Stroke Rehabilitation Gaming** System

Linda Harley, Scott Robertson, Maribeth Gandy, Simeon Harbert, Douglas Britton, Georgia Institute of Technology, United States.

EPCE S080

Detecting Terrorist Activities

Room: Taylor

Chair(s): Alex Stedmon, Glyn Lawson, The University of Nottingham, United Kingdom.

The Effects of Individual and Context on Aggression in **Repeated Social Interaction**

Jolie Martin, Ion Juvina, Christian Lebiere, Cleotilde Gonzalez, Carnegie Mellon University, United

Using Behavioral Measures to Assess Counter-Terrorism Training in the Field

V. Alan Spiker, Anacapa Sciences, Inc., United States; Joan Johnston, Naval Air Warfare Center Training Systems Division, United States.

Scent trails: Countering Terrorism through Informed Surveillance

Alex Sandham, Tom Ormerod, Coral Dando, Lancaster University, United Kingdom; Ray Bull, Leicester University, United Kingdom; Mike Jackson, James Goulding, The University of Nottingham, United Kingdom.

Acoustic Correlates of Deceptive Speech - An Exploratory Study David Howard, Christin Kirchhubel, University of York, United Kingdom.

Deception and Self-Awareness

Glyn Lawson, Alex Stedmon, The University of Nottingham, United Kingdom; Chloe Zhang, Dawn Eubanks, University of Bath, United Kingdom; Lara Frumkin, The University of East London, United Kingdom.

Adversarial Behavior in Complex Adaptive Systems: An Overview of ICST's Research on Competitive Adaptation in **Militant Networks**

John Horgan, Michael Kenney, Mia Bloom, Cale Horne, Kurt Braddock, Peter Vining, Nicole Zinni, Pennsylvania State University, United States; Kathleen Carley, Michael Bigrigg, Carnegie Mellon University, United States.

UAHCI **S081**

Information Technology Strategies in Health Care

Room: Palm Beach

Chair(s): Joyram Chakraborty, State University of NY, The College at Brockport, United States.

A Top-k Analysis Using Multilevel Association Rule Mining for **Autism Treatments**

Kelley Engle, Roy Rada, UMBC, United

Evaluation of Video Game Interfaces

Joyram Chakraborty, Phillip Bligh, State University of NY, The College at Brockport, United States.

Supporting a Shared Dialog on Healthcare Policy between Researchers, Practitioners, and the Lav Public: Creating the **SpeakHealth Online Community**

David Gurzick, Hood College, United States; Lee Boot, UMBC, United States; Stacy Arnold, Infoculture, United States; Martha Gurzick, Shady Grove Adventist Hospital, United States.

Preliminary Framework for Studying Self-Reported Data in Electronic Medical Records within a Continuing Care Retirement Community Kelley Gurley, Anthony Norcio, UMBC, United States.

Bringing the Home into the Hospital: Assisting the Pre-**Discharge Home Visit Process** using 3D Home Visualisation Software

Arthur Money, University of Bedfordshire, United Kingdom; Anne McIntyre, Anita Atwal, Georgia Spiliotopoulou, Tony Elliman, Brunel University, United Kingdom; Tim French, University of Bedfordshire, United Kingdom.

continues >>

VMR S082 S083 S084 S085 Active Ageing with ICT Toward Ultra-Reality Technology SMART Interfaces for Consumer The Future of Universal Access for VR/MR **Health Applications (II)** Room: Nassau Room: Dixie Room: Empire Room: Madison Chair(s): Qin Gao, Tsinghua University, Virtual and Mixed Reality P.R. China. Chair(s): Josette Jones, Indiana Chair(s): Noam Ben Asher, Ben-Chair(s): Yasushi Ikei, Tokvo Gurion University of the Negev, Israel; Metropolitan University, Japan. University, United States. Gisela Susanne Bahr, Florida Institute of Technology, United States. Mobile Wikipedia: A Case Study **Exploring Health Website Users** Smart Cities, Ambient Ultra-reality and Virtual Reality by Web Mining Intelligence and Universal Yasushi Ikei, Masahiro Urano, Tokyo of Information Service Design Wei Kong, Josette Jones, Indiana Metropolitan University, Japan. for Chinese Teenagers Access University, United States. Norbert Streitz, Smart Future Jia Zhou, P.L. Patrick Rau, **Concave-convex Surface** Christoph Rohmer, Jie Zhou, Initiative, Germany. Perception by Visuo-vestibular **Can User Tagging Help Health** Christophe Ghalayini, Felix Roerig, **Information Seekers? Universal Access in Ambient Stimuli for Five-Senses Theater** Tsinghua University, P.R. China. Malika Mahoui, Josette Jones, Intelligent Environments - A Tomohiro Amemiya, NTT Towards an Evidence-based Corporation, Japan; Koichi Hirota, Andrew Meyerhoff, Indiana Research Agenda and Context-aware Elderly University, United States; The University of Tokyo, Japan; Pier Luigi Emiliani, Laura Burzagli, Toufeeq Syed Ahmed, Vanderbilt Yasushi Ikei, Tokyo Metropolitan **Caring System Using Persuasive** Francesco Gabbanini, Consiglio University, United States. Nazionale delle Ricerche (CNR), Italy. University, Japan. Engagement Yu-Chun Yen, Ching-Hu Lu, Yi A System for Creating the **Increasing Physical Activity Practical Aspects of Running** Chung Cheng, Jing-Shiang Chen, Li Content for a Multi-Sensory by Implementing a Behavioral **Experiments with Human** Chen Fu, National Taiwan University, Change Intervention using **Participants** Theater **Pervasive Personal Health** Koichi Hirota, Seichiro Ebisawa, Frank Ritter, Pennsylvania State **Investigating the Relationships** The University of Tokyo, Japan; **Record System: An Exploratory** University, United States; Jong Kim, Tomohiro Amemiya, NTT between User Capabilities and Study University of Central Florida, Corporation, Japan; Yasushi Ikei, Product Demands for Older and Hadi Kharrazi, Lynn Vincz, Indiana United States; Jonathan Morgan, Tokyo Metropolitan University, Japan. Richard Carlson, Pennsylvania State **Disabled Users** University, United States. Umesh Persad, The University of University, United States. **Interactive Exhibition with Developing Protege to Structure** Trinidad and Tobago, Trinidad Age-related Accessibility Biases **Ambience using Video Avatar Medical Report** and Tobago; Patrick Langdon, and Animation on Huge Screen Josette Jones, in Pass-face Recognition P. John Clarkson, University of Kanitha Phalakornkule, Ray Adams, Middlesex University, Hasup Lee, Yoshisuke Tateyama, *Cambridge, United Kingdom.* Tetsuro Ogi, Keio University, Japan; Tia Fitzpatrick, Sudha Iyer, Consuelo United Kingdom; Gisela In Search of Information on Zorina Ombac, Indiana University, Susanne Bahr, Florida Institute of Teiichi Nishioka, University of Tsukuba, Japan; Takuro Kayahara, Technology, United States; Ejder Websites: A Question of Age? United States. Sevgen Raif, Middlesex University, Miyagi University, Japan; Eugenius Loos, University of BioSEME: A Semantically-Kenichi Shinoda, National Museum of Amsterdam, Netherlands. United Kingdom. **Integrated Content** Nature and Science, Japan. Muntermacher – "Think and Forms of Interaction in **Management System for Cancer Towards Noninvasive Brain-**Virtual Space: Applications to Move" Interface and Interaction Research Psychotherapy and Counselling **Computer Interfaces during Design of a Motion-Based** Ionut Mihai Stancu, Indiana **Standing for VR Interactions** Serious Game for the Generation University, United States. Shagun Chawla, Nigel Foreman, Hideaki Touyama, Toyama Prefectural Middlesex University, United Kingdom. Plus **Construction of Adaptive User** University, Japan. Holger Graf, Christian Tamanini, **Lessons Learned Regarding** Interfaces for Non-Professional **Olfactory Display Using Visual** Lukas Geissler, Fraunhofer, Germany. Simulator Sickness in Older **Geriatric Care** Feedback Based on Olfactory **Adult Drivers** Videogames and Elders: a New Eric Tinsley, Jean Bandos, My Health Nicholas Cassavaugh. Sensory Map Path in LCT? Care Manager, Inc., United States. Joshua Domeyer, Richard Backs, Tomohiro Tanikawa, Aiko Nambu, Nicola D'Aquaro, Associazione Central Michigan University, United Takuji Narumi, Kunihiro Nishimura, AQUA, Italy; Dario Maggiorini, Michitaka Hirose, The University of States. Giacomo Mancuso, Laura Tokyo, Japan. Anna Ripamonti, *Universita degli* Studi di Milano, Italy. **Irradiating Heat in Virtual Environments: Algorithm and** Implementation Marco Gaudina, Andrea Brogni, Darwin Caldwell, Istituto Italiano di Tecnologia (IIT), Italy.



Parallel Sessions

VMR S086

Health and Rehabilitation Applications of VR and AR

Room: Fulton

Chair(s): Vassilis Charissis, Glasgow Caledonian University, United Kingdom.

Serious Games for the Therapy of the?Posttraumatic Stress Disorder of Children and Adolescents

Rafael Radkowski, Heinz Nixdorf Institute, Germany; Wilfried Huck, Germany; Gitta Domik, University of Paderborn, Germany;

Emotions and Clinical Trials for Virtual Telerehabilitation Application **Using Haptic Device and its** Mood and Motivation

Shih-Ching Yeh, National Central University, Taiwan; Margaret McLaughlin, Yujung Nam, Scott Sanders, Chien-Yen Chang, Bonnie Kennedy, Sheryl Flynn, Southern California, United States; Lei Li, Microsoft, United States; Shu-ya Chen, Maureen Whitford, of Southern California, United States; Younbo Jung, Nanyang Technological University, Singapore; Albert "Skip" Rizzo, University of Southern California, United States.

for Exposure Therapy to

Stefano Ricciardi, University of

System for Parkinson's Patient Rehabilitation

Todd Ingalls, Arizona State

to Strengthen Post-stroke Rehabilitation

Montpellier 2, France; Liesjet Van Dokkum, *Universite Montpellier* 1, France; Abdelkader Gouaich, LIRMM - UniversitA© Montpellier 2, Montpellier 1, France.

IDGD S087

Social Networks: Cultural Design and Analysis Methods

Room: Manatee

Chair(s): Vanessa Evers, University of Amsterdam, Netherlands; Haijie Ding, Reya Group, P.R. China.

Cross-cultural Design of a **Groupware Application for** Global Virtual Team

Rein Suadamara, Stefan Werner, Axel Hunger, University Duisburg-Essen, Germany.

The Impact of «Device» in Social **Networking: An Explorative** Study with Turkish Social **Network Site Users on the** Nature of Interactions through **Personal Computers and Smartphones**

Ozgurol Ozturk, Kerem Rizvanoglu, Sezgin Polat, Fatih Karanfil, Ozan Bakis, Galatasaray University,

On the Design of Organizational Network **Analysis Software**

Jacob Rigby, Reyagroup, United States; Haijie Ding, Reya Group, P.R.

An Investigation on the Relationship between Informal **Networks and Organizational** Performance

Haijie Ding, Reya Group, P.R. China; Jacob Rigby, Reyagroup, United

Using Embedded Technology Badges to Derive Social Networks, Patterns of **Interaction & Space Utilization** in a Corporate Headquarters

Jay Brand, Gabor Nagy, Haworth, United States; Haijie Ding, Reya Group, P.R. China.

Does Internationalization Have its Own Face in Each Country? Measuring the Internationalization of Web **Presence on Higher Education** Admission Web Pages between **USA** and Taiwan

Juihsiang Lee, China University of Technology / National Yunlin University of Science & Technology, Taiwan; Manlai You, National Yunlin University of Science and Technology, Taiwan

S088

Cultural Neuroscience and Individual Differences: Implications for Augmented Cognition

Room: Escambia

AC

Chair(s): Laura Matzen, Sandia National Laboratories, United States.

Augmenting Brain and Cognition by Aerobic Exercise

Kirk Erickson, University of Pittsburgh, United States.

The Influence of Culture on Memory

Angela Gutchess, Aliza Schwartz, Brandeis University, United States; Aysecan Boduroglu, Bogazici University, Turkey.

Computational Cultural **Neuroscience: Implications for** Augmented Cognition

Joan Chiao, Northwestern University, United States.

Individual Differences and the **Science of Human Performance**

Chris Forsythe, Robert Abbott, Susan Stevens-Adams, Stacey Hendrickson, Michael Trumbo, Michael Haass, Sandia National Laboratories, United

Cultural Neuroscience and Individual Differences: Implications for Augmented Cognition

Laura Matzen, Sandia National Laboratories, United States.

Learning in Virtual Worlds: a New Path for Supporting Cognitive Impaired Children

Laura Anna Ripamonti, Dario Maggiorini, Universita degli Studi di Milano, Italy.

A Longitudinal Study of P300 **Brain-Computer Interface and** Progression of Amyotrophic **Lateral Sclerosis**

Nathan Gates, Christopher Hauser, Eric Sellers, East Tennessee State University, United States.

DHM **S089**

Upper Extremity Safety and Health

Room: Hamilton

Chair(s): Kang Li, Rutgers University, United States; Jia-Hua Lin, Liberty Mutual Research Institute for Safety, United States.

Dynamic Power Tool Operation Model: Experienced Users vs. **Novice Users**

Jia-Hua Lin, Raymond McGorry, Chien-Chi Chang, Liberty Mutual Research Institute for Safety, United

Postural Observation of Shoulder Flexion during **Asymmetric Lifting Tasks**

Xu Xu, Chien-Chi Chang, Liberty Mutual Research Institute for Safety, United States: Gert Faber, Harvard School of Public Health, United States; Idsart Kingma, VU University Amsterdam, Netherlands; Jack Dennerlein, Harvard School of Public Health, United States.

The Upper Extremity Loading during Typing Using One, Two and Three Fingers

Jin Qin, UMass Lowell / Liberty Mutual Research Institute for Safety, United States: Matthieu Trudeau. Jack Dennerlein, Harvard School of Public Health, United States.

In Silicon Study of 3D Elbow Kinematics

Kang Li, Rutgers University, United States; Virak Tan, University of Medicine and Dentistry of New Jersey, United States.

Introducing ema (Editor for Manual Work Activities) - A **New Tool for Enhancing Accuracy and Efficiency of Human Simulations in Digital Production Planning**

Lars Fritzsche, imk automotive GmbH, United States; Ricardo Jendrusch, Wolfgang Leidholdt, Sebastian Bauer, Thomas Jackel, Attila Pirger, imk automotive GmbH, Germany.

Optimization-Based Posture Prediction for Analysis of Box Lifting Tasks

Tim Marler, Lindsey Knake, Ross Johnson, The University of Iowa, United States.

Verification of Two Models of **Ballistic Movements**

Jui-Feng Lin, Yuan Ze University, Taiwan; Colin Drury, State University of NY at Buffalo, United States.

LWL-University Clinic Hamm,

Martin Holtmann, LWL-University Clinic Hamm, Germany.

Telerehabilitation: Pilot Impact on Post Stroke Patients'

Belinda Lange, University of Carolee Winstein, *University*

AR Based Environment Mottephobia

Andrea Abate, Michele Nappi, Salerno, Italy.

An Interactive Multimedia

Wenhui Yu, Catherine Vuong, University, United States.

Mixed Reality as a Means

Ines Di Loreto, LIRMM - Universite France; Isabelle Laffont, Universite

Psychological and Physiological Evaluation for User on Interface Design

S090

Room: Union

DUXU

Chair(s): Keiko Kasamatsu, Tokyo Metropolitan University, Japan; Shin'ichi Fukuzumi, NEC Corporation,

Novel Mobile Interactions, **Services and Environments**

S091

Room: Lake

Chair(s): Arne Berger, Robert Knauf, Chemnitz University of Technology, Germany.

Clarification of Kansei Elements of Attractiveness Related to **Usability for Long Term Mobile Phone Users**

Hiroaki Kiso, NEC Corporation, Japan; Nanae Kashiwase, Keiko Kasamatsu, Tokyo Metropolitan University, Japan; Misako Yamagishi, Hideo Jingu, Kanazawa Institute of Technology, Japan; Shin'ichi Fukuzumi, NEC Corporation, Japan.

Comparisons on Kansei Factors of Attractiveness between Initial and Long Term Use of Mobile Phone

Nanae Kashiwase, Keiko Kasamatsu, Tokyo Metropolitan University, Japan; Hiroaki Kiso, Shin'ichi Fukuzumi, NEC Corporation, Japan; Misako Yamagishi, Hideo Jingu, Kanazawa Institute of Technology, Japan.

Proposal for Indices to Assess Attractiveness on Initial Use of **Mobile Phones**

Misako Yamagishi, Hideo Jingu, Kanazawa Institute of Technology, Japan; Keiko Kasamatsu, Tokyo Metropolitan University, Japan; Hiroaki Kiso, Shin'ichi Fukuzumi, NEC Corporation, Japan.

A Study on the Time Estimation **Measurement for Web Usability**

Keiji Suzuki, Mitsuhiko Karashima, Hiromi Nishiguchi, Tokai University,

Studies on Imaging Methods to Realize Effective BCI through

Mariko Funada, Hakuoh University, Japan; Yoshihide Igarashi, Gunam University, Japan; Tadashi Funada, Rikkyo University, Japan; Miki Shibukawa, Hakuoh University,

A Quantitative Evaluation on the **Software Use Experience with** Electroencephalogram

Hitoshi Masaki, Masao Ohira, Nara Institute of Science and Technology, Japan; Hidetake Uwano, Nara National College of Technology, Japan; Ken-ichi Matsumoto, Nara Institute of Science and Technology, Japan.

User Characteristic-Based Information-Providing Service for Museum with Optical See-**Through Head-Mounted Display:** Does It Evoke Enthusiasm?

Yuki Yasuma, Miwa Nakanishi, Keio University, Japan.

Moody Mobile TV: Exploring TV Clips With Personalized Playlists

Arne Berger, Robert Knauf, Maximilian Eibl, Chemnitz University of Technology, Germany; Aaron Marcus, Aaron Marcus and Associates, Inc. (AM+A), United States.

Ethnographic Research of User Behavior of Mobile Devices of China, Korea, India, and the Netherlands

Daeeop Kim, Kun-Pyo Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

An Extensible Tool for the Annotation of Images and Videos using Segmentation and Tracking

Marc Ritter, Maximilian Eibl, Chemnitz University of Technology, Germany.

The Health Machine: Mobile **UX Design that Combines** Information Design with **Persuasion Design**

Aaron Marcus, Aaron Marcus and Associates, Inc. (AM+A), United States.

Phone Use and Aging: Do Spatial **Interface Metaphors Help?**

Mark Turner, Roxane Cortes, University of Portsmouth, United Kingdom.

Mobile Web Usability: **Developing Guidelines for Mobile Web via Smart Phones** Sungmoo Hong, Sung Chul Kim, KT

Dynamic Navigation System Design for Networked Electric Vehicles

R&D Center, Korea.

Frazer McKimm, DHS, Ltd., Ireland; Manuela Galli, Veronica Cimolin, Politecnico di Milano, Italy.

EHAWC S092

Biomedical and Health Visualization HCI Design

Room: Nassau

Chair(s): Anthony Faiola, Indiana University, United States; Taowei David Wang, University of Maryland, United States.

cs and Health Aspects of Work with Com Advancing Critical Care in the ICU: A Human-Centered **Biomedical Data Visualization**

Anthony Faiola, Chris Newlon, Indiana University, United States.

A Comparative Study of Children's eHealth Design between East and West: a Case Study of a Children's Health Website in China, Taiwan, the UK, and the US

Yah-Ling Hung, Fu-Jen Catholic University, Taiwan; Catherine Stones, University of Leeds, United Kingdom.

Interactive Medical Volume Visualizations for Surgical Online Applications

Konrad Muhler, Mathias Neugebauer, Bernhard Preim, University of Magdeburg, Germany.

Emerging Triage Support Environment for Dementia Care with Camera System

Taro Sugihara, Tsutomu Fujinami, Japan Advanced Institute of Science and Technology (JAIST), Japan.

The Disability-Simulator: Simulating the Influences of Disabilities on the Usability of **Graphical User Interfaces**

Kai Breiner, Tobias Wuchner, Malte Brunnlieb, University of Kaiserslautern, Germany.

Visually Exploring Multivariate Trends in Patient Cohorts using **Animated Scatter Plots**

Alexander Rind, Donau-Universitat Krems, Austria; Wolfgang Aigner, Vienna University of Technology, Austria; Silvia Miksch, Donau-Universitat Krems, Austria; Sylvia Wiltner, Margit Pohl, Vienna University of Technology, Austria; Felix Drexler, Landesklinikum Krems, Austria; Barbara Neubauer, Nikolaus Suchy, Vienna University of Technology, Austria.

HIMI **S093**

continues >>

Practical Implications of Applied Visual Analytics

Room: Palm Beach

Chair(s): Yan Liu, Wright State University, United States; Paul Havig, Air Force Research Laboratory, United States

Visual Random Forests for **Large High Dimensional Data**

Joshua Huang, Institutes of Advanced Computing and Digital Engineering, P.R. China.

What Does It Mean to Apply Visual Analytics and How Do You Do It?

Paul Havig, Air Force Research Laboratory, United States.

Air, Space, Cyber - User Defined Operating Picture (ASC-UDOP): the Benefits and Pitfalls of Allowing the User to Tell their Own Story

Jason Moore, Air Force Research Laboratory, United States.

Multivariate Data Visualization: A Review from the Perception Aspect

Yan Liu, Wright State University, United States.

Cognitive Processes in Visual Analytics Robert Patterson, Air Force

Research Laboratory, United States.

A Classification Scheme for **Characterizing Visual Mining** Elaheh Mozaffari, Sudhir Mudur, Concordia University, Canada.



Parallel Sessions

HIMI HCI **S094 S095 S096 S097 Emotions in HCI** Industrial, Aeronautical and **Novel Interaction Methods and Learning Environments Military Applications Techniques** Room: Hamilton Room: Madison Room: Liberty Room: Escambia Chair(s): Maximiliano Romero, Chair(s): To be announced Chair(s): Nickolas Macchiarella, Politecnico di Milano, Italy. Chair(s): G Michael Poor, Bowlina Embry-Riddle Aeronautical University, Green State University, United States. **United States** A Human Interface Toolkit **Multimodal Emotion ARAMIS: Toward a Hybrid CAI Platform for Fundamental** Classification in Naturalistic User for Developing Operation Approach for Human-**Geometric Training on Support System of Complex Behavior Environment Interaction Perspective Sketching** Ding-Bang Luh, Shao-Nung Chen, **Industrial Systems with IVI-COM** Steffen Walter, Stefan Scherer, Stefano Carrino, University of Martin Schels, Michael Glodek, Friboura & College of Engineering and National Cheng Kung University, Technology David Hrabal, Miriam Schmidt, Ulm Architecture of Fribourg, Switzerland; Yangping Zhou, Yujie Dong, University, Germany; Ronald Bock, Elena Mugellini, Omar Abou Xiaojin Huang, Tsinghua University, Effects of Print-storybooks and University of Magdeburg, Germany; Khaled, College of Engineering and P.R. China; Hidekazu Yoshikawa, E-storybooks with Reading Kerstin Limbrecht, Harald Traue, Architecture of Fribourg, Switzerland; Symbio Community Forum, Japan. **Comprehension Strategies** Friedhelm Schwenker, Ulm University, Rolf Ingold, University of Fribourg, Macroergonomics in Air Traffic on Fifth Graders' Reading Switzerland. Control - The Approach of a New **Comprehension Ability Guess Who? An Interactive and** Passive Identification and Huang Hsiu-Shuang, National System Luiza Rebello, Universidade Federal **Entertaining Game-like Platform Control of Arbitrary Devices in** University of Tainan, Taiwan; for Investigating Human **Smart Environments** do Rio Grande do Norte, Brazil. Chen Shang-Liang, National Cheng **Emotions** Andreas Braun, Felix Kamieth, Kung University, Taiwan; Leou Yea-**Pilot Information Presentation** Fraunhofer, Germany. Muneeb Imtiaz Ahmad, Hassan Tariq, Mei, National Tainan Institute of on the Flight Deck: an Mehreen Saeed, National University Nursing, Taiwan; Huang Ho-Chuan, **Research of Passive Mode** Application of Synthetic Speech of Computer and Emerging Science, National Kaohsiung University of **Interaction in Pervasive** and Visual Digital Displays Pakistan; Suleman Shahid, Applied Sciences, Taiwan; Yeh Ching-Computing Nickolas Macchiarella, Jason Kring, Emiel Krahmer, Tilburg University, Yu, National University of Tainan, Yin Lu, Kejian Miao, Zhanhuai Li, Michael Coman, Tom Haritos, Netherlands. Taiwan; Chen Yun-Yao, National Northwestern Polytechincal University, Zoubair Entezari, Embry-Riddle Cheng Kung University, Taiwan; **Adaptive Machine Learning** P.R. China; Ke Wei, Shaanxi Provincial Aeronautical University, United States. Elaine Chen, National University **Approach for Emotional Email** Tourism Institute, P.R. China. Multimodal Threat Cueing in of Tainan, Taiwan; Tseng Ya-Ying, Classification Scratchable Devices: User-Simulated Combat Vehicle with National Changhua University of K. Karthik, R. Ponnusamy, AVIT -**Friendly Programming for Tactile Information Switching** Education, Taiwan. Vinayaka Missions University, India. **Household Appliances** between Threat and Waypoint **Exploring Children's Toward Adapting Interactions** Jordan Ash, Monica Babes, Indication Requirements for the Graphic by Considering User Emotions Gal Cohen, Sameen Jalal, Patrik Lif, Per-Anders Oskarsson, **Design of the WebOPAC** Sam Lichtenberg, Michael Littman, and Capabilities Bjorn Lindahl, Johan Hedstrom, Tengku Siti Meriam Tengku Wook, Idoia Cearreta, Nestor Garay-Vitoria, Vukosi Marivate, Phillip Quiza, Jonathan Svensson, Swedish Defence National University of Malaysia, University of the Basque Country, Blase Ur, Emily Zhang, Rutgers Research Agency, FOI, Sweden. Malaysia; Siti Salwah Salim, University, United States. Spain. **Experimental Investigation** University of Malaya, Malaysia. Intentionality in Interacting **Introducing Animatronics to** of Misuse and Disuse in Using A Web-based Learning **HCI: Extending Reality-Based** with Companion Systems - an **Automation System Environment to Support** Empirical Approach Akihiro Maehigashi, Kazuhisa Miwa, Chemistry G Michael Poor, Bowling Green State Hitoshi Terai, Nagoya University, Dietmar Rosner, Rafael Friesen, Candice Adams, Cheryl Seals, Auburn University, United States; Rob Jacob, Mirko Otto, Julia Lange, Japan; Kazuaki Kojima, Waseda University, United States. Matthias Haase, Jorg Frommer, Tufts University, United States. University, Japan; Junya Morita, University of Magdeburg, Germany. **Creating a New Context for** Japan Advanced Institute of Science **A Method of Multiple Odors Activity in Blended Learning** and Technology (JAIST), Japan; Affective Videogame. The **Detection and Recognition** Yugo Hayashi, Ritsumeikan University, **Environments: Engaging the Problem of Wearability and** Dong-Kyu Kim, Yong-Wan Roh, **Twitchy Fingers** Kwang-Seok Hong, Sungkyunkwan Comfort Jayne Klenner-Moore, King's College, Andrea Bonarini, Fiammetta Costa, University, Korea. **ICT-enabled Business Process** United States. Maurizio Garbarino, Re-engineering: International **Dancing Skin: An Interactive** Comparison of a 3-D expression Matteo Matteuci, Comparison **Device for Motion** Maximiliano Romero, system and a Standardized IQ Sheng-Han Chen, Teng-Wen Chang, Ya-Ching Lee, National Sun Yat-Simone Tognetti, Politecnico di Test for Children sen University, Taiwan; Pin-Yu Chu, National Yunlin University of Science Milano, Italy. Akihiro Suzuki, Masayuki Wajima, National Chengchi University, Taiwan; and Technology, Taiwan; Sheng-Hsien-Lee Tseng, National Sun Yat-Takashi Kawakami, Tetsuo Okazaki, The Effect of Physical cheng Shi, MingDao University, Hokkaido Institute of Technology, sen University, Taiwan. Taiwan. **Embodiment of an Animal Robot on Affective Prosody** The e-progression in SEs' Karl Sandberg, Olof Wahlberg, Recognition Myounghoon Jeon, Fredrik Hakansson, Mid Sweden Infantdani Rayan, Georgia Institute of University, Sweden. Technology, United States.

UAHCI EPCE S098 S099 S100 S101 Cognitive Issues in Interaction Smart Products and Services Designing Interactions for the Universal Accessibility in Ageing Society Documents Room: Fulton Room: Dixie Room: Manatee Chair(s): Kevin Tseng, Chang Gung **Computer Interaction** Chair(s): Katrin Fischer, University University, Taiwan. Chair(s): Carlos Duarte, University of Chair(s): Georgios Kouroupetroglou, of Applied Sciences Northwestern University of Athens, Greece. Lisbon, Portugal. Switzerland, Switzerland. **Engineering Psychology and Cognitive Subitizing-Counting Analogue** Universal Access in Human-Chetoe.com: An Integrated Web **Virtual Reality for AAL Services** Web Application for Analysis, Manipulation and Generation of Observed in a Fast Multi-tapping 2.0 Service for Automatically Interaction Design and **Travel Planning Evaluation Accessible PDF Documents** Task Hsien-Tsung Chang, Zi-Ning Liu, Pilar Sala, ITACA-TSB Universidad Hiro-Fumi Yanai, Kyouhei Kurosawa, Alireza Darvishy, Hans-Peter Hutter, Kousuke Takahashi, Ibaraki University, Yi-Ting Wang, Che-Wen Chang, Chia-Politecnica de Valencia, Spain: Oliver Mannhart, Zurich University of An Hung, Chang Gung University, Felix Kamieth, Fraunhofer, Japan. Applied Sciences, Switzerland. Germany; Juan Bautista Mocholi, **Display System for Advertising Metagnostic Deductive** Juan Carlos Naranjo, ITACA-TSB **Design and Development a Image with Scent and Question Answering with** Universidad Politecnica de Valencia, **Social Networks Platform for Psychological Effect Explanation from Texts** Spain. Keisuke Tomono, Wartburg College, **Older People** John Kontos, Joseph Armaos, United States; Hiroki Wakatsuki, Chien-Lung Hsu, Kevin Tseng, Chin **Investigating the Accessibility** Ioanna Malagardi, University of of Program Selection Menus of a Shigeki Kumazawa, Akira Tomono, Lung Tseng, Boo Chen Liu, *Chang* Athens, Greece. Tokai University, Japan. Gung University, Taiwan. Digital TV Interface Collaborative Editing for All: the Pradipta Biswas, Patrick Langdon, Viability of Mobile Devices for An Investigation into a **Google Docs Example** University of Cambridge, United **Training Purposes** Personalised and Web2.0-Based Giulio Mori, Maria Claudia Buzzi, Kingdom. Shehan Sirigampola, **Search Engine Interface** Marina Buzzi, Barbara Leporini, Tsai-Hsuan Tsai, Hsien-Tsung Chang, **Self-adapting TV Based** Steven Zielinski, Glenn Martin, Consialio Nazionale delle Ricerche Jason Daly, Jaime Flores, University of **Applications** (CNR), Italy; Victor Penichet, Shih-Ting Huang, Chang Gung Central Florida, United States. University of Castilla-La Mancha, University, Taiwan. Daniel Costa, Carlos Duarte, University of Lisbon, Portugal. Spain. **Consideration of Human Factors Connecting Communities:** for Prioritizing Test Cases for the **Adapting Multimodal Fission to Acoustic Modelling of Dialogue Designing a Social Media User's Abilities Elements for Document Software System Test Platform for Older Adults Living** Christoph Malz, University of David Costa, Carlos Duarte, Accessibility in a Senior Village University of Lisbon, Portugal. Pepi Stavropoulou, Stuttgart, Germany; Kerstin Sommer, Tsai-Hsuan Tsai, Hsien-Tsung Chang, Technische Universitat Munchen. Chang Gung University, Taiwan; Dimitris Spiliotopoulos, **Adaptive Multimodal Fusion** Germany; Peter Gohner, University Georgios Kouroupetroglou, Alice May-Kuen Wong, Chang-Gung Pedro Feiteira, Carlos Duarte, of Stuttgart, Germany; Birgit Vogel-University of Athens, Greece. Memorial Hospital, Taiwan; Tsung-University of Lisbon, Portugal. Heuser, Technische Universitat Fu Wu, Chang Gung University, Readable Image for the Visually The Effects of Font Size and Page Munchen, Germany. Taiwan. **Impaired** Presentation Method of E-book **Estimation of Driver's Fatigue** A New Structure of Online Sunil Kumar Kopparapu, TCS **Reading on Small Screens for Based on Steering Wheel Angle** Innovation Labs - Mumbai, India. **Learning Environment to** Older adults Qichang He, Wei Li, Xiumin Fan, **Support the Professional** Wang-Chin Tsai, Yi-Lin Lo, Ya-**Survey: Improving Document** Shanghai Jiaotong University, P.R. Learning Tzu Chang, Chang-Franw Lee, Accessibility from the Blind and China. Wenzhi Chen, Yu-Hao Lin, Chang National Yunlin University of Science **Visually Impaired User's Point** Gung University, Taiwan. and Technology, Taiwan. of View A Telehealthcare System to Care Martin Dorigo, University of Plymouth, United Kingdom; for Older People Suffering from Bettina Harriehausen-Muhlbauer, **Metabolic Syndrome** Ingo Stengel, University of Applied Kevin Tseng, Chien-Lung Hsu, Sciences Darmstadt, Germany; Chang Gung University, Taiwan; Paul Dowland, University of Plymouth, Yu-Hao Chuang, National Central United Kingdom. University, Taiwan. From «Reading» Math to «Doing» Math: A New Direction in Non-Visual Math Accessibility Nancy Alajarmeh, Enrico Pontelli, Tran Son, New Mexico State University, United States.

n and Global Dev

Parallel Sessions

VMR S102

Developing Virtual Environments (II)

Room: Empire

Chair(s): Jose San Martin, Universidad Rey Juan Carlos, Spain.

Enhancing Marker-based AR Technology

Jong-Hoon Seo, Jinwook Shim, Ji-Hye Choi, James Park, Tack-Don Han, Yonsei University, Korea.

Semi Autonomous Camera Control in Dynamic Virtual Environments

Marcel Klomann, Jan-Torsten Milde, Fulda University of Applied Sciences,

Study of Optimal Behavior in Complex Virtual Training Systems

Jose San Martin, Universidad Rey Juan Carlos, Spain.

LIS3D: Low-cost 6DOF Laser Interaction for outdoor Mixed Reality

Pedro Santos, Hendrik Schmedt, Bernd Amend, Fraunhofer, Germany; Philip Hammer, Deck 13 GmbH, Germany; Ronny Giera, Semantis Information Builders GmbH, Germany; Elke Hergenroether, **University of Applied Sciences** Darmstadt, Germany; Andre Stork, Technical University of Darmstadt,

Mechatronic Prototype for Rigid Endoscopy Simulation

Byron Perez-Gutierrez, Camilo Ariza Zambrano, Juan Camilo Hernandez, Nueva Granada Military University, Colombia.

IDGD S103

HCI for Economic Development: from HCI4D to the PRC

Room: Jackson

Chair(s): Emilie Gould, State University of NY at Albany, United States.

Working toward Women's **Economic Empowerment:** Using Information and Communication Technology in Developing Areas to Market **Traditional Crafts**

Melissa Secore Levis, Rensselaer Polytechnic Institute, United States.

Seeing the World in 5 **Dimensions - More or Less?**

Emilie Gould, State University of NY at Albany, United States.

Culture-Centered Design: Culture Audit of Screen Designs for Educational Software in Saudi Arabia

Aaron Marcus, Aaron Marcus and Associates, Inc. (AM+A), United States; Emilie Gould, State University of NY at Albany, United States; Laurie Wigham, Aaron Marcus and Associates, Inc. (AM+A), United States.

Designing for Social Commerce Experience as Cultural Consumption

Huatong Sun, Miami University, United States.

Sub-Saharan Africa: Failures, Successes, and the Implementation of ICTS

Vanessa Maestas, Rensselaer Polytechnic Institute, United States.

Human-Computer Interaction as an instrument for strengthening Culture and Language of a Colombian **Native Community**

Santiago Ruano Rincon, Annabelle Boutet, Gilles Coppin, Telecom-Bretagne, France; Franck Poirier, Universite de Bretagne-Sud, France; Tulio Rojas Curieux, Universidad del Cauca, Colombia.

Toward the new Sullivan Principles in the Information Age: Conflicts and Challenges of Multinational Information **Technology Companies in Asian** Countries

Byul Shin, Rensselaer Polytechnic Institute, United States.

OCSC S104

Interacting with Wikis and **Blogs**

Room: Park

Communities and Social

Online (

Chair(s): Mark Zachry, University of Washington, United States

Interpreting User-Generated Content: What Makes a Blog Believeable?

Rahayu Ahmad, Wayne Lutters, UMBC, United States.

Mining Social Relationships in **Micro-blogging Systems**

Qin Gao, Qu Qu, Xuhui Zhang, Tsinghua University, P.R. China.

An Exploratory Study of **Navigating Wikipedia** Semantically: Model and Application

I-Chin Wu, Yi-Sheng Lin, Fu-Jen Catholic University, Taiwan; Che-Hung Liu, National University of Tainan, Taiwan.

Collaborative Sensemaking during Admin Permission **Granting in Wikipedia**

Katie Derthick, Patrick Tsao, Travis Kriplean, Alan Borning, Mark Zachry, David McDonald, University of Washington, United

Impact of Blog Design Features on Blogging Satisfaction - An Impression Management Perspective

Wee-Kek Tan, Hock-Hai Teo, National University of Singapore, Singapore.

S105

AugCog in Training and Education

Room: Sarasota

Chair(s): Roy Stripling, Office of Naval Research, United States.

EEG Knows Best: Predicting Future Performance Problems for Targeted Training

Gwenn Campbell, Christine Belz, Naval Air Warfare Center Training Systems Division, United States; Charles Scott, Kaegan, United States; Phan Luu, Electrical Geodesics, Inc., United States.

From Sound to Meaning: Changes in EEG Source-Localized Brain Activity with Foreign-Language Training

Catherine Poulsen, Phan Luu, Colin Davey, Don Tucker, Joey Nelson, Electrical Geodesics, Inc., United States.

Ongoing Efforts Towards Developing a Physiologically **Driven Training System**

Joe Coyne, Ciara Sibley, Naval Research Laboratory, United States; Carrly Baldwin, George Mason University, United States.

Neuroergonomic Assessment of Simulator Fidelity in an Aviation **Centric Live Virtual Constructive** (LVC) Application

Tom Schnell, The University of Iowa, United States; Alex Postnikov, Rockwell Collins, United States: Nancy Hamel, Advanced Infoneering, Inc., United States.

Interactive Neuro-Educational Technologies (I-NET): **Development of a Novel Platform for Neurogaming**

Giby Raphael, Adrienne Behneman, Veasna Tan, Nicholas Pojman, Chris Berka, Advanced Brain Monitoring, Inc., United States.

Improving Students' Meta-Cognitive Skills within **Intelligent Educational Systems:** A Review

Alejandro Pena-Ayala, WOLNM / IPN / Osaka University, Mexico; Michiko Kayashima, Tamagawa University, Japan; Riichiro Mizoguchi, Osaka University, Japan; Rafael Dominguez, ESIME-ZIPN, Mexico

Considering Cognitive Traits of University Students with Dyslexia in the Context of a **Learning Management System**

Carolina Mejia Corredor, *University* of Girona, Spain; Alicia Diaz Megona, Juan Jimenez Gonzalez, Universidad de La Laguna, Spain; Ramon Fabregat, University of Girona,

DHM **S106**

Cognitive Modelling and AR/ VR based Support Technologies for Future Home and Work **Environments**

Room: Union

Chair(s): Bo Hoege, Jeronimo Dzaack, Technische Universitat Berlin, Germany.

Implicit Human-Computer **Interaction by Posture** Recognition

Enrico Maier, Technische Universitat Berlin, Germany.

Incorporating Motion Data and Cognitive Models in IPS

Michael Beckmann, Jeronimo Dzaack, Technische Universitat Berlin, Germany.

Multimodal, Touchless Interaction in Spatial **Augmented Reality** Environments

Monika Elepfandt, Marcelina Sunderhauf, Technische Universitat Berlin, Germany.

Less Driving While Driving? An Approach for the Estimation of Effects of Future Vehicle **Automation Systems on Driver** Rehavior

Bertram Wortelen, Andreas Ludtke, OFFIS – Institute for Information Technology, Germany.

A Model of Shortcut Usage in **Multimodal Human-Computer** Interaction

Stefan Schaffer, Technische Universitat Berlin, Germany; Robert Schleicher, Sebastian Moller, Deutsche Telekom Laboratories, Germany.

A Context-Aware Adaptation **System for Spatial Augmented** Reality

Anne Wegerich, Matthias Rotting, Technische Universitat Berlin, Germany.

Multimodal User Interfaces in IPS²

Ulrike Schmuntzsch, Matthias Rotting, Technische Universitat Berlin, Germany.

An Empirical Study of Disassembling Using an **Augmented Vision System**

Barbara Odenthal, Marcel Mayer, Wolfgang Kabuss, Bernhard Kausch, Christopher Schlick, RWTH Aachen University, Germany.

HCD S107

Towards a Human-Centred Web

Room: Lexington

Chair(s): To be announced

An Experimental Study of Home Page Design on Green Electronic **Products Web Site**

Fei-Hui Huang, Oriental Institute of Technology, Taiwan.

Culturally Situated Design Tools: Animated Support Tools for Mathematics

Albanie Bolton, Cheryl Seals, Auburn University, United States.

Development of Web-Based Participatory Trend Forecasting System: urtrend.net

Eui-Chul Jung, Yonsei University, Korea; Soon-Jong Lee, HeeYun Chung, BoSup Kim, HyangEun Lee, YoungHak Oh, YounWoo Cho, WoongBae Ra, HyeJin Kwon, June-Young Lee, Seoul National University, Korea.

Exploring the Impact of Cultures on Web Usability Test

Hsiu Ching Hsieh, National Yunlin University of Science and Technology, Taiwan.

Management of Weight-Loss: Patients' and Healthcare Professionals' Requirements for an E-health System for Patients

Anita Das, Arild Faxvaag, Dag Svanaes, Norwegian University of Science and Technology, Norway.

SemaZoom: Semantics Exploration by Using a Layerbased Focus and Context Metaphor

Dirk Burkhardt, Kawa Nazemi, Matthias Brever, Christian Stab. Arjan Kuijper, Fraunhofer, Germany.

Extraction of User Interaction **Patterns for Low-usability Web Pages**

Toshiya Yamada, The Graduate University for Advanced Studies, Japan; Noboru Nakamichi, Nanzan University, Japan; Tomoko Matsui, The Institute of Statistical Mathematics, Japan.

DUXU S108

ISO Usability Standards and **Enterprise Software**

Room: Taylor

Chair(s): Anna Wichansky, Oracle, United States.

S109 User Experience and the Web

Room: Jade

Chair(s): Abbas Moallem, San Jose State University, United States.

Experience, and Usability ISO 25062 Usability Test Planning for a Large Enterprise **Applications Suite**

Sean Rice, Jatin Thaker, Anna Wichansky, Oracle, United States.

ISO Standards for Standard Software: Accountability, **Customer Expectations and** Reality

Ulrich Kreichgauer, SAP AG, Germany.

ISO Standards and Enterprise Software: A Case Study Using SUMI and SUS in an **International Sale**

Joyce Ohgi, Jeff Sauro, Oracle, United States.

ISO 20282: Is a Practical Standard for the Usability of **Consumer Products Possible?**

Nigel Bevan, Professional Usability Services, United Kingdom; Simon Raistrick, Foviance, United Kingdom.

ISO Usability Standards and Enterprise Software: A Management Perspective

Clemens Lutsch, Microsoft Deutschland GmbH, Germany.

Usability Standards across the Development Lifecycle Mary Theofanos, Brian Stanton,

National Institute of Standards and Technology, United States.

Did You Forget Your Password? Abbas Moallem, San Jose State

University, United States.

A Solution to Revisitation Using **Organic Bookmark Management**

Siu-Tsen Shen, National Formosa University, Taiwan; Stephen Prior, Middlesex University, United Kingdom; Kuen-Meau Chen, National United University, Taiwan.

Exploring Cultural Variation in Eye Movements on a Web Page between Americans and Koreans

Chang Woo Yang, Valdosta State University, United States.

Trails - An Interactive Web **History Visualization and Tagging Tool**

Wenhui Yu, Todd Ingalls, Arizona State University, United States.

HCI Browser: A Tool for Administration and Data Collection for Studies of Web Search Behaviors

Robert Capra, University of North Carolina at Chapel Hill, United States.

Measuring Cultural Markers in **Arabic Government Websites** Using Hofstede's Cultural Dimensions

Nouf Khashman, Andrew Large, McGill University, Canada.

Enhancing Interactions of Self-Help Groups in Africa through Mobile Solutions: Design Guidelines

Mokeira Masita-Mwangi, Faith Ronoh-Boreh, Patricia Aruwa, Nokia Research Center, Kenya.

Alternative Workstations may be

New but are they Better?

Alan Hedge, Cornell University, United

New Ways of Working: A Proposed Framework and Literature Review

Merle Blok, Liesbeth Groenesteijn, Christiaan Van den Berg, Peter Vink, TNO, Netherlands.

Nonvisual Effects of Led Coloured Ambient Lighting on Well-Being and Cardiac **Reactivity: Preliminary Findings**

Michel Varkevisser, Thales Research & Technology, Netherlands; Roy Raymann, Philips Research Europe, Netherlands; David Keyson, Delft University of Technology, Netherlands.

The Effect of Vibrotactile **Feedback on Novice Older Adults in Target Selection Tasks** Bora UZUM, Mehmet Gokturk, Gebze Institute of Technology, Turkey.

Effects of Meeting Room Interior Design on Team Performance in a Creativity Task

Elsbeth Korte, Lottie Kuijt, Rick Van der Kleij, TNO, Netherlands.

HIMI **S111 Kansei Value Creation**

Room: Nassau

Human Interface and the Management of Information

Chair(s): Michiko Ohkura, Shibaura Institute of Technology, Japan.

Designing the Service Engineering in the Present Day

S112

Room: Sarasota

Chair(s): Sakae Yamamoto, Tokyo University of Science, Japan; Hirohiko Mori, Tokyo City University,

S113 Visualisation Methods,

Techniques and Applications Room: Jackson

Chair(s): Jan Stelovsky, University of Hawaii at Manoa, United States.

Emotion Recognition Using Biological Signal in Intelligent Space

Kanlaya Rattanyu, Makoto Mizukawa, Shibaura Institute of Technology,

Auditory Feature Parameters for Music Based on Human Auditory Processes

Masashi Murakami, Toshikazu Kato, Chuo University, Japan.

Surprise Generator for Virtual KANSEI Based on Human Surprise Characteristics

Masaki Zenkyou, Ken Tomiyama, Chiba Institute of Technology, Japan.

Virtual Interaction Between Human and Fabric

Shigeru Inui, Akihiro Yoneyama, Yosuke Horiba, Shinshu University,

Study on Evaluation of Kawaii **Colors using Visual Analog Scale**

Tsuvoshi Komatsu, Michiko Ohkura, Shibaura Institute of Technology,

Petimo: Sharing Experiences through Physically Extended **Social Networking**

Nimesha Ranasinghe, Owen Noel Newton Fernando, Adrian David Cheok, National University of Singapore, Singapore.

Ontological Approach to Aesthetic Feelings: A **Multilingual Case of Cutism**

Akifumi Tokosumi, Fumina Teng, Tokyo Institute of Technology, Japan.

Supporting of Requirements Elicitation for Ensuring Services of Information Systems Used for

Yuki Terawaki, The University of Tokyo / Hosei University, Japan.

Privacy Concern in Ubiquitous Society and Research on **Consumer Behavior**

Yumi Asahi, Tokyo University of Science, Japan.

Service Science Method to **Create Pictograms Referring to** Sign Languages

Naotsune Hosono, Oki Consulting Solutions Co., Ltd., Japan; Hiromitsu Inoue, Chiba Prefectural University of Health Sciences, Japan; Hiroyuki Miki, Oki Electric Ind. Co., Ltd., Japan; Michio Suzuki, Association of Architectural of Japanese DEAF (AAJD), Japan; Yuji Nagashima, Kogakuin University, Japan; Yutaka Tomita, Keio University, Japan; Sakae Yamamoto, Tokyo University of Science, Japan.

Evaluation of Disaster Information Management **System Using Tabletop User Interfaces**

Hidemi Fukada, Otaru University of Commerce, Japan; Kazue Kobayashi, Aki Katsuki, NTT COMWARE CORPORATION, Japan; Naotake Hirasawa, Otaru University of Commerce, Japan.

Study on Accessibility of Urgent Message Transmission Service in a Disaster

Shunichi Yonemura, NTT Corporation, Japan; Kazuo Kamata, Utsunomiya University, Japan.

Disaster Information Collecting/ Providing Service for Local Residents

Yuichi Takahashi, Tokyo University of Science, Japan; Daiji Kobayashi, Chitose Institute of Science and Technology, Japan; Sakae Yamamoto, Tokyo University of Science, Japan.

A Study on Selection Ability in the 3D Space by the Finger

Makoto Oka, Yutaro Ooba, Hidetaka Kuriiwa, Ryuta Yamada, Hirohiko Mori, Tokyo City University, Japan.

VizKid: A Behavior Capture and Visualization System of Adult-Child Interaction

Grace Shin, Taeil Choi, Agata Rozga, Mario Romero, Georgia Institute of Technology, United States.

Visualizing Programs on Different Levels of Abstractions Jo-Han Wu, Jan Stelovsky, University

of Hawaii at Manoa, United States.

VICPAM: A Visualization Tool for **Examining Interaction Data in Multiple Display Environments** Roshanak Zilouchian Moghaddam, Brian Bailey, *University of Illinois at*

Visualizing Stakeholder **Concerns with Anchored Map** Takanori Ugai, Fujitsu Laboratories,

Ltd., Japan.

Urbana-Champaign, United States.

Peer-to-Peer File Sharing Communication Detection using Spherical SOM Visualization for **Network Management**

Satoshi Togawa, Shikoku University, Japan; Kazuhide Kanenishi, Yoneo Yano, The University of Tokushima, Japan.

Explicit Modeling and Visualization of Imperfect Information in the Context of **Decision Support for Tsunami** Early Warning in Indonesia

Monika Friedemann, Ulrich Raape, Sven Tessmann, Thorsten Schoeckel, Christian Strobl, German Aerospace Center (DLR), Germany.

Performance Visualization for Large-Scale Computing Systems: A Literature Review

Qin Gao, Xuhui Zhang, P.L. Patrick Rau, Tsinghua University, P.R. China; Anthony Maciejewski, Howard Jay Siegel, Colorado State University, United States.

HCI **S114 S115 S116 S117** Signal and image processing for **Cognitive and Psychological Novel Approaches to Usability Multimodal Interaction** HCI (II) Issues in HCI (I) Room: Park Room: Lexington Room: Liberty Room: Madison Chair(s): Christophe Kolski, University Chair(s): Pedro Campos, University of Chair(s): Ping Guo, Beijing Normal Chair(s): Satoru Inoue, Electronic of Valenciennes, France. Madeira and INESC-ID, Portugal University, P.R. China. Navigation Research Institute, Japan Towards A Cognitive-Based User An Image Segmentation Improving the Usability of **Exploiting New Interaction Hierarchical Representations** Method for Chinese Paintings by **Techniques for Disaster Control Interface Design Framework Combining Deformable Models Development** for Interactively Labeling Large Management Using Multitouch-, Natrah Abdullah, Wan Adilah Wan with Graph Cuts **Image Data Sets** Tangible- and Pen-based-Ning He, Beijing Union University, Adnan, Nor Laila Md Noor, Universiti Julia Moehrmann, University Interaction P.R. China; Lu Ke, Graduate University Teknologi MARA, Malaysia. of Stuttgart, Germany; Karsten Nebe, Florian Klompmaker, Stefan Bernstein, University of of Chinese Academy of Sciences, P.R. University of Paderborn, Germany; The Effects of Personality Type Applied Sciences Mittweida, Germany; China. Helge Jung, Siemens IT Solutions in User-Centered Appraisal Thomas Schlegel, *Technische* and Services GmbH, Germany; A Novel Parallel Clustering Systems Universitat Dresden, Germany; Holger Fischer, University of **Algorithm Based on Artificial** Zacharias Lekkas, Nikos Tsianos, Gunter Werner, University of Applied Paderborn, Germany. University of Athens, Greece; Immune Network Using nVidia Sciences Mittweida, Germany; **Windows Positioning System:** Panagiotis Germanakos, **CUDA Framework** Gunther Heidemann, University of University of Cyprus, Cyprus; **Aural Assistance Environment** Ruiyi Luo, Qian Yin, Beijing Normal Stuttgart, Germany. Constantinos Mourlas, University University, P.R. China. for the Aging in Windows **Towards an Automatic Analysis** of Athens, Greece; George Samaras, Navigation Image Skeletonization Based on of Interaction Data for HCI University of Cyprus, Cyprus. Chi Chu, China University of **Curve Skeleton Extraction Evaluation - Application to a** Technology, Taiwan. Finding a Relationship between Xiaoyan Hu, Bo Sun, Huiqin Zhao, **Transport Network Supervision Internet Anxiety and Human** Bin Xie, Hao Wu, Beijing Normal **Needle Insertion Simulator with** System **Behavior Haptic Feedback** University, P.R. China. Selem Charfi, Houcine Ezzedine, Santosh Kalwar, Kari Heikkinen, Seungjae Shin, University of Science **Shape –based Human Actions** Christophe Kolski, University of Jari Porras, Lappeenranta University & Technology / Korea Institute of **Recognition in Videos** Valenciennes, France; Faouzi Moussa, of Technology, Finland. Science and Technology (KIST), Nitish Amraji, Lin Mu, Universite de Tunis, Tunisia. Korea: Wanioo Park, Hyunchul Cho, Mariofanna Milanova, University of **Fuzzy Linguistic Modelling Usability of Nomadic User** Sehyung Park, Laehyun Kim, Korea Cognitive/Learning Styles for Arkansas at Little Rock, United States. Interfaces *Institute of Science and Technology* Adaptation through Multi-level Validating Video Analytics in Walter Dees, Philips Research Labs, (KIST), Korea. Granulation **Mission Critical Applications** Netherlands. An Assistive Bi-Modal User Ilham Huseyinov, European University Stephen Mitchell, Sukhpreet Gill, **Key Requirements for** of Lefke, Turkey. Interface Integrating Multi-Steve Loveless, Pelco, United States; Integrating Usability **Channel Speech Recognition** Brent Auernheimer, California State Eye-movement-based **Engineering and Software** and Computer Vision University, Fresno, United States. **Instantaneous Cognition Model** Engineering Alexey Karpov, Andrey Ronzhin, for Non-verbal Smooth Closed A Detection Method of Basic Karsten Nebe, University of Irina Kipyatkova, SPIIRAS, Russia. **Figures** Mouth Shapes from Japanese Paderborn, Germany; Volker Paelke, **Experimental Study on** Yuzo Takahashi, Shoko Koshi, **Utterance Images** Institut de Geomatica, Spain. Hiroshima City University, Japan. **Appropriate Reality of Agents** Tsuyoshi Miyazaki, Kanagawa Inherent Usability Problems as a Multi-modal Interface for Institute of Technology, Japan; **Associating Learners' Cognitive** in Interactive Voice Response **Human-Computer Interaction** Toyoshiro Nakashima, Sugiyama Style with their Navigation Systems Kaori Tanaka, Tatsunori Matsui, Jogakuen University, Japan; **Behaviors: A Data-Mining** Hee-Cheol Kim, Deyun Liu, Kazuaki Kojima, Waseda University, Naohiro Ishii, Aichi Institute of Approach Ho-Won Kim, Inje University, Korea. Japan. Technology, Japan. Yung-Chi Hsu, Sherry Chen, National A Design Science Framework for **GMM Parameter Estimation** Central University, Taiwan. **Dynamic Queries with Relevance Designing and Assessing User** by Means of EM and Genetic **Feedback for Content Based Extraversion and Computer Algorithms** Experience **Image Retrieval** Game Play: Who Plays What Sisira Adikari, Craig McDonald, Sergey Zablotskiy, Teerat Pitakrat, Murat Birinci, Esin Guldogan, Games? John Campbell, *University of* Kseniya Zablotskaya, Moncef Gabbouj, Tampere University Xiaowen Fang, Miaogi Zhu, DePaul Canberra, Australia. Wolfgang Minker, Ulm University, of Technology, Finland. University, United States. Germany. **Project and Development of** Taking Turns in Flying With a ErgoColn version 2.0 Marcelo Morandini, Virtual Wingman Roberto Rodrigues, Marcus Cerrato, Pim Nauts, Tilburg University, Marcos Chaim, State University of Sao Netherlands; Willem Van Doesburg, Paulo, Brazil. TNO, Netherlands; Emiel Krahmer, Tilburg University, Netherlands; Anita Cremers, TNO, Netherlands.



Parallel Sessions

Virtual and Mixed Reality

EPCE S118

Situation Awareness and Transportation Safety

Room: Escambia

Chair(s): Paul Salmon, Monash University, Australia.

The Effects of Visual and **Cognitive Distraction on Driver Situation Awareness**

Meghan Rogers, Yu Zhang, David Kaber, North Carolina State University, United States; Yulan Liang, Liberty Mutual Research *Institute for Safety, United States;* Shruti Gangakhedkar, North Carolina State University, United States.

Cognitive Compatibility of **Motorcylists and Drivers**

Experienced and Novice Driver Situation Awareness at Rail Level Crossings: An Exploratory On-road Study

Paul Salmon, Michael Lenne, Kristie Young, Monash University, Australia; Guy Walker, Heriot Watt

with Advanced Measurement Techniques

Kelly Hale, Design Interactive, Inc., United States; Robert Breaux, Private Consultant, United States.

A Formalism for Assessing the **Situation Awareness of Pilots**

Steven Landry, Chittayong Surakitbanharn, Purdue University, United States.

competencies of train dispatchers in the Swiss Federal Railway

Sciences Northwestern Switzerland, Switzerland.

UAHCI

S119

BCI: Application Interfaces and Environments

Room: Lake

Chair(s): Anton Nijholt, University of Twente, Netherlands.

S120

Affective Technology through **Affective Management**

Room: Dixie

Chair(s): Hiroyuki Umemuro, Tokyo Institute of Technology, Japan.

VMR **S121**

VR in Products Design and Assembly

Room: Jade

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

Guy Walker, Heriot Watt University, United Kingdom; Neville Stanton, University of Southampton, United Kingdom; Paul Salmon, Monash University, Australia.

University, United Kingdom.

Enhancing Pilot Training

Management of cognitive

Katrin Fischer, University of Applied

Social Environments, Mixed Communication and Goal-**Oriented Control Application Using a Brain-Computer** Interface

Gunter Edlinger, Christoph Guger, g.tec medical engineering GmbH and Guger Technologies OG, Austria.

BCIs in Multimodal Interaction and Multitask Environments: Theoretical Issues and Initial Guidelines

Jan Van Erp, Marieke Thurlings, Peter Werkhoven, Anne-Marie Brouwer, TNO, Netherlands.

Towards Standardized User and Application Interfaces for the **Brain Computer Interface**

Paul McCullagh, Melanie Ware, Alexander McRoberts, Gaye Lightbody, Maurice Mulvenna, Gerry McAllsister, University of Ulster, United Kingdom; Jose Luis Gonzalez, Vicente Cruz Medina, Telefonica, Spain.

Perspectives on User Experience Evaluation of Brain-Computer Interfaces

Bram Van de Laar, Hayrettin Gurkok, Danny Plass - Oude Bos, Femke Nijboer, Anton Nijholt, University of Twente, Netherlands.

EEG-based Personalized Digital Experience

Olga Sourina, Yisi Liu, Qiang Wang, Minh Khoa Nguyen, Nanyang Technological University, Singapore.

Online BCI Implementation of High-frequency Phase **Modulated Visual Stimuli**

Danhua Zhu, Gary Garcia Molina, Vojkan Mihajlović, Ronald Aarts, Philips Research Europe, Netherlands.

Affective Technology through Affective Management

Hiroyuki Umemuro, Tokyo Institute of Technology, Japan.

Do Hedonic and Eudaimonic Well-being of Online Shopping Come from daily Life **Experience?**

Jia Zhang, Hiroyuki Umemuro, Tokyo Institute of Technology, Japan.

Affective Climate of Workplace and its Contributing Factors

Waratta Authayarat, Hiroyuki Umemuro, Tokyo Institute of Technology, Japan.

General Factors that Elicit Human Affect Across Countries

Qin Tang, Hiroyuki Umemuro, Tokyo Institute of Technology, Japan.

Life in Affective Reality: **Identification and Classification** of Smiling in Early Childhood Fumito Kawakami,

Akifumi Tokosumi, Tokyo Institute of Technology, Japan.

Tactile Hand Gesture Recognition through Haptic **Feedback for Affective Online** Communication

Hae Youn Joung, Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

Affective Technology for Older Adults: Does Fun Technology Affect Older Adults and Change their Lives?

Ryoko Fukuda, Keio University, Japan.

5-finger Exoskeleton for **Assembly Training in Augmented Reality**

Siam Charoenseang, Sarut Panjan, King Mongkut's University of Technology Thonburi (KMUTT), Thailand.

Fast Prototyping of Virtual Replica of Real Products

Francesco Ferrise, Monica Bordegoni, Politecnico di Milano, Italy.

Virtual Factory Manager

Marco Sacco, Consiglio Nazionale delle Ricerche (CNR), Italy; Giovanni Dal Maso, Technology Transfer System S.r.l., Italy; Ferdinando Milella, SimX Ltd., United Kingdom; Paolo Pedrazzoli, Diego Rovere, ICIMSI - Computer Integrated Manufacturing Institute of Sustainable Innovation, Switzerland; Walter Terkaj, Consiglio Nazionale delle Ricerche (CNR), Italy.

A Virtual Experiment Platform for Mechanism Motion Cognitive Learning

Xiumin Fan, Xi Zhang, Huanchong Cheng, Yanjun Ma, Qichang He, Shanghai Jiaotong University, P.R. China.

VClav 2.0 - System for Playing 3D Virtual Copy of a Historical Clavichord

Krzysztof Gardo, Ewa Lukasik, Poznan University of Technology, Poland.

IDGD S122

Social Innovation and Service Design Education and Practices in China

Room: Hamilton

Chair(s): Zhiyong Fu, Tsinghua University, P.R. China.

Experience Design on m-Commerce in China---Digital Marketing Oriented Social Innovation Design

Guan Yan, Wu Qiong, Tsinghua University, P.R. China.

Design for All: Social Innovation and Service Design Education and Practice in China

Jun Hai, Kin Wai Michael Siu, The Hong Kong Polytechnic University, Hong Kong.

Design for Social Emotional Interaction in China: Light-tech driven Design and Prototyping Applied in Design Education and Research

Feng Xian, Zhiyong Fu, Tsinghua University, P.R. China.

Interactive Media in Social Innovation

Xiaohua Sun, Lei Wang, Tongji University, P.R. China.

Designing for Social Urban Media: Creating an Integrated Framework of Social Innovation and Service Design in China

Zhiyong Fu, Xia Zhang, Tsinghua University, P.R. China.

Common Task-oriented Communication Tool Applied in Radiology Department of Hospital

Rui Yang, GE Healthcare, P.R. China.

OCSC S123

Information in On-line Communities

Room: Fulton

Chair(s): Anthony Norcio, UMBC, United States.

Extracting Events from Wikipedia as RDF Triples Linked to Widespread Semantic Web Datasets

Carlo Aliprandi, *Synthema Srl, Italy*; Francesco Ronzano,
Andrea Marchetti, Maurizio Tesconi,
Salvatore Minutoli, *Consiglio Nazionale delle Ricerche (CNR), Italy*.

Beyond the Social Search: Personalizing the Semantic Search in Social Networks

Julio Reis, University of Campinas (UNICAMP), Brazil; Rodrigo Bonacin, Center for Information Technology Renato Archer (CTI), Brazil; M. Cecilia Baranauskas, University of Campinas (UNICAMP), Brazil.

Community Search: A Collaborative Searching Web Application With a User Ranking System

Papon Yongpisanpop, Masao Ohira, Ken-ichi Matsumoto, *Nara Institute* of Science and Technology, Japan.

A Supervised Machine Learning Link Prediction Approach for Tag Recommendation

Manisha Pujari, Rushed Kanawati, LIPN CNRS UMR 7030, France.

Conversational Lives: Visualizing Interpersonal Online Social Interactions

Heng Chen, Aisling Kelliher, Arizona State University, United States.

AC \$124

Technology Integration

Room: Palm Beach

Chair(s): Joseph Cohn, Office of Naval Research, United States.

Challenges and Solutions with Augmented Cognition Technologies: Precursor Issues to Successful Integration

Joseph Cohn, Office of Naval Research, United States.

Towards a Software Toolkit for Neurophysiological Data Collection and Analysis

James Niehaus, Peter Weyhrauch, Charles River Analytics, United States.

Cognition: What Does It Have To Do With The Brain?

Alexandra Geyer, Aptima, Inc., United States.

Toward a Wearable, Neurally-Enhanced Augmented Reality System

David Goldberg, Equinox Corporation, United States; Jacob Vogelstein, Johns Hopkins University APL, United States; Diego Socolinsky, Lawrence Wolff, Equinox Corporation, United States.

Neurocognitive Patterns: Using Brain, Behavior, and Context to Infer User Intent

Webb Stacy, Aptima, Inc., United States.

Neurological Advances and Ethical/Legal Conundrums: Lessons from History

Cheryl Erwin, University of Texas, United States.

Particle Swarm Optimizationbased Feature Selection for Brain-Computer Interfaces

Alexer Firpi, Francesco Tenore, Michael McLoughlin, Jacob Vogelstein, Johns Hopkins University APL, United States.

HCD \$125

Usability and Design

Room: Empire

Chair(s): To be announced

Adapting User Interfaces by Analyzing Data Characteristics for Determining Adequate Visualizations

Kawa Nazemi, Dirk Burkhardt, Alexander Praetorius, Matthias Breyer, Arjan Kuijper, *Fraunhofer, Germany*.

Usability Tests for Improvement of 3D Navigation in Multiscale Environments

Tathiane Andrade, Daniel Trindade, Eduardo Silva, Alberto Raposo, Simone Barbosa, PUC - Rio de Janeiro, Brazil.

A Holistic Model for Integrating Usability Engineering and Software Engineering Enriched with Marketing Activities Holger Fischer, Karsten Nebe,

Florian Klompmaker, University of Paderborn, Germany.

Task Analysis for Behavioral Factors Evaluation in Work System Design

Lingyan Wang, Henry Lau, The University of Hong Kong, Hong Kong.

User-Oriented Graph Visualization Taxonomy: A Data-Oriented Examination of Visual Features

Kawa Nazemi, Matthias Breyer, Arjan Kuijper, Fraunhofer, Germany.

Expert-sided Workflow Data Acquisition by means of an Interactive Interview System Daniel Ley, Fraunhofer, Germany.



DUXU **S126**

Communication Issues and the User Experience: Branding, **Content Design and Semiotics**

Room: Manatee

Chair(s): Anthony Faiola, Davide Bolchini, Indiana University, United States.

S127 Mobile Services and Devices

Room: Taylor

Chair(s): Jonathan Kies, Qualcomm, Inc., United States.

The Fusing of "Paper-in-Screen": Reducing Mobile **Prototyping Artificiality to Increase Emotional Experience** Davide Bolchini, Anthony Faiola, Indiana University, United States.

Modeling Users' Data Usage **Experiences from Scientific** Literature

Jian Zhang, Chaomei Chen, Michael S. Vogeley, Drexel University, United

A Study on the Expected **Image and Relevant Design** Techniques in Different **Product-Use Stages**

Yung-Chin Tsao, Brian Chen, Yen-Pang Yang, Tatung University,

Influencing Mechanism of **Apparent Space Dimensions** on Interface Aesthetics and **Apparent Usability**

Tian Lei, Yingbin Zhou, Xiang Li, Huazhong University of Science and Technology, P.R. China; Xiaoli Chen, China University of Geosciences, P.R.

A Conjoint Analysis of **Attributes Affecting the** Likelihood of Technology Use

Anna Pohlmeyer, Technische Universitat Berlin, Germany; Lucienne Blessing, University of Luxembourg, Luxembourg.

Socratic Dialogue in Design

Neil Matthiessen, University of South Florida, United States.

Talking to Strangers: Using Large Public Displays to **Facilitate Social Interaction**

Elisa Rubegni, Nemanja Memarovic, Marc Langheinrich, Universita della Svizzera italiana, Switzerland.

Mobile OWERTY User Research

Yat-Sang Hung, Sarena Yang, Samsung Telecommunications America, United States; Neung Eun Kang, SAMSUNG Electronics, Korea; Stephanie Vance, Samsung Telecommunications America, United States.

Mobile Web & Native Apps: **How One Team Found a Happy**

Kathleen Buettner, Anna Simmons, Intuit, Inc., United States.

Approaching Warp Speed!: Examining the User Experience in the Age of 4G

Quinn Simpson, Sce Pike, Citizen, United States.

Oracle Mobile User Assistance Testing

Erika Webb, Ultan O'Broin, Ray Matsil, Laurie Pattison, Mindi Cummins, Oracle, United

Suggested Collaborative Learning Conceptual Architecture and Applications for Mobile Devices

Kwang Lee, Abdul Razague, University of Northern Virginia, United States.

Photo Diaries - A Peek into a Mobile Worker's Life

Anthony Sampanes, Cisco Systems, Inc., United States; Michele Snyder, Lynn Rampoldi-Hnilo, Brent White, Oracle, United States.

An Experience Sampling System for Context-Aware Mobile Application Development

Jungsuk Seo, Seunghwan Lee, Geehyuk Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

HIMI **S128**

Security and Forensic Aspects of Human-Computer Interaction

Room: Lake

Chair(s): Pavel Ocenasek, Brno University of Technology, Czech Republic.

Analysis of Authentication Protocols with Scyter: Case Study

Pavel Ocenasek, Brno University of Technology, Czech Republic.

Routing Functionality in the Logic Approach for **Authentication Protocol Design**

Pavel Ocenasek, Jakub Hranac, Brno University of Technology, Czech Republic.

An Approach for Security **Protocol Design Based on** Zero-knowledge Primitives Composition

Pavel Ocenasek, Brno University of Technology, Czech Republic.

Constructing Phylogenetic Trees Based on Intra-**Group Analysis of Human Mitochondrial DNA**

Ivan Vogel, Brno University of Technology, Czech Republic; Frantisek Zedek, Masaryk University, Czech Republic; Pavel Ocenasek, Brno University of Technology, Czech Republic.

Exploring Informational Privacy Perceptions in the context of Online Social Networks: A **Phenomenology Perspective** Emma Nuraihan Mior Ibrahim,

Universiti Teknologi MARA, Malaysia.

Modelling Social Cognitive Theory to Explain Software **Piracy Intention**

Ameetha Garbharran, Andrew Thatcher, University of the Witwatersrand, South Africa.

HCI **S129**

Innovative Interaction Strategies

Room: Madison

Chair(s): Frode Eika Sandnes, Oslo University College, Norway.

Landmarks Detection to Assist the Navigation of Visually **Impaired People**

Paulo Costa, IPL, Portugal; Hugo Fernandes, UTAD, Portugal; Veronica Vasconcelos, *Polytechnic* Institute of Coimbra, Portugal; Paulo Coelho, IPL, Portugal; Joao Barroso, UTAD, Portugal; Leontios Hadjileontiadis, Aristotle University of Thessaloniki, Greece.

A Configurable Photo Browser Framework for Large Image Collections

Frode Eika Sandnes, Oslo University College, Norway.

Finding Suitable Candidates: The Design of a Mobile Volunteering Matching System

Wei-Chia Chen, Yun-Maw Cheng, Tatung University, Taiwan; Frode Eika Sandnes, Oslo University College, Norway; Chao-Lung Lee, Tatung University, Taiwan.

Enabling Efficient Browsing and Manipulation of Web Tables on Smartphone

Wenchang Xu, Yuanchun Shi, Tsinghua University, P.R. China.

Older User-Computer Interaction on the Internet: **How Conversational Agents** Can Help

Wi-Suk Kwon, Veena Chattaraman, Soo In Shim, Auburn University, United States; Hanan Alnizami, Juan Gilbert, Clemson University, United States.

An Efficient Document Browsing Method with Floating Diagram Window on Mobile

Yu Shibuya, Kazunobu Nagata, Kazuyoshi Murata, Kyoto Institute of Technology, Japan.

A Research of Interaction **Strategy with Public** Information Display

Youngkyu Jin, Jookyung Woo, Jongwoo Jung, Youngwan Seo, Juyoun Lee, UX Center DMC R&D Center Samsung Electronics, Korea; Amy Chung, SAMSUNG Electronics, Korea.



Parallel Sessions

Gesture-based Interaction (II)

S130

Room: Lexington

Chair(s): George Margetis, Foundation for Research & Technology - Hellas (FORTH), Greece.

User Interface Design Methods and Tools

S131

Room: Jade

Chair(s): Mark Bachman, University of California, Irvine, United States.

Capturing and Consolidating Design Knowledge

Room: Fulton

Chair(s): To be announced

S132

Chair(s): Stephen Prior, Middlesex University, United Kingdom; Steven Landry, Purdue University, United States; Savita Verma, NASA Ames, United States.

EPCE

Room: Nassau

Development of a **Reconfigurable Protective** System for Multi-Rotor UAS

S133

Aeronautics and Space

Thomas Irps, Stephen Prior, Darren Lewis, Middlesex University, United Kingdom.

Optimizing Performance Variables for Small Unmanned **Aerial Vehicle Co-Axial Rotor** Systems

Jonathon Bell, Mantas Brazinskas, Stephen Prior, Middlesex University, United Kingdom.

A Testbed for Exploring **Human-Robot Interaction with Unmanned Aerial and Ground** Vehicles

Jaime Flores, Glenn Martin, University of Central Florida, United States; Paula Durlach, U.S. Army Research Institute for the Behavioral and Social Sciences, United States.

Test-Retest Reliability of CogGauge: A Cognitive Assessment Tool for SpaceFlight. Matthew Johnston,

Angela Carpenter, Kelly Hale, Design Interactive, Inc., United States.

Acceptability and Effects of **Tools to Assist with Controller** Managed Spacing in the **Terminal Area**

Lynne Martin, Michael Kupfer, SJSU/ NASA Ames Research Center, United States; Everett Palmer, Joey Mercer, Todd Callantine, Thomas Prevot, NASA Ames Research Center, United

A Low-cost Natural User Interaction Based on a Camera **Hand-Gestures Recognizer**

Mohamed Boulabiar, Telecom-Bretagne, France: Thomas Burger, Franck Poirier, Universite de Bretagne-Sud, France; Gilles Coppin, Telecom-Bretagne, France.

Hidden-Markov-Model-Based **Hand Gesture Recognition** Techniques Used for a Human-**Robot Interaction System**

Chin-Shyurng Fahn, Keng-Yu Chu, National Taiwan University of Science and Technology, Taiwan.

Upper Body Gesture Recognition for Human-Robot Interaction

Chi-Min Oh, Md. Zahidul Islam, Jun-Sung Lee, Chil-Woo Lee, Chonnam National University, Korea; In So Kweon, Korea Advanced Institute of Science and Technology (KAIST), Korea.

CornerPen: SmartPhone is the

Bong-gyu Jang, MyongHee Lee, Gerard Kim, Korea University, Korea.

Virtual Mouse: A Low Cost Proximity-based Gestural Pointing Device

Sheng Kai Tang, Wen Chieh Tseng, Wei Wen Luo, Kuo Chung Chiu, Sheng Ta Lin, Yen Ping Liu, ASUS Design Center, ASUSTeK Computer Inc., Taiwan.

Niboshi for Slate Devices: a Japanese Input Method Using Multi-touch for Slate Devices

Gimpei Kimioka, Buntarou Shizuki, Jiro Tanaka, University of Tsukuba,

Technology for Health Hyungsin Kim, Young Suk Cho, Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

Using Pen-Based Computing in

Message Oriented Middleware for Flexible Wizard of Oz **Experiments in HCI**

Mirko Otto, Rafael Friesen, Dietmar Rosner, University of Magdeburg, Germany.

A Rapid Prototyping Tool for **Interactive Device Development** Mark Merlo, Mark Bachman, *University* of California, Irvine, United States.

POLVO - Software for Prototyping of Low-fidelity Interfaces in Agile Development Junia Goncalves, Caroline Santos, Universidade Federal dos Vales do

Enhancing Personas with their Main Scenarios

Jequitinhonha e Mucuri, Brazil.

Alicia Valls Saez, Muriel Garreta-Domingo, Marta Lopez Reyes, UOC -Universitat Oberta de Catalunya, Spain.

A Reference Model for Adaptive **Visualization Systems**

Kawa Nazemi, Christian Stab, Arjan Kuijper, Fraunhofer, Germany.

Automatic Adaptation of User Workflows within Model-based User Interface Generation during Runtime on the Example of the **SmartMote**

Kai Breiner, Kai Bizik, Thilo Rauch, Marc Seissler, University of Kaiserslautern, Germany; Gerrit Meixner, German Research Center for Artificial Intelligence (DFKI), Germany; Philipp Diebold, University of Kaiserslautern, Germany.

Evaluating Usability of Webbased Electronic Government: Users' Perspective

Zhao Huang, Laurence Brooks, Brunel University, United Kingdom.

Axiomatic Design for Biometric Icons

Sheau-Farn Max Liang, Chien-Tsen Lin, National Taipei University of Technology, Taiwan.

Towards a Conceptual Framework for Interaction Design in the Pragmatic Web Heiko Hornung, M.

Cecilia Baranauskas, University of Campinas (UNICAMP), Brazil.

Objective and Subjective Measures of Visual Aesthetics of Website Interface Design: The Two Sides of the Coin

Ahamed Altaboli, Yingzi Lin, Northeastern University, United States.

The Effects of Content Type and Presentation Style on User **Experiences of Multimedia** Content on a Tablet PC

Kari Kallinen, Jan Kallenbach, Niklas Ravaja, Aalto University, Finland.

Studying the Role of Interactivity in Museums: Designing and Comparing Multimedia Installations

Pedro Campos, University of Madeira and INESC-ID, Portugal; Miguel Campos, Joao Pestana, WowSystems, Lda., Portugal; Joaquim Jorge, INESC-ID, Portugal.

An End User and Environment Field Study for an Inclusive **Design of Consumer Products**

Thomas Fiddian, Chris Bowden, Royal National Institute for Deaf People, United Kingdom; Mark Magennis, Antoinette Fernnell, Joshue O Connor, National Council for the Blind of Ireland (NCBI), Ireland; Pierre Kirisci, University of Bremen, Germany; Yehya Mohamad, Fraunhofer, Germany; Michael Lawo, University of Bremen, Germany.

Parallel Sessions

Designing Interfaces for Invehicle Driver Support Systems
- Issues under Consideration

S134

Room: Palm Beach

UAHCI

Chair(s): Angelos Amditis, Institute of Communications and Computer Systems, Greece.

Aging and HCI

Room: Sarasota

Chair(s): Christopher Schlick, Nicole Jochems, RWTH Aachen University, Germany.

S135

New Approaches to the Study of Web Accessibility

S136

Room: Taylor

Chair(s): Helen Petrie, *University of York, United Kingdom*.

Advances in Accessibility

Room: Empire

Chair(s): Alexandros Mourouzis, Centre for Research and Technology Hellas (CERTH), Greece.

S137

Monitoring User Distraction in a Car by Segmentation of Experimental Data

Tomas Macek, Martin Labsky, Jan Kleindienst, Hana Truskova, *IBM*, *Czech Republic*.

On-road Pilot Study on The Need for Integrated Interfaces of Invehicle Driver Support Systems

Evangelia Portouli, Vasilis Papakostopoulos, Nicolas Marmaras, National Technical University of Athens, Greece.

Towards User-Centred Development of Integrated Information, Warning, and Intervention Strategies for Multiple ADAS in the EU Project interactIVe

Tobias Hesse, German Aerospace Center (DLR), Germany; Johan Engstrom, Emma Johansson, Volvo Technology, Sweden; Giuseppe Varalda, Centro Ricerche Fiat, Italy; Martin Brockmann, Allround Team GmbH, Germany; Amon Rambaldini, Centro Ricerche Fiat, Italy; Nicola Fricke, Frank Flemisch, Frank Koster, German Aerospace Center (DLR), Germany; Lena Kanstrup, Volvo Technology, Sweden.

Towards an integrated adaptive automotive HMI for the future

Angelos Amditis, Katia Pagle, Institute of Communications and Computer Systems, Greece; Gustav Markkula, Volvo Technology, Sweden; Luisa Andreone, Centro Ricerche Fiat, Italy.

Design of Human Computer Interfaces for Highly Automated Vehicles in the EU-Project HAVFit

Frank Flemisch, Anna Schieben, German Aerospace Center (DLR), Germany; Nadja Schomig, Wurzburg Institute for Traffic Sciences, Germany; Matthias Strauss, Stefan Lueke, Continental Frankfurt, Germany; Anna Heyden, Volvo Technology, Sweden.

Age-Adapted Psychoacoustics: Target Group Oriented Sound Schemes for the Interaction with Telemedical Systems

Alexander Mertens, Philipp Przybysz, Alexander Gross, David Koch-Koerfges, Claudia Nick, Martin Kaethner, Christopher Schlick, RWTH Aachen University, Germany.

Age Dependent Differences in the Usage of a Desktop VR System for Air Force Mission Planning and Preparation

Carsten Winkelholz, Michael Kleiber, Fraunhofer, Germany.

Fitts' Law in Bivariate Pointing on Large Touch Screens: Age-differentiated Analysis of Motion Angle Effects on Movement Times and Error Rates

Sebastian Vetter, Jennifer Butzler, Nicole Jochems, Christopher Schlick, RWTH Aachen University, Germany.

Young by Design: Supporting Older Adults' Mobility and Home Technology Use through Universal Design and Instruction Michael Sangolel Humbolds

Michael Sengpiel, Humboldt-Universitat zu Berlin, Germany.

Sense of Presence in a Robotic Telepresence Domain

Annica Kristoffersson, Silvia Coradeschi, Orebro University, Sweden; Kerstin Severinson Eklundh, KTH Royal Institute of Technology, Sweden; Amy Loutfi, Orebro University, Sweden.

Results from Multi-dimensional Accessibility Assessment

Rogerio Bandeira, Rui Lopes, Luis Carrico, *University of Lisbon, Portugal*.

An Architecture for Multiple Web Accessibility Evaluation Environments

Nadia Fernandes, Rui Lopes, Luis Carrico, *University of Lisbon*, *Portugal*.

Remote Evaluation of WCAG 2.0 Techniques by Web Users with Visual Disabilities

Christopher Power, Helen Petrie, Andre Freire, David Swallow, *University of York, United Kingdom.*

Making Visual Maps Accessible to the Blind

Maria Claudia Buzzi, Marina Buzzi, Barbara Leporini, Loredana Martusciello, Consiglio Nazionale delle Ricerche (CNR), Italy.

Investigating Drag and Drop Techniques for Older People with Cognitive Impairment

Frederic Vella, Nadine Vigouroux, IRIT, Universite Paul Sabatier, France; Pierre Rumeau, CHU Toulouse, France.

A Concept for User-centered Development of Accessible User Interfaces for Industrial Automation Systems and Web Applications

Farzan Yazdi Motlagh, University of Stuttgart, Germany; Helmut Vieritz, RWTH Aachen University, Germany; Nasser Jazdi, University of Stuttgart, Germany; Daniel Schilberg, RWTH Aachen University, Germany; Peter Gohner, University of Stuttgart, Germany; Sabina Jeschke, RWTH Aachen University, Germany.

A Unified Environment for Accessing a Suite of Accessibility Evaluation Facilities

Nikolaos Partarakis, Constantina Doulgeraki, Margherita Antona, Foundation for Research & Technology - Hellas (FORTH), Greece; Theofanis Oikonomou, Nikolaos Kaklanis, Konstantinos Votis, Grammati-Eirini Kastori, Dimitrios Tzovaras, Centre for Research and Technology Hellas (CERTH), Greece.

Advances in Game Accessibility from 2005 to 2010

Thomas Westin, Stockholm University, Sweden; Kevin Bierre, Rochester Institute of Technology, United States; Dimitris Grammenos, Foundation for Research & Technology - Hellas (FORTH), Greece; Michelle Hinn, Pursuit of Happiness Foundation, United States.

Access-a-WoW: Building an Enhanced World of Warcraft™ UI for Persons with Low Visual Acuity

G Michael Poor, Thomas Donahue, Martez Mott, Guy Zimmerman, Laura Leventhal, *Bowling Green State University, United States*.

Disable Workstation Development: a Multicompetence Approach to Human Behaviour Analysis

Giuseppe Andreoni, Fiammetta Costa, Carlo Frigo, Muschiato Sabrina, Esteban Pavan, Laura Scapini, Maximiliano Romero, *Politecnico di Milano, Italy*.

Website Design and Usability Assessment Implications from a Usability Study with Visually Impaired Users

Sarah Swierenga, Jieun Sung, Graham Pierce, Dennis Propst, Michigan State University, United States.

Comparative Study Between AZERTY-type and K-Hermes Virtual Keyboards Dedicated to Users with Cerebral Palsy

Yohan Guerrier, Maxime Baas, Universite Lille Nord de France, France; Christophe Kolski, University of Valenciennes, France; Franck Poirier, Universite de Bretagne-Sud, France.

eBooks: Accessibility, Limitations and Exceptions to Copyright - An Ongoing Debate

Ana Isabel Paraguay, Officio Ergonomia S/C, Brazil.

VMR \$138

"What's the Name of the Game? Does It Mean Anything To You?" - Maximizing the Learning Value of Serious Games and Virtual Worlds

Room: Manatee

Chair(s): Anya Andrews, University of Central Florida, United States.

Farming Education: A Case for Social Games for Learning

Peter Smith, ADL Co-Lab, United States; Alicia Sanchez, Defense Acquisition University, United States.

Reflected in a Liquid Crystal Display: Personalization and the Use of Avatars in Serious Games

Shan Lakhmani, Clint Bowers, University of Central Florida, United States.

Serious Games for Psychological Health Education Anya Andrews, University of Central Florida, United States.

Patterns of Gaming Preferences and Serious Game Effectiveness

Katelyn Procci, James Bohnsack, Clint Bowers, University of Central Florida, United States.

Designing Augmented Reality Tangible Interfaces for Kindergarten Children

Pedro Campos, University of Madeira and INESC-ID, Portugal; Sofia Pessanha, University of Madeira, Portugal.

Tracking the UFO's Paths: Using Eye-Tracking for the Evaluation of Serious Games

Michael Kickmeier, Eva Hillemann, Dietrich Albert, *Graz University of Technology, Austria*. IDGD S139

Trends of HCI in China

Room: Park

Chair(s): Hui Li, Tsinghua University, P.R. China; Hua Qin, Beijing University of Civil Engineering and Architecture, P.R. China.

Cross-Cultural Study on Shop-Floor Control System

Xiongfei Zhao, Hong Huang, Corporate Technology, Siemens Ltd., P.R. China.

Effects of Different Visual Feedback Forms on Eye Cursor's Stabilities

Xinyong Zhang, Wenxin Feng, Renmin University of China, P.R. China; Hongbin Zha, Peking University, P.R. China.

Motion Control with Intentions for Virtual Assembly

Jianfei Yu, Beijing Aeronautical Technology Research Center, P.R. China; Dan Zong, Chunpeng Li, Shihong Xia, Zhaoqi Wang, Chinese Academy of Sciences, P.R. China.

A Review of Driver Mental Workload in Driver-Vehicle-Environment System

Yutao Ba, Wei Zhang, Tsinghua University, P.R. China.

The Impact of Cultural Differences on Instant Messaging Communication in China and Germany

Hui Li, P.L. Patrick Rau, Andreas Hohmann, Tsinghua University, P.R. China.

Analysis of the Applied Pattern of Distributed Computing Used in Simulation

Song-feng Gao, Hua Qin, Beijing University of Civil Engineering and Architecture, P.R. China. **AC** \$140

Public, Private and Industry Researchers: their Combined Role is a Key to Success in Advancing Augmented Cognition

Room: Union

Chair(s): Jefferson Grubb, *Naval Air Warfare Center Training Systems Division*, *United States*.

Today's Competitive Objective: Augmenting Human Performance

Kay Stanney, Kelly Hale, Design Interactive, Inc., United States.

Analysis of Multiple Physiological Sensor Data

Lauren Reinerman-Jones, Grant Taylor, University of Central Florida, United States; Keryl Cosenzo, US Army Research Laboratory, United States; Stephanie Lackey, University of Central Florida, United States.

Distributed Logging and Synchronization of Physiological and Performance Measures to Support Adaptive Automation Strategies

Daniel Barber, University of Central Florida, United States; Irwin Hudson, US Army Research Laboratory, United States

Measuring the Effectiveness of Stress Prevention Programs in Military Personnel

Andrea Taylor, Sae Schatz, University of Central Florida, United States.

Augmented Cognition Methods for Evaluating Serious Game Based Insider Cyber Threat Detection Training

Terence Andre, TiERT Performance Solutions, United States; Cali Fidopiastis, University of Alabama, Birmingham, United States; Tiffany Ripley, Anna Oskorus, Ryan Meyer, Robert Snyder, TiER1 Performance Solutions, United States.

Using Neurophysiological Data to Inform Feedback Timing: A Pilot Study

Jennifer Vogel-Walcutt, Julian Abich, University of Central Florida, United States.

DHM \$141

Shape Analysis and its Applications

Room: Hamilton

Chair(s): Afzal Godil, National Institute of Standards and Technology (NIST), United States; Sudhakar Rajulu, NASA Johnson Space Center, United States.

An Automatic Method for Computerized Head and Facial Anthropometry

Jing-Jing Fang, Sheng-Yi Fang, National Cheng Kung University, Taiwan

Development of Sizing Systems for Chinese Minors

Xin Zhang, China National Institute of Standardization, P.R. China; Yanyu Wang, University of Science and Technology Beijing, P.R. China; Linghua Ran, China National Institute of Standardization, P.R. China; Ailan Feng, Ketai He, University of Science and Technology Beijing, P.R. China; Taijie Liu, China National Institute of Standardization, P.R. China; Jianwei Niu, University of Science and Technology Beijing, P.R. China.

Automatic Face Feature Points Extraction

Dominik Rupprecht, Sebastian Hesse, Rainer Blum, Fulda University of Applied Sciences, Germany.

Cloth Modeling and Simulation: A Literature Survey

James Long, Katherine Burns, Jingzhou (James) Yang, Texas Tech University, United States.

The Effects of Landmarks and Training on 3D Surface Anthropometric Reliability and Hip Joint Center Prediction

Wen-Ko Chiou, Chang Gung University, Taiwan; Bi-Hui Chen, Chihlee Institute of Technology, Taiwan; Wei-Ying Chou, Chang Gung University, Taiwan.

Accelerated Real-Time Reconstruction of 3D Deformable Objects from Multi-View Video Channels

Holger Graf, Leon Hazke, Svenja Kahn, Fraunhofer, Germany; Cornelius Malerczyk, University of Applied Science Friedberg-Giessen, Germany. HCD **S142**

Holistic Prosthetics Technology for People with Multiple Disability

Room: Escambia

Chair(s): Noriaki Kuwahara, Kyoto Institute of Technology, Japan.

Holistic Prosthetic Approaches to the Hearing Handicapped **People: Communicational Tools** in Various Situations

Kazuyuki Kanda, Chukyo University, Japan; Tsutomu Kimura, Toyota College of Technology, Japan.

Cognitive Prostheses: Findings from Attempts to Model Some **Aspects of Cognition**

Norman Alm, University of Dundee, United Kingdom; Arlene Astell, University of St Andrews, United Kingdom; Gary Gowans, University of Dundee, United Kingdom; Maggie Ellis, University of St Andrews, United Kingdom; Richard Dye, Phillip Vaughan, Philippa Riley, University of Dundee, United Kingdom.

A Study on the Visibility of the **Light Emitting Braille Block**

Hiromi Fukuda, Noriaki Kuwahara, *Kyoto Institute of Technology, Japan;* Takao Suzuki, Tanabe, CD., LTD, Japan; Kazunari Morimoto, Kyoto Institute of Technology, Japan.

Expansion of the System of JSL-**Japanese Electronic Dictionary** -An Evaluation for the Compound Research System-

Tsutomu Kimura, Toyota College of Technology, Japan; Daisuke Hara, Toyota Technical Institute, Japan; Kazuvuki Kanda, Chukvo University, Japan; Kazunari Morimoto, Kyoto Institute of Technology, Japan.

Development of a Wearable Airbag for Preventing Fall Related Injuries

Toshiyo Tamura, Chiba University, Japan; Takumi Yoshimura, Tokyo Metropolitan College of Industrial Technology, Japan; Masaki Sekine, Chiba University, Japan; Mitsuo Uchida, Prop Co., Japan.

Human-centered Design in the Care of Immobile Patients

Thomas Laeubli, Roger Gassert, ETH Zurich, Switzerland; Masaru Nakaseko, Kyoto Institute of Technology and Osaka Jikei Research Center of Health Care Management,

Nonspeech Sound Design for a Hierarchical Information System

Rafa Absar, Catherine Guastavino, McGill University, Canada.

DUXU

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Usability in the Life Science Industry

Room: Dixie

Design, User Experience, and Usability

Chair(s): Brigitte Herrmann, Siemens AG, Healthcare Sector, Imaging & Therapy, Germany.

Revisiting User Support

Room: Jackson

Chair(s): Emilie Gould, State University of NY at Albany, United

S144

Industrial User Experience

S145

Room: Liberty

Chair(s): Sanjay Tripathi, ABB Corporate Research, India.

Improved Usability through Internationalization

Carsten Witte, Siemens AG, Germany.

Terminological Precision — A **Key Factor in Product Safety and** Usability

Barbara Inge Karsch, BIK Terminology - Terminology Consulting and Training, United States; Gabriele Sauberer, International Network for Terminology - TermNet, Austria.

Development of an Augmented Feedback Application to Support Motor Learning after Stroke: Requirement Analysis

Simone Schmid, Technische Universitat Berlin, Germany.

2D vs. 3D Pain Visualization: User Preferences in a Spinal **Cord Injury Cohort**

Fotios Spyridonis, Gheorghita Ghinea, Brunel University, United Kingdom.

The Usability Evaluation of Web-based 3D Medical Image Visualization

Sittapong Settapat, Shibaura Institute of Technology, Japan; Tiranee Achalakul, King Mongkut's University of Technology Thonburi (KMUTT), Thailand; Michiko Ohkura, Shibaura Institute of Technology,

Analysis of Emergent Use for **Wellbeing Service Innovation**

Alexandros Yeratziotis, Nelson Mandela Metropolitan University, South Africa; Christian Sannemann, University of Helsinki, Finland; Johanna Viitanen, Marko Nieminen, Aalto University, Finland.

User Satisfaction of Ali Wangwang, an Instant **Messenger Tool**

Jie Gao, Zhenghua Zhang, Taobao (China) Software Co., Ltd., P.R. China.

Study of User Interface for **Browsing Web Contents that Considers the Cognitive Features of Older Users**

Masahiro Watanabe, Shunichi Yonemura, Ryo Hashimoto, Yoko Asano, NTT Corporation, Japan.

The Layout for the User-friendly Manual: Case Study on an Internet Set-up Manual

Momoko Nakatani, Takehiko Ohno, Yurika Katagiri, Ai Nakane, NTT Corporation, Japan; Shuji Hashimoto, NTT Corporation / Waseda University,

Smart User Assistance Based on Dynamic Model Composition

Rene Zilz, Peter Forbrig, University of Rostock, Germany.

Multi-Language Online Word Processor for Learners and the Visually Impaired

Shiblee Imtiaz Hasan, BRAC University, Bangladesh.

Lessons Learned from Using Personas & Scenarios for Requirements Specification of Next-generation Industrial Robots

Petra Bjorndal, Mikko Rissanen, ABB Corporate Research, Sweden; Steve Murphy, ABB Discrete Automation and Motion, Robotics, Sweden

To Develop Viable Human Factors Engineering Methods for Improved Industrial Use

Jonas Andersson, Lars-Ola Bligard, Anna-Lisa Osvalder, Chalmers University of Technology, Sweden; Mikko Rissanen, ABB Corporate Research, Sweden; Sanjay Tripathi, ABB Corporate Research, India.

Ethnography, Ethnography or **Ethnography? What Happens** when the Same Word Means Different Things to Different People?

Sasanka Prabhala, Daria Loi, Subhashini Ganapathy, Intel Corporation, United States.

Training Designers of Real-World Products: Scenario Approach in Industrial Design Curriculum

Yu-Chun Hsu, Chang Gung University,

The Inmates are Still Running the Asylum: How to Share a **Design Vision with Engineers**

Uday Gajendar, Colin Johnson, Citrix Systems, Inc., United States.

Exploring the Learning Problems and Resources Usage of Undergraduate Industrial Design Students in Design Studio

Wenzhi Chen, Chang Gung University, Taiwan; Hsien-Hui Tang, National Taiwan University of Science and Technology, Taiwan.

Enterprise UX Design in China Dongyuan Li, Huawei Corporation, P.R. China.

continues >>

EHAWC S146

Technology Mediated Collaboration

Room: Hamilton

Chair(s): Enid Montague, University of Wisconsin-Madison, United States.

Healthcare & Security: Understanding & Evaluating the Risks

Aubrey Baker, Laurian Vega, Tom DeHart, Steve Harrison, Virginia Tech, United States.

Improving the Online Video **Chat Experience**

Asim Kadav, Chelsea Wanta, Nai-Wen Claire Yu, Kyung Lee, Enid Montague, University of Wisconsin-Madison, United States.

DeskTop: A Design Guideline to Creating a Multi-Touch Desk Prototype

Jerome McClendon, Joshua Ekandem, Austen Haves, Clemson University, United States; Amy Ulinski, University of Wyoming, United States; Larry Hodges, Clemson University, United States.

All in Hand Keyboard Designing and Researching Based on **Ergonomics**

Zhenya Wang, Heshan Liu, Song Hao, Yandong Wang, Shandong University,

HIMI **S147**

Relationality Design

Room: Manatee

Chair(s): Katsunori Shimohara, Doshisha University, Japan.

Relationality-Oriented Systems

Design For Emergence, Growth,

and Operation of Relationality

Takuya Kajio, Manami Watanabe,

Ivan Tanev, Katsunori Shimohara,

Local Communication Media

Hidetsugu Suto, Makiba Sakamoto,

Based on Concept of Media

Muroran Institute of Technology,

Interactive e-Hon as Parent-

Hakodate, Japan; Mizue Nagata,

Communication in Collaborative

ichi Nakayama, University of Tsukuba,

Negotiation Order of Bargaining

Japan; Midori Maeshiro, Federal

University of Rio de Janeiro, Brazil.

Mamiko Sakata, Keita Miyamoto,

Representation of Decision

Making Process in Music

Composition based on

Hypernetwork Model

Tetsuya Maeshiro, Shin-

What Kinds of Human

Acquired by Changing

Comparison between Mathematical Complexity and

Human Feeling

Agents?

Japan.

Negotiation Skill Can be

Keiki Takadama, Atsushi Otaki,

Keiji Sato, Hiroyasu Matsushima, Masayuki Otani, Yoshihiro Ichikawa,

Kiyohiko Hattori, Hiroyoki Sato, The University of Electro-Communications,

Masashi Okubo, Doshisha University, Japan; Akiya Togo, Nihon Unisys Co. Ltd, Japan; Shogo Takahashi, Doshisha University, Japan.

child Communication Tool

Kaoru Sumi, Future University

Jumonji University, Japan.

Process in Establishing

Doshisha University, Japan.

Doshisha University, Japan.

Biotope

Japan

Creation

Access to Information

Room: Jade

Chair(s): Eugenius Loos, University of

S148

Amsterdam, Netherlands.

Interacting with Semantics and

Matthias Breyer, Dirk Burkhardt, Arjan Kuijper, Fraunhofer, Germany.

A Qualitative Study of Similarity **Measures in Event-Based Data**

Comparison Analysis for Text Data by Using FACT-Graph

Ryosuke Saga, Seiko Takamizawa, Kodai Kitami, Kanagawa Institute of Technology, Japan; Hiroshi Tsuji, Osaka Prefecture University, Japan; Kazunori Matsumoto, Kanagawa Institute of Technology, Japan.

User Interface and Information Management of Scenarios

Glenn Martin, Jason Daly, Sae Schatz, University of Central Florida, United

An Investigation for **Simplification of Information Design for the Roadmap**

National Yunlin University of Science and Technology, Taiwan.

Knowledge in Digital Decision Support System

Erika Matsak, Tallinn University, Estonia; Peeter Lorents, Cooperative Cyber Defence Centre of Excellence, Estonia.

HCI **S149 Mobile Interaction**

Room: Jackson

Chair(s): Yihsiu Chen, Verizon Wireless, United States

Computer Support of Team Work on Mobile Devices

Hilko Donker, Malte Blumberg, Technische Universitat Dresden,

Integrated Context-Aware and **Cloud-based Adaptive Home Screens for Android Phones**

Tor-Morten Gronli, Norwegian School of IT, Norway; Jarle Hansen, Gheorghita Ghinea, Brunel University, United Kingdom.

Using a Smart Phone for Information Rendering in Computer-Aided Surgery

Gael Le Bellego, Marek Bucki, UJF -Grenoble 1, France; Ivan Bricault, UJF - Grenoble 1 / CHU Grenoble, France; Jocelyne Troccaz, UJF - Grenoble 1, France.

Safe-in-Place Awareness GPS System with Distance-Based and Duration-Based Notification Control

Chi Chu, China University of Technology, Taiwan; Gene Chu, National Taiwan Normal University,

ProJest: Enabling Higher Levels of Collaboration Using Today's **Mobile Devices**

Babak Forutanpour, Jianfeng Ren, Qualcomm, United States.

Imaged based Codes Performance Comparison for **Mobile Environments**

Jong-Hoon Seo, Ji-Hye Choi, Tack-Don Han, Yonsei University, Korea.

Christian Stab, Kawa Nazemi,

Katerina Vrotsou, Camilla Forsell,

Linkoping University, Sweden.

Robert Louden, Matt Fontaine,

Kuang-Chih Lo, Chi-Shiung Thzeng,

HCI EPCE **S150 S151 S152 S153** HCI in the Physical, Architectural Interacting with the World Wide **Spatial Interaction Design (II) Driver Measurement and** and Cultural Environment Web Sensing Room: Lexington Room: Taylor Room: Union Room: Nassau Chair(s): Teng-Wen Chang, National Chair(s): To be announced Chair(s): To be announced Yunlin University of Science and Chair(s): Yukiyo Kuriyagawa, Nihon Technology, Taiwan. University, Japan. GooGreen - Towards Increasing **Development of Web-based Self Replicating Robotic** Estimation of Driver's Arousal the Environmental Awareness of **Voice Interface to Identify Child** Strategies as a Catalyst for State using Multi-dimensional **Autonomous Architectural Users Based on Automatic Physiological Indices** Households Ruud Mattheij, Tilburg University, Mieko Ohsuga, Yoshiyuki Kamakura, **Speech Recognition System** Construction Netherlands: Lindsy Szilvasi, Yumiko Inoue, Osaka Ryuichi Nisimura, Shoko Miyamori, Michael Fox, Cal Poly, Pomona, United THURSDAY 08:00 - 10:00 Utrecht University, Netherlands; Institute of Technology, Japan; Lisa Kurihara, Hideki Kawahara, Lorraine De Beer, Kartini Rakiman, Yoshihiro Noguchi, Keiji Shimada, Toshio Irino, Wakayama University, **Interaction Design Teaching** Suleman Shahid, Tilburg University, National Institute of Advanced Japan. **Method Design** Industrial Science & Technology (AIST), Netherlands. Categorize Web Sites based on Chenwei Chiang, Kiyoshi Tomimatsu, Japan; Masami Mishiro, Asahi Kasei **Blowing Light: Green-Based Design Issues** Kyushu University, Japan. Corp., Japan. Interaction Design Amin Abolghasem Rasooli, University Reacting with Care: The Hybrid The Influence of False and Yu-Chun Annester Huang, Chihof Tehran / University of Rostock, Iran; **Interaction Types in a Sensible** Chieh Tsai, Teng-Wen Chang, Fattaneh Taghiyareh, University of Missing Alarms of Safety System Pen-Yan Tsai, Tien-Hsin Hung, Jaion Drivers' Risk-taking Behavior Tehran, Iran; Peter Forbrig, University Guo-Jhen Yu, Teng-Wen Chang, Jung Chen, National Yunlin University of Rostock, Germany. Takayuki Masuda, Railway National Yunlin University of Science of Science and Technology, Taiwan. Technical Research Institute, Japan; **Shopping Cart Interactive** and Technology, Taiwan. Shigeru Haga, Azusa Aoyama, TiMBA – Tangible User Interface Program (SCIP) **Express Yourself: Designing** Hiroki Takahashi, Gaku Naito, Rikkyo for Model Building and Analysis Cyndi Wiley, Emmanuel Saka, Interactive Products with University, Japan. Chih-Pin Hsiao, Georgia Institute Stefan Tauber, Sunghyun Kang, Iowa Implicitness to Improve Social of Technology, United States; **Facial Expression Measurement** State University, United States. Interaction Brian Johnson, University of for Detecting Driver Drowsiness An Avatar-Based Help System Huang-Ming Chang, Eindhoven Washington, United States. Satori Hachisuka, Kenji Ishida, for Web-Portals University of Technology, Netherlands; Takeshi Enya, DENSO Corporation, Video Interaction Mechanism in Helmut Lang, Christian Mosch, Rung-Huei Liang, National Taiwan Japan; Masayoshi Kamijo, Shinshu Performance Space - Performers, Bastian Boegel, David M. Benoit, University of Science and Technology, University, Japan. **Performing Space vs. Audiences** Wolfgang Minker, Ulm University, Taiwan PaoShu Wang, Yinghsiu Huang, Influence of Brightness and Germany. **Designing a Better Morning:** Tunghai University, Taiwan. Traffic Flow on Driver's Eye-Socio Economic Psycho A Study on Large Scale Touch **Fixation-Related Potentials** Restoration support system for **Knowledge Based Intelligent** Interface Design Yoshihisa Terada, Koji Morikawa, a historic textile market using **Agents for Automated** Onur Asan, Mark Omernick, Panasonic Corporation, Japan; virtual environment e-Commerce Negotiation Dain Peer, Enid Montague, University Yuji Kawanishi, Keio University, Japan; P. Vijayaragavan, Jawaharlal Nehru Michiko Ohkura, Mizuki Konuma, of Wisconsin-Madison, United States. YongWook Jeon, Ajou University, Yuri Kogure, Sayaka Tanaka, Technological University Kakinada, Korea; Tatsuru Daimon, Keio Hitomi Ei, Akiko Sakai, India; R. Ponnusamy, AVIT - Vinayaka University, Japan. Takashi Ishidou, Yoko Watanabe, Missions University, India. Shibaura Institute of Technology, Study on Driving Performance of **User Experience of Social** Aged Drivers at the Intersections Japan. **Bookmarking Tools Compared with Young Drivers** Enric Mor, Nuria Ferran, Seunghee Hong, Hanbat National Muriel Garreta-Domingo, Juan University / Kagawa University, Korea; Antonio Mangas Forner, UOC -Byungchan Min, Hanbat National Universitat Oberta de Catalunya, University, Korea; Shun'ichi Doi, Kagawa University, Japan.

UAHCI **S154 S155 S156 S157 Camera-based Interfaces for Mobile User Interaction Behavior Computer Animation, Functional Modeling and People with Disabilities Communicability and Education** Rehabilitation (I) Room: Lake for All Room: Dixie Room: Park Chair(s): Thomas Alexander, Room: Sarasota Chair(s): Margrit Betke, Boston Fraunhofer, Germany. Chair(s): Jue Wang, Xi'an Jiaotong University, United States. Chair(s): Francisco Cipolla-Ficarra, University, P.R. China. ALAIPO / AINCI, Italy. Camera Canvas: Image Editing Evaluation of a Mobile AR Tele-Behaviour Computer Animation, Adaboost with SVM-based **Communicability and Education** Classifier for the Classification of Software for People with maintenance System Disabilities Michael Kleiber, Thomas Alexander, for All **Brain Motor Imagery Tasks** Christopher Kwan, Margrit Betke, Francisco Cipolla-Ficarra, ALAIPO Fraunhofer, Germany. Jue Wang, Lin Gao, Haoshi Zhang, / AINCI, Italy; Jacqueline Alma, Jin Xu, Xi'an Jiaotong University, P.R. Boston University, United States. A System for Enhanced Situation Universidad Nacional de La Pampa, Adaptive Mouse-replacement **Awareness with Outdoor** Argentina; Miguel Cipolla-Ficarra, Interface Control Functions for **Double Visual Feedback in the Augmented Reality** ALAIPO / AINCI, Italy. **Users with Disabilities** Jan Neuhofer, Thomas Alexander, **Rehabilitation of Upper LIMB** On Interactive Interfaces for Enchen Liu, Jianfeng Sui, Linhong Ji, Fraunhofer, Germany. John Magee, Samuel Epstein, **Learning Chinese Character** Eric Missimer, Christopher Kwan, Tsinghua University, P.R. China. **Experimental Evaluations of** Margrit Betke, Boston University, **Writing Online Novel Human-centered Touch Interaction Considering** Manlai You, Yu-Jie Xu, Cherng Chin, United States. **Automotive Requirements Rehabilitation Robot with** National Yunlin University of Science An Information Theoretic Mouse Andreas Haslbeck, Severina Popova, **Biofeedback for Training and** and Technology, Taiwan. **Trajectory Measure** Michael Krause, Katrina Pecot, Assessment Samuel Epstein, Eric Missimer, The Effect of a GPS on Learning Jurgen Mayer, Klaus Bengler, Runze Yang, Linhong Ji, Margrit Betke, Boston University, Technische Universitat Munchen, with regards to Performance Hongwei Chen, Tsinghua University, United States Germany. and Communication in P.R. China. **Municipal Crisis Response AVIN (Assisted Visual Interactive Mobile Interfaces for Better Upper Limb Contralateral** Helena Granlund, Santa Anna Notepad): A Novel Interface **Living: Supporting Awareness in Physiological Characteristic** IT Research Institute / Swedish Design to Expedite the Eye a Smart Home Environment **Evaluation for Robot-assisted** Defence Research Agency, Sweden; Denis Gracanin, Scott McCrickard, Writing Experience **Post Stroke Hemiplegic** Rego Granlund, Santa Anna Xianjun Sam Zheng, Stuart Goose, Virginia Tech, United States; Rehabilitation IT Research Institute, Sweden; Arthur Billingsley, Roosevelt Cooper, Siemens Corporate Research, United Lap Nam Wong, Qun Xie, Linhong Ji, Nils Dahlback, Linkoping University, States; Joeri Kiekebosch, Siemens Tavon Gatling, Erik Irvin-Williams, Tsinghua University, P.R. China. Corporate Research, Netherlands; Felicia Osborne, Felicia Doswell, **Designing Interactive Pill** mGuides, Design and Usability Norfolk State University, United States. James Lin, Siemens Corporate Reminders for Older Adults: a of a Mobile System to Assist Research, United States. **BrailleTouch: Mobile Texting for Formative Study Learning in Critical Situations** Interpreting 3D Faces for the Visually Impaired Sepideh Ansari, Indiana University, Jaime Sanchez, Matias Espinoza, Augmented Human-Computer Brian Frey, Caleb Southern, United States. University of Chile, Chile. Mario Romero, Georgia Institute of Interaction **Detection of Wheelchair User** Technology, United States. **Personalization in Mobile** Marinella Cadoni, Enrico Grosso, **Activities Using Wearable** Andrea Lagorio, Massimo Tistarelli, **Learning for People with Special Enhancing Mobile Interaction** Sensors University of Sassari, Italy. Needs using WLAN Proximity Ding Dan, Shivayogi Hiremath, Saeed Zare, University of Bremen, Wolfgang Narzt, Younghyun Chung, Rory Cooper, Germany. Heinrich Schmitzberger, Johannes University of Pittsburgh, United States. Kepler University of Linz, Austria. **Gesture-based User Interfaces** for Public Spaces **Development of Mobile** Andreas Kratky, University of **Evacuation Guides for Travellers** Southern California, Los Angeles, and Rescue Personnel United States. Viveca Jimenez Mixco, Universidad Politecnica de Madrid, Spain; Jan Paul Leuteritz, Fraunhofer / University of Stuttgart, Germany; Eugenio Gaeta, Maria Fernanda Cabrera-Umpierrez, Maria Teresa Arredondo, Universidad Politecnica de Madrid, Spain; Harald Widlroither, Fraunhofer / *University of Stuttgart, Germany;* Mary Panou, Centre for Research and Technology Hellas (CERTH), Greece.

08:00 - 10:00 **THURSDAY**

VMR S158

Ubiquitous Virtual Reality

Room: Escambia

Chair(s): Woontack Woo, Gwangju *Institute of Science and Technology* (GIST), Korea.

Meta Cookie+: An Illusionbased Gustatory Display

Takuji Narumi, Shinya Nishizaka, Takashi Kajinami, Tomohiro Tanikawa, Michitaka Hirose, The University of Tokyo, Japan.

ClearSpace: Mixed Reality Virtual Teamrooms

Alex Hill, Mathew Bonner, Blair MacIntyre, Georgia Institute of Technology, United States.

Social Augmented Reality for Sensor Visualization in **Ubiquitous Virtual Reality**

Youngho Lee, Jongmyung Choi, Mokpo National University, Korea; Sehwan Kim, Gwangju Institute of Science and Technology (GIST), Korea; Seunghun Lee, Korea Aerospace Research Institute, Korea; Say Jang, SAMSUNG Electronics, Korea.

Foundation of a New Digital **Ecosystem for u-Content:** Needs, Definition, and Design

Yoosoo Oh, Sebastien Duval, Gwangju Institute of Science and Technology (GIST), Korea; Sehwan Kim, WorldViz, Korea; Hyoseok Yoon, Taejin Ha, Woontack Woo, Gwangju Institute of Science and Technology (GIST),

A Vision-Based Mobile **Augmented Reality System for Baseball Games**

Seong-Oh Lee, Sang Chul Ahn, Jae-In Hwang, Hyoung-Gon Kim, Korea *Institute of Science and Technology* (KIST), Korea.

Visualization and Management of u-Contents for Ubiquitous VR

Kiyoung Kim, Jonghyun Han, Changgu Kang, Woontack Woo, Gwangju Institute of Science and Technology (GIST), Korea.

Camera-based In-situ 3D **Modeling Techniques for AR** Diorama in Ubiquitous Virtual Reality

Atsushi Umakatsu, Hiroyuki Yasuhara, Tomohiro Mashita. Kiyoshi Kiyokawa, Haruo Takemura, Osaka University, Japan.

AC **S159**

Operational Neuroscience

Room: Palm Beach

Chair(s): Monique Beaudoin, Strategic Analysis Inc., United States.

Operational Neuroscience: Neuroscience Research and Tool Development to Support the

Monique Beaudoin, Strategic Analysis Inc., United States; Dylan Schmorrow, United States Navy, United States.

Non-Invasive Functional Brain **Biomarkers for Cognitive-Motor Performance Assessment: Towards New Brain Monitoring Applications**

Rodolphe Gentili, University of Maryland, United States.

Exploring New Methodologies for the Analysis of Functional **Magnetic Resonance Imaging** (fMRI) Following Closed-Head **Iniuries**

Peter Walker, Naval School of Aviation Safety, United States; Ian Davidson, University of California, Davis, United States.

Modeling Pharmacokinetics and Pharmacodynamics on a Mobile **Device to Help Caffeine Users**

Frank Ritter, Kuo-Chuan (Martin) Yeh, Pennsylvania State University, United

Behavioral and Brain Dynamics of Team Coordination Part I: Task Design

Emmanuelle Tognoli, Attila Kovacs, Benjamin Suutari, Florida Atlantic University, United States; Daniel Afergan, Strategic Analysis *Inc., United States*; Joe Coyne, Gregory Gibson, Naval Research Laboratory, United States; Roy Stripling, Office of Naval Research, United States; J.A. Scott Kelso, Florida Atlantic University, United States.

Behavioral and Brain Dynamics of Team Coordination Part II: **Neurobehavioral Performance**

Emmanuelle Tognoli, Attila Kovacs, Benjamin Suutari, Florida Atlantic University, United States; Daniel Afergan, Strategic Analysis Inc., United States; Joe Coyne, Gregory Gibson, Naval Research Laboratory, United States; Roy Stripling, Office of Naval Research, United States; J.A. Scott Kelso, Florida Atlantic University, United States.

Advances and Challenges in Signal Analysis for Single Trial P300-BCI

Kun Li, Vanitha Narayan Raju, Ravi Sankar, Yael Arbel, Emanuel Donchin, University of South Florida, United States.

HCD S160

The Home and the Mobile Context

Room: Liberty

Chair(s): Ebba Thora Hvannberg, University of Iceland, Iceland.

Methods and Tools for Assessing and Enhancing the **User Experience**

S161

Room: Madison

DUXU

Chair(s): Federico Botella, Miguel Hernandez University of Elche, Spain.

Possibilities for Cultural **Customization of Mobile Communication Devices: The Case of Iranian Mobile Users**

Bijan Aryana, Casper Boks, Norwegian University of Science and Technology, Norway; Azadeh Navabi, Chalmers University of Technology, Sweden.

Guideline Development of Mobile Phone Design for Preventing Child Abuse

Joon Bin Im, Eui-Chul Jung, Jung Yoon Yang, Yonsei University, Korea.

Adjustable Interactive Rings for iDTV: First Results of an **Experiment with End-Users**

Leonardo Miranda, Heiko Hornung, M. Cecilia Baranauskas, University of Campinas (UNICAMP), Brazil.

Scientometric Analysis of Research in Smart Clothing: State of the Art and Future Direction

Kyeyoun Choi, Huiju Park, Oklahoma State University, United States; Eui-Seob Jeong, Korea Institute of Science and Technology Information (, Korea; Semra Peksoz, Oklahoma State University, United

Human Affordance as Life-Log for Environmental Simulations

Masayuki Ihara, Minoru Kobayashi, NTT Corporation, Japan: Takahiro Yoshioka, Kyushu University, Japan.

Bridging the Social Media Usage Gap from Old to New: an Elderly Media Interpersonal and Social Research in Taiwan

Shih-Hsun Lin, Wen Huei Chou, National Yunlin University of Science and Technology, Taiwan.

Making the Design Process More Usable: Aligning Design with User Performance

Roberto Champney, Christina Kokini, Kay Stanney, Design Interactive, Inc., United States.

Using Interaction Patterns in **Heuristic Evaluation**

Federico Botella, Jose Gallud, Miguel Hernandez University of Elche, Spain; Ricardo Tesoriero, Úniversity of Castilla-La Mancha, Spain.

Personas on the Move: Making Personas for Today's Mobile Workforce

Michele Snyder, Oracle, United States; Anthony Sampanes, Cisco Systems, Inc., United States; Brent White, Lynn Rampoldi-Hnilo, Oracle, United States.

Classification of Interactive **Systems Components Enables** Planning Heuristic Evaluation

Llucia Masip, Marta Oliva, Toni Granollers, University of Lleida,

Scenario and Task Based **Interview to Evaluate Usability** of Computer Assisted Data Collection

Luiz Agner, Patricia Tavares, IBGE - Instituto Brasileiro de Geografia e Estatistica, Brazil; Simone Bacellar Leal Ferreira, IBGE - Instituto Brasileiro de Geografia e Estatistica / UNIRIO, Brazil.

Evaluating Ubiquitous Media Usability Challenges - Content Transfer and Channel Switching Delays

Alexandre Fleury, Jakob Schou Pedersen, Lars Bo Larsen, Aalborg University, Denmark.

Environmental Affordances as a Way to Help in the Design of Videogame Worlds

Elisangela Vilar, Francisco Rebelo, Paulo Noriega, Luis Teixeira, Technical University of Lisbon, Portugal.

EHAWC S162

Quality of Working Life

Room: Madison

Chair(s): Eric Brangier, University Paul Verlaine of Metz, France.

Human-Computer Interaction in Office Work: Evaluation of **Interaction Patterns Using** Office Equipment and Software **During Data Entry and** Navigation

Ernesto Filgueiras, Beira Interior University, Portugal; Francisco Rebelo, Fernando Moreira da Silva, Technical University of Lisbon, Portugal.

Management Standardisation versus Quality of Working Life

Przemyslaw Drozyner, Pawel Mikolajczak, Jaroslaw Szuszkiewicz, University of Warmia and Mazury, Poland; Malgorzata Jasiulewicz-Kaczmarek, Poznan University of Technology, Poland.

Beyond the Technology Acceptance Model: Elements to Validate the Human-**Technology Symbiosis Model**

Eric Brangier, Sonia Hammes-Adele, University Paul Verlaine of Metz,

Is the Presence of a Companion **Animal Dog Beneficial for Computer Operators?**

Rie Takeshima, Iiji Ogawa, Teikyo University of Science, Japan.

Preventive and Pro-active Ergonomics Influence on Maintenance Excellence Level

Malgorzata Jasiulewicz-Kaczmarek, Poznan University of Technology, Poland; Przemyslaw Drozyner, University of Warmia and Mazury, Poland.

The Interaction Effect of **Posture and Psychological** Stress on Neck-shoulder Muscle **Activity in Typing: A Pilot Study**

Wei-Ying Chou, Chang Gung University, Taiwan; Bi-Hui Chen, Chihlee Institute of Technology, Taiwan; Wen-Ko Chiou, Chang Gung University, Taiwan.

Analysis on Flight Fatigue Risk and the Systematic Solution

Lei Wang, Ruishan Sun, Civil Aviation University of China, P.R. China.

HIMI **S163**

Embodied Interaction and Communication

Room: Escambia

Interface and the Management of Information

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

S164

Toward Creating Human-Centric Services in Service Engineering Design

Room: Jackson

Chair(s): Sakae Yamamoto, Tokyo University of Science, Japan; Hirohiko Mori, Tokyo City University, Japan.

Hand Gesture-based Manipulation of a Personalized **Avatar Robot in Remote** Communication

Teruaki Ito, The University of Tokushima, Japan.

Support for Generation of Sympathetic Embodied Awareness: Measurement of Hand Contact Improvisation under Load Fluctuation Stress

Takabumi Watanabe, Yoshiyuki Miwa, Go Naito, Norikazu Matsushima, Waseda University, Japan; Hiroko Nishi, Toyo Eiwa University, Japan.

Utilization of Shadow Media - Supporting Co-Creation of **Bodily Expression Activity in a** Group -

Koji Iida, Shiroh Itai, Waseda University, Japan; Hiroko Nishi, Toyo Eiwa University, Japan; Yoshiyuki Miwa, Waseda University,

Real-time and Interactive Rendering for Translucent Materials such as Human Skin

Hiroyuki Kubo, Waseda University, Japan; Yoshinori Dobashi, Hokkaido University, Japan; Shigeo Morishima, Waseda University, Japan.

A Virtual Audience System for Enhancing Embodied Interaction Based on a **Conversational Activity**

Yoshihiro Sejima, Yamaguchi University, Japan; Yutaka Ishii, Tomio Watanabe, Okayama Prefectural University, Japan.

Balance Ball Interface for **Performing Arts**

Tomoyuki Yamaguchi, Tsukasa Kobayashi, Waseda University, Japan; Shuji Hashimoto, NTT Corporation / Waseda University, Japan.

Measurement and Evaluation in **Service Engineering**

Sakae Yamamoto, Tokyo University of Science, Japan; Hiroyuki Miki, Oki Electric Ind. Co., Ltd., Japan; Hirohiko Mori, Tokyo City University,

Designing Peripheral Communication Services for Families Living-apart: Elderly **Persons and Family**

Yosuke Kinoe, Mihoko Noda, Hosei University, Japan.

Connecting Envisioning Process to User Interface Design **Process**

Naotake Hirasawa, Otaru University of Commerce, Japan; Shinya Ogata, U'eyes Design Inc., Japan; Kiko Yamada-Kawai, Otaru University of Commerce, Japan.

Methods for Service Sciences from Visualization Points

Hiroyuki Miki, Oki Electric Ind. Co., Ltd., Japan: Naotsune Hosono, Oki Consulting Solutions Co., Ltd., Japan; Sakae Yamamoto, Tokyo University of Science, Japan.

Information Technology Services Industry and Job Design

Yoshihiko Saitoh, IBM, Japan.

Some Issues toward Creating **Human-Centric Services** Hirohiko Mori, Tokyo City University,

Development of a System for **Proactive Information Service**

Myon-Woong Park, Korea Institute of Science and Technology (KIST), Korea; Soo-Hong Lee, Yonsei University, Korea; Young-Tae Sohn, Jae Kwan Kim, Ilju Bae, Korea Institute of Science and Technology (KIST), Korea; Jae-Kwon Lim, Yonsei University, Korea.

HCI **S165**

Modeling Interaction

continues >>

Room: Dixie

Chair(s): Stefano Levialdi Ghiron, Sapienza, Uniersity of Rome, Italy.

Modeling the Rhetoric of **Human-Computer Interaction**

Iris Howley, Carolyn Penstein Rose', Carnegie Mellon University, United

Differentiating Between Successful and Less Successful Products by Using MAInEEAC - A Model for Interaction Characterization

Steffen Hess, Andreas Maier, Marcus Trapp, Fraunhofer, Germany.

Model-based Ubiquitous **Interaction Concepts and** Contexts in Public Systems

Thomas Schlegel, Christine Keller, Technische Universitat Dresden,

Complex Components Abstraction in Graphical User Interfaces

Pedro Teixeira-Faria, Polytechnic Institute of Viana do Castelo, Portugal; Javier Rodeiro Iglesias, University of Vigo, Spain.

Giving UI Developers the Power of UI Design Patterns

Jocelyn Richard, Jean-Marc Robert, Ecole Polytechnique de Montreal, Canada; Sebastien Malo, Joel Migneault, CAE Montreal, Canada.

Universal Access in Human-Computer Interaction

HCI

S166

S167

Human Performance Modeling Using Interactive Simulations

Room: Palm Beach

Chair(s): Ling Rothrock, Pennsylvania State University, United States.

Cognitive and Psychological Issues in HCI (II)

Room: Fulton

Chair(s): Klaus Bengler, Technische Universitat Munchen, Germany.

Human Behavioral Simulation using Affordance-based Agent Model

Namhun Kim, Ulsan National Institute of Science & Technology (UNIST), Korea; Jaekoo Joo, Inje University, Korea; Ling Rothrock, Pennsylvania State University, United States; Richard Wysk, North Carolina State University, United States; Young-Jun Son, University of Arizona, United

The Influence of Virtual World **Interactions Toward Driving Real World Behaviors**

Hari Thiruvengada, Paul Derby, Wendy Foslien, John Beane, Anand Tharanathan, Honeywell Labs, United States.

An Inductive Inference Model to Elicit Noncompensatory **Judgment Strategies**

Jing Yin, MicroStrategy, United States; Ling Rothrock, Pennsylvania State University, United States.

Investigating the Effects of **Metacognition in Dynamic Control Tasks**

Jung Hyup Kim, Ling Rothrock, Pennsylvania State University, United States; Anand Tharanathan, Hari Thiruvengada, Honeywell Labs,

«How Do I Line Up?": Reducing **Mental Transformations to Improve Performance**

Guy Zimmerman, Dale Klopfer, G Michael Poor, Julie Barnes, Laura Leventhal, Samuel Jaffee, Bowling Green State University, United States.

Multi-Modal Interface based on **Driving-Workload Optimization**

Hyesun Park, Jongwoo Choi, *Electronics and Telecommunications* Research Institute (ETRI), Korea; Hyeong-Joon Kwon, Sungkyunkwan University, Korea; Kyong-Ho Kim, **Electronics and Telecommunications** Research Institute (ETRI), Korea.

Process Choreography for Human Interaction Computer-Aided Simulation

Carlos Fernandez-Llatas, Juan Bautista Mocholi, Pilar Sala, Juan Carlos Naranjo, ITACA-TSB Universidad Politecnica de Valencia, Spain.

A Study of The Preattentive Perception for Interface Design and Cognitive Style on **Information Search Performance**

Jiunde Lee, Meng-Chieh Lee, National Chiao Tung University,

The effect of agents' appearance attractiveness on users' perceived personality

Yu-chen Hsu, National Tsing Hua University, Taiwan.

Individual Differences in Work Load while Doing Multitasking with a Computer

Kari Kallinen, Inger Ekman, Niklas Ravaja, Aalto University,

ColoriT: Color Based Image Code Application to Aid in Memory Restoration of Offline Photo Artifacts

James Park, Jong-Hoon Seo, Ji-Hye Choi, Tack-Don Han, Yonsei University, Korea.

Measurement of Driver/s Distraction for an early Prove of Concepts in Automotive Industry at the Example of the Development of a Haptic Touchpad

Roland Spies, Ergoneers GmbH, Germany; Andreas Blattner, Technische Universitat Munchen, Germany; Christian Lange, Martin Wohlfarter, Ergoneers GmbH, Germany; Klaus Bengler, Technische Universitat Munchen, Germany; Werner Hamberger, Audi AG, Germany.

In-car Dictation and Driver's Distraction: a Case Study

Martin Labsky, Tomas Macek, Jan Kleindienst, IBM, Czech Republic; Holger Quast, Nuance Communication, Belgium; Christophe Couvreur, Nuance Communications, Belgium.

EPCE S168

Basic Issues of Interface Design

Room: Taylor

Chair(s): Xianghong Sun, Chinese Academy of Sciences, P.R. China.

Air Passengers' Luggage Screening: What is the **Difference between Naive** People and Airport Screeners?

Xi Liu, Civil Aviation University of China, P.R. China; Alastair Gale, Loughborough University, United Kingdom.

Application of Natural Language in Fire Spread Display

Yan Ge, Li Wang, Xianghong Sun, Chinese Academy of Sciences, P.R.

How Font Size and Tag Location **Influence Chinese Perception of** Tag Cloud?

Qiping Zhang, Long Island University, United States; Weina Qu, Li Wang, Chinese Academy of Sciences, P.R.

Cross-cultural Comparison of Blog Use for Parent-Teacher Communication in Elementary

Qiping Zhang, April Hatcher, Long Island University, United States.

Balance Between Abstract Principles and Concrete Instances in Knowledge Communication

Toshiya Akasaka, Yusaku Okada, Keio University, Japan.

Trust Evaluation through Human-Machine Dialogue Modelling

Cyril Crocquesel, Francois Legras, Gilles Coppin, Telecom-Bretagne,

Audio and Audiovisual Cueing in Visual Search: Effect of Target **Uncertainty and Auditory Cue** Precision

Hugo Bertolotti, Thomas Strybel, California State University, Long Beach, United States.

UAHCI **S169**

elnclusion - Policies, Programs, **Best Practices**

Room: Sarasota

Chair(s): Ana Isabel Paraguay, Officio Ergonomia S/C, Brazil.

eInclusion: Policies and **Concepts Regarding** Persons with Disabilities -**Considerations about Brazil and Portugal**

Ana Isabel Paraguay, Officio Ergonomia S/C, Brazil.

Mobile Technologies for Promoting Health and Wellness among African American Youth

Donovan Hill, Jasmine Blunt, Terrence Pugh, Monika Monk, Norfolk State University, United States; Ji-Sun Kim, Woodrow Winchester, Scott McCrickard, Paul Estabrooks, Virginia Tech, United States; Felicia Doswell, Norfolk State University, United States.

Implementation of the ISO/ IEC 24756 for the Interaction **Modeling of an AAL Space**

Pilar Sala, Carlos Fernandez, Juan Bautista Mocholi, Pablo Presencia, Juan Carlos Naranjo, ITACA-TSB Universidad Politecnica de Valencia,

Investigation of Best Practices for Maintaining Section 508 Compliance in U.S. Federal Web Sites

Jonathan Lazar, Abiodun Olalere, Towson University, United States.

Using Human Service Center Interfaces and their Information to foster Innovation Management

Klaus-Peter Fahnrich, Kyrill Meyer, Benjamin Strehl, University of Leipzig, Germany.

eAccessibility in Public Procurement: an Introduction to European Mandate M/376

John Lee, Research In Motion Ltd,

VMR IDGD S170 S171 S172 S173 Digital Museum Ergonomics in Architecture The Future of Universal Access **Research on User Experience** and Service System Design in Room: Hamilton Room: Manatee **Mobile Network** Room: Jade Chair(s): Jerzy Charytonowicz, Chair(s): Michitaka Hirose, The Virtual and Mixed Reality Room: Liberty Wroclaw University of Technology, Chair(s): Liam Mayron, Harris Corp., University of Tokyo, Japan. Poland. United States; Gisela Susanne Bahr, Chair(s): Binbin Li, Jiangnan Florida Institute of Technology, United University, P.R. China. The Computer - a Tool that Informatics as Semiotics Digital Diorama: AR Exhibition **New Development of Mobile** Makes Human Environment. System to Convey Background **Instant Messaging: Virtual Body Engineering: Lessons learned** Technosphere. from Design, Development and Information for Museums **Communication Interaction** Beata Majerska-Palubicka, Silesian **Evaluation of Ambient Assisted** Takuji Narumi, Oribe Hayashi, Linong Dai, Shanghai Jiaotong University of Technology, Poland. University, P.R. China. Kazuhiro Kasada, **Living Applications for Elderly** Mitsuhiko Yamazaki, People **Evolution of Domestic Kitchen Exhibition User Experience** Tomohiro Tanikawa, Andreas Holzinger, Gig Searle, Jerzy Charytonowicz, Dzoana Latala, **Research and Design for** Michitaka Hirose, The University of Medical University of Graz, Austria; Wroclaw University of Technology, **Applications of Context** Tokyo, Japan. Andreas Auinger, Upper Austria Poland. Awareness Technologies University of Applied Sciences, Digital Display Case: A Study Jikun Liu, Xin Liu, Tsinghua University, Thermal Preparation of Food Austria; Martina Ziefle, RWTH Aachen on the Realization of a Virtual P.R. China; Bingxue Gao, Beijing and its Influence on Shaping the University, Germany. Transportation System for a Information Science & Technology Old and Modern Kitchen **Towards IT Security for Universal Museum Collection** University, P.R. China; Jun Cai, Przemyslaw Nowakowski, Wroclaw Takafumi Watanabe, Kenji Inose, Tsinghua University, P.R. China; Access University of Technology, Poland. Shiran Cohen, Noam Ben Asher, Makoto Ando, Toppan Printing Jenny Wang, *Nokia Research Center* Perception and Illusion in Co., Ltd., Japan; Takashi Kajinami, Beijing, P.R. China; Qing Liu, Tsinghua Joachim Meyer, Ben-Gurion University **Interior Design** Takuji Narumi, Tomohiro Tanikawa, University, P.R. China. of the Negev, Israel. Anna Jaglarz, Wroclaw University of Michitaka Hirose, The University of **Teaching the Next Generation Mobilized Collaborative Services** Technology, Poland. Tokyo, Japan. of Universal Access Designers: A in Ubiquitous Network Design for the Information Wearable Display System for **Case Study** Miaosen Gong, Jiangnan University, Society Handing down Intangible P.R. China; Ezio Manzini, Politecnico Simeon Keates, University of Abertay Agata Bonenberg, Poznan University Cultural Heritage di Milano, Italy; Federico Casalegno, Dundee, United Kingdom. of Technology, Poland. Atsushi Hiyama, Yusuke Doyama, Massachusetts Institute of Technology **Supporting Universal Usability** The University of Tokyo, Japan; (MIT), United States. of Mobile Software: Touchscreen Mariko Miyashita, Tamagawa Study of the Influence **Usability Meta-Test** University, Japan; Eikan Ebuchi, of Handset Modeling Vlado Glavinic, University of Zaareb, Masazumi Seki, Kochi Prefectural Characteristics on Image Croatia; Sandi Ljubic, University Paper Industry Technology Center, Cognition of Rijeka, Croatia; Mihael Kukec, Japan; Michitaka Hirose, The Binbin Li, Jiangnan University, Polytechnic of Varazdin, Croatia. University of Tokyo, Japan. P.R. China; Jia-liang Lin, Ningbo **Design and Development of** Digital Display Case using Non-University, P.R. China; Liang Yin, **Four Prototype Interactive** contact Head Tracking Jiangnan University, P.R. China. **Edutainment Exhibits for** Takashi Kajinami, Takuji Narumi, Service Design about the Museums Tomohiro Tanikawa, **Recycle System of College** Dimitris Grammenos, Michitaka Hirose, The University of Bicvcles Xenophon Zabulis, Damien Michel, Tokyo, Japan. Thomas Sarmis, Giannis Georgalis, Tianshi Shen, Peng Ran, Yonghe Ou, A Realtime and Direct-touch Yang Wang, Biwei Zhu, Ya Zhou, Konstantinos Tzevanidis, Interaction System for the 3D Liang Ying, Jiangnan University, P.R. Antonis Argyros, Constantine Stephanidis, Foundation **Cultural Artifact Exhibition** Wataru Wakita, Ritsumeikan for Research & Technology - Hellas **Usability Evaluation Factors** University, Japan; Katsuhito Akahane, (FORTH), Greece. **Research in Network Database** Tokyo Institute of Technology, Japan; System Masaharu Isshiki, Ehime University, Engao Zhou, Jian Zhou, Bin-bin Li, Japan; Hiromi Tanaka, Ritsumeikan Jiangnan University, P.R. China. University, Japan. The User's Emotional Elements FiveStar: Ultra-realistic Space **Research of Mobile Network Experience System Products Development Guided** Masahiro Urano, Yasushi Ikei, Tokyo by User Experience Metropolitan University, Japan; Yin Wang, Zhejiang Sci-tech Koichi Hirota, The University of Tokyo, University, P.R. China; Qing Ge, Japan; Tomohiro Amemiya, NTT Hangzhou Vocational & Technical

Corporation, Japan.

Development of Mobile AR Tour Application for the National Palace Museum of Korea Jae-Beom Kim, Changhoon Park, Hoseo University, Korea.

College, P.R. China.

OCSC S174

Design of Social Applications

Room: Park

Chair(s): Carsten Kleiner, University of Applied Sciences & Arts Hannover, Germany.

GAZO GAZO KUN: Photosharing System Using an **Anthropomorphic Photo Frame** for Communication Support Takashi Yoshino, Tomoya Matsuo, Wakayama University, Japan.

An Investigation into the Social Network between Three Generations in a Household: **Bridging the Interrogational** Gaps between the Senior and the Youth

Tsai-Hsuan Tsai, Yi-Lun Ho, Kevin Tseng, Chang Gung University,

Design and Evaluation of an Online Social Support Application for Family Caregivers

Matthieu Tixier, Myriam Lewkowicz, Universite de Technologie de Troyes, France.

A Study on Social Network Services Visualization Based on **User Needs**

Young Suk HAN, Jong Kyu Choi, Yong Gu Ji, Yonsei University, Korea.

Tweet Me Home: Exploring Information Use on Twitter in **Crisis Situations**

Nirupama Sreenivasan, Chei Sian Lee, Dion Hoe-Lian Goh, Nanyang Technological University, Singapore.

Features to Support Persistent Chat Conversation

Mohsen Rahimifar, Siti Salwah Salim, University of Malaya, Malaysia.

Factors Influencing Online Social Interactions

Ravi Shankar, Indian Institute of Technology Bombay, India.

AC **S175**

Augmenting Cognition by Social Information and Collective Intelligence

Room: Nassau

Chair(s): Wai Tat Fu, University of Illinois at Urbana-Champaign, United States; Yasuaki Sakamoto, Stevens Institute of Technology, United States.

Discovering Context: Classifying Tweets through a Semantic Transform based on Wikipedia

Yegin Genc, Yasuaki Sakamoto, Jeff Nickerson, Stevens Institute of Technology, United States.

The Crowdsourcing Design

Yasuaki Sakamoto, Yuko Tanaka, Lixiu Yu, Jeff Nickerson, Stevens Institute of Technology, United States.

Feature Selection in Crowd Creativity

Lixiu Yu, Yasuaki Sakamoto, Stevens Institute of Technology, United States.

Visual Analytics of Social Networks: Mining and **Visualizing Co-authorship** Networks

Carson Leung, Christopher Carmichael, Eu Wern Teh, The University of Manitoba, Canada.

Modelling User Behaviour and Interactions: Augmented Cognition on the Social Web

Ching-man Au Yeung, Tomoharu Iwata, NTT Corporation,

Idea Visibility, Information Diversity, and Idea Integration in Electronic Brainstorming

Elahe Javadi, Wai Tat Fu, University of Illinois at Urbana-Champaign, United States.

Designing Consumer Health Information Systems: What do **User-generated Questions Tell**

Yan Zhang, The University of Texas at Austin, United States; Wai Tat Fu, University of Illinois at Urbana-Champaign, United States.

DHM **S176**

Driver Modeling

Room: Union

Chair(s): Claus Moebus, University of Oldenburg, Germany; Vincent Duffy, Purdue University, United States.

A Simulation Environment for Analysis and Optimization of **Driver Models**

Ola Benderius, Chalmers University of Technology, Sweden; Gustav Markkula, Volvo Technology, Sweden; Krister Wolff, Mattias Wahde, Chalmers University of Technology,

The Two-point Visual Control Model of Steering - New **Empirical Evidence**

Hendrik Neumann, Barbara Deml, University of Magdeburg, Germany.

What is Human? How the Analysis of Brain Dynamics Can Help to Improve and Validate **Driver Models**

Sebastian Welke, Janna Protzak, Matthias Rotting, Technische Universitat Berlin, Germany; Thomas Jurgensohn, HFC Human-Factors-Consult GmbH, Germany.

Learning the Relevant Percepts of Modular Hierarchical **Bayesian Driver Models using a Bayesian Information Criterion**

Mark Eilers, OFFIS - Institute for Information Technology, Germany; Claus Moebus, University of Oldenburg, Germany.

Predicting the Focus of Attention and Deficits in Situation Awareness with a **Modular Hierarchical Bayesian Driver Model**

Claus Moebus, University of Oldenburg, Germany; Mark Eilers, OFFIS – Institute for Information Technology, Germany; Hilke Garbe, University of Oldenburg, Germany.

Automation Effects on Driver's Behaviour when Integrating a PADAS and a Distraction Classifier

Fabio Tango, Centro Ricerche Fiat, Italy; Luca Minin, University of Modena and Reggio Emilia, Italy; Raghav Aras, Olivier Pietquin, IMS Supelec, France.

Impact and Modeling of Driver **Behavior Due to Cooperative Assistance Systems**

Florian Laquai, Markus Duschl, Gerhard Rigoll, Technische Universitat Munchen, Germany.

HCD **S177**

HCD and Innovation

Room: Lake

Chair(s): Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

Human Interaction and Collaborative Innovation

Kevin Clark, Content Evolution, United

Design and Development of Eyes- and Hands-free Voice Interface for Mobile Phone

Kengo Fujita, Tsuneo Kato, KDDI R&D Laboratories Inc., Japan.

Consideration of HCD Methods for Service Innovation Design

Akira Kondo, Hitachi Intermedix Co., Ltd., Japan; Naoko Kondo, OpensourceCRM, Inc., Japan.

A Pattern Approach for **Designing Application**

Kohei Daimaru, Buntaro Kaji, IBM,

Building a Shared Cross-cultural Learning Community for Visual Communication Design Education

Takahito Kamihira, Senshu University, Japan: Miho Aoki, University of Alaska Fairbanks, United States; Tomoya Nakano, Senshu University, Japan.

Co-creation Process of Collaborative Work with **Communication Robot**

Seita Koike, Takeshi Ogino, Sari Takamura, Tatsushi Mivaii, Yuki Miyajima, Tokyo City University, Japan; Daishi Kato, Koyo Uemura, Kazuo Kunieda, Keiji Yamada, NEC Corporation, Japan.

One of Industrial Design Case to Share Tacit Knowledge

Hisashi Shima, Lenovo, Japan.

DUXU S178

User Experience in Complex Systems

Room: Lexington

ience,

Chair(s): Shu-Wen Tzeng, Auburn University, United States

Human-Information Interactions with Complex Software

Michael Albers, East Carolina University, United States.

Clustering Analysis to Evaluate Usability of Work-Flow Systems and to Monitor Proficiency of Workers

Toru Nakata, National Institute of Advanced Industrial Science & Technology (AIST), Japan.

Fundamental Aspects Concerning the Usability Evaluation of Model-Driven Object Oriented Programming Approaches in Machine and Plant Automation

Martin Obermeier, Steven Braun, Kerstin Sommer, Birgit Vogel-Heuser, Technische Universitat Munchen, Germany.

A Fitting Software Comparative Usability Study to Investigate Transition Challenges Faced by Hearing-Aid Practitioners

Anil Shankar, Susie Valentine, Brent Edwards, Starkey Hearing Research Center, United States.

Interface for Multi-robots Based Video Coverage

Ryad Chellali, Emmanuel Bernier, Khelifa Baizid, Istituto Italiano di Tecnologia (IIT), Italy; Mohamed Zaoui, College de France, France.

Applying Gestural Interfaces to Command-and-Control

Todd Reily, Martina Balestra, *The MITRE Corporation*, *United States*.

Improving Code Reading and Comprehension on Large Displays

Selvihan Kaptan, Bahcesehir University, Turkey; Mehmet Gokturk, Gebze Institute of Technology, Turkey.

HIMI S179

Intelligent HCI Convergence

Room: Lake

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

S180

Personalisation, Persuasion and Credibility

Room: Fulton

Chair(s): Cheryl L. Brown, *University* of North Carolina at Charlotte, *United States*.

Cryptanalysis to a Remote User Authentication Scheme Using Smart Cards for Multi-Server Environment

Youngsook Lee, Howon University, Korea; Jeeyeon Kim, Dongho Won, Sungkyunkwan University, Korea.

Analysis of Content Filtering Software

Woongryul Jeon, Sungkyunkwan University, Korea; Youngsook Lee, Howon University, Korea; Dongho Won, Sungkyunkwan University, Korea.

A Practical Analysis of Smartphone Security

Woongryul Jeon, Jeeyeon Kim, Sungkyunkwan University, Korea; Youngsook Lee, Howon University, Korea; Dongho Won, Sungkyunkwan University, Korea.

Economic Analysis of SONenabled Mobile WiMAX

Seungjin Kwack, SAMSUNG Electronics, Korea; Jahwan Koo, Jinwook Chung, Sungkyunkwan University, Korea.

An Efficient and Scalable Meeting Minutes Generation and Presentation Technique.

Berk Taner, Can Yildizli, Ahmet Nergiz, Selim Balcisoy, Sabanci University, Turkey.

A Comprehensive Reference Model for Personalized Recommender Systems

Matthias Breyer, Kawa Nazemi, Christian Stab, Dirk Burkhardt, Arjan Kuijper, *Fraunhofer, Germany*.

Server-Aided Password-Authenticated Key Exchange: from 3-Party to Group

Junghyun Nam, Konkuk University, Korea; Juryon Paik, Jeeyeon Kim, Sungkyunkwan University, Korea; Youngsook Lee, Howon University, Korea; Dongho Won, Sungkyunkwan University, Korea.

How to Persuade Sustainable Behavior Around Energy Consumption?

Youngho Rhee, Michael Chang, SAMSUNG Electronics, Korea; Youngkyu Jin, UX Center DMC R&D Center Samsung Electronics, Korea; Youngsil Jang, SAMSUNG Electronics, Korea

Different People Different Styles: Impact of Personality Style in Web Sites Credibility Judgement

Rahayu Ahmad, Jieyu Wang, UMBC, United States; Karoly Hercegfi, Budapest University of Technology and Economics, Hungary; Anita Komlodi, UMBC, United States.

Health Information Technology: A Conceptual Model of Trust

Cheryl L. Brown, *University of North Carolina at Charlotte, United States*.

A Smart Movie

Recommendation System

Sang-Ki Ko, Sang-Min Choi, Hae-Sung Eom, Yonsei University, Korea; Jeong-Won Cha, Changwon National University, Korea; Hyunchul Cho, Laehyun Kim, Korea Institute of Science and Technology (KIST), Korea; Yo-Sub Han, Yonsei University, Korea.

Proposal of the Kawaii Search System Based on the First Sight of Impression

Kyoko Hashiguchi, Katsuhiko Ogawa, Keio University, Japan.

Development of a Price Promotion Model for Online Store Selection

Shintaro Hotta, Syohei Ishizu, Yoshimitsu Nagai, *Aoyama Gakuin University, Japan*.

Chair(s): Dieter Spath, Fraunhofer, Germany; Florian Metze, Carnegie Mellon University, United States.

HCI and Auto Industry

Room: Palm Beach

Chair(s): Yong Gu Ji, Yonsei University, Korea.

Interaction Design

Room: Hamilton

National Tsing Hua University, Taiwan; Ying-Lien Lee, Chaoyang University of Technology, Taiwan.

Chair(s): Sheue-Ling Hwang,

A Design Patterns Approach to Adaptive User Interfaces for vehicle Roominess **Users with Special Needs**

Matthias Peissner, Andreas Schuller, Dieter Spath, Fraunhofer, Germany.

A Middleware Architecture for **Designing TV-based Adapted** Applications for the Elderly

Carlos Gacimartin, Jose Alberto Hernandez, David Larrabeiti, Universidad Carlos III de Madrid, Spain.

Accessibility for Older Users Through Adaptive Interfaces: Opportunities, Challenges and Achievements

Rob Edlin-White, Sue Cobb, Mirabelle D'Cruz, Anne Floyde, Sarah Lewthwaite, Johann Riedel, The University of Nottingham, United Kingdom.

A Review of Personality in Voice-**Based Man Machine Interaction**

Florian Metze, Alan Black, Carnegie Mellon University, United States; Tim Polzehl, Technische Universitat Berlin, Germany.

Sensing User Needs: Recognition Technologies and User Models for Adaptive User Interfaces

Barnabas Takacs, Semmelweis Medical University / Technical University of Budapest, Hungary; Lajos Simon, Semmelweis Medical University, Hungary; Matthias Peissner, Fraunhofer, Germany.

The Design of Adaptive Error Feedback Music Ear-Training **System with Image Cues**

Yu-Ting Huang, Shih Chien University, Taiwan; Chi Chu, China University of Technology, Taiwan.

Factors for Representing In-

Wonil Hwang, Nam-Hyo Kim, Hyeong-Joon Ahn, Soongsil University, Korea; Hee-Seok Jung, Hyundai Motor Company, Korea.

Analysis of Low-floor Bus **Passengers' Behavior Patterns** using Video Observation

Ji Yeon Kim, Hwan Hwangbo, Beom Suk Jin, Yonsei University, Korea; Bong-Ha Hwang, Young Joo Moon, Hyundai Motor Company, Korea; Yong Gu Ji, Yonsei University, Korea.

Analysis of Customer Satisfaction on the Stiffness of Outside Panels of Passenger

Ilsun Rhiu, Seoul National University, Korea; Taebeum Ryu, Hanbat National University, Korea; Byung Kee Jin, Myung Hwan Yun, Seoul National University, Korea.

The Effective IVIS Menu and Control Type of an Instrumental Gauge Cluster and Steering Wheel Remote Control with a Menu Traversal

Seongmin Kim, Jaekyu Park, Korea University, Korea; Jaeho Choe, Daejin University, Korea; Eui Seung Jung, Korea University, Korea.

Driver's Experience and **Behavioral Patterns through** the Observation of Commercial Vehicle Driving

Youngjae Lim, Korea University, Korea; Sungjoon Park, Namseoul University, Korea; Eui Seung Jung, Taeil Kim, Korea University, Korea.

Improving Human-Machine Interaction - A Non-Invasive Approach to Detect Emotions in **Car Drivers**

Michael Oehl, Felix Siebert, Tessa-Karina Tews, Rainer Hoger, Hans-Ruediger Pfister, Leuphana University of Lueneburg, Germany.

Evaluation of Collision Avoidance Prototype Head-Up Display Interface for Older Drivers

Vassilis Charissis, Glasgow Caledonian University, United Kingdom; Stylianos Papanastasiou, Chalmers University of Technology, Sweden; Lewis Mackenzie, Sachi Arafat, University of Glasgow, United Kingdom.

Evaluation of Wayfinding Performance and Workload on **Electronic Map Interface**

Ya-Li Lin, Cheng-Han Wang, *Tunghai* University, Taiwan.

Effects of Presence on Causing Cybersickness in the Elderly within a 3D Virtual Store

Cheng-Li Liu, Vanung University, Taiwan; Shiaw-Tsyr Uang, Minghsin University of Science and Technology, Taiwan.

The Influence of Social **Experience in Online Games**

Hua Qin, Beijing University of Civil Engineering and Architecture, P.R. China; P.L. Patrick Rau, Tsinghua University, P.R. China; Song-feng Gao, Beijing University of Civil Engineering and Architecture, P.R. China.

Effects of Age Groups and **Distortion Types on Text-based CAPTCHA Tasks**

Chih-Hsiang Hsu, Ying-Lien Lee, Chaoyang University of Technology,

Predicting The Effects of Timegaps for Adaptive Cruise Control (ACC) on Bus Driver Performance

Brian Lin, University of Michigan Transportation Research Institute (UMTRI), United States; Sheue-Ling Hwang, National Tsing Hua University, Taiwan.

Measurement of Tagging Behavior Differences

Li-Chen Tsai, Sheue-Ling Hwang, National Tsing Hua University, Taiwan; Eric Kuo-Hao Tang, Fung-Chia University, Taiwan.

User Interactive Design for **Digital TV Web Surfing**

Chih-Fei Chuang, National Tsing Hua University, Taiwan; Nancy Huang, Purdue University, United States; Sheue-Ling Hwang, National Tsing Hua University, Taiwan.

EPCE S184

Cognitive Design for Human-**Automation Interaction in** Vehicle Guidance

Room: Taylor

Chair(s): Axel Schulte, Universitat der Bundeswehr Munchen, Germany.

Mental Resource Demands Prediction as a Key Element for Future Assistant Systems in **Military Helicopters**

Felix Maiwald, Axel Schulte, Universitat der Bundeswehr Munchen, Germany.

Designing Effective Soldier-Robot Teams in Complex Environments: Training, Interfaces, and Individual **Differences**

Michael Barnes, Jessie Chen, US Army Research Laboratory, United States; Florian Jentsch, University of Central Florida, United States; Elizabeth Redden, US Army Research Laboratory, United States.

Measuring Self-adaptive UAV Operators' Load-Shedding Strategies under High Workload Axel Schulte, Diana Donath,

Universitat der Bundeswehr Munchen,

Display Requirements for an Interactive Rail Scheduling Display

Jacqueline Tappan, David Pitman, Mary Cummings, Massachusetts Institute of Technology (MIT), United States; Denis Miglianico, Alstom Transport, France.

Authority Sharing in Mixed Initiative Control of Multiple Uninhabited Aerial Vehicles

Rui Goncalves, Sergio Ferreira, Jose Pinto, Joao Sousa, Gil Goncalves, University of Porto, Portugal.

Delegation to Automation: Performance and Implications in **Non-Optimal Situations**

Christopher Miller, Smart Information Flow Technologies, United States; Tyler Shaw, George Mason University, United States; Joshua Hamell, Smart Information Flow Technologies. United States; Adam Emfield, George Mason University, United States; David Musliner, Smart Information Flow Technologies, United States; Ewart De Visser, Raja Parasurman, George Mason University, United

Mixed-Initiative Multi-UAV Mission Planning by Merging Human and Machine Cognitive Skills

Ruben Strenzke, Axel Schulte, Universitat der Bundeswehr Munchen, UAHCI **S185 S186 S187**

Functional Modeling and Rehabilitation (II)

Room: Dixie

Chair(s): Jue Wang, Xi'an Jiaotong University, P.R. China.

Advanced Interaction Supporting Universal Access in Educational Systems

Room: Union

Chair(s): Vlado Glavinic, University of Zagreb, Croatia; Andrina Granic, University of Split, Croatia.

Implications of Cloud Computing for People with Cognitive Disabilities

Room: Liberty

Chair(s): Clayton Lewis, University of Colorado, United States.

Effect of Spinal Cord Injury on **Nonlinear Complexity of Skin Blood Flow Oscillations**

Yih-Kuen Jan, Fuyuan Liao, University of Oklahoma Health Sciences Center. United States; Stephanie Burns, Oklahoma City Veterans Affair Medical Center, United States.

The Design and Manufacture of Functional Micro-stationary **PCR Chip**

Jinguan Nie, Yulong Zhao, Yimin Liu, Kevin Liu, Niancai Peng, Xi'an Jiaotong University, P.R. China.

Intensity Analysis of Surface Myoelectric Signals from Lower Limbs during Key Gait Phases by Wavelets in Time-Frequency

Jiangang Yang, Xuan Gao, Baikun Wan, Dong Ming, Xiaoman Cheng, Hongzhi Qi, Xingwei An, Long Chen, Shuang Qiu, Tianjin University, P.R. China; Weijie Wang, University of Dundee, United Kingdom.

Control of Powered Prosthetic Hand Using Multidimensional **Ultrasound Signals: A Pilot** Study

Xin Chen, Siping Chen, Guo Dan, Shenzhen University, P.R. China.

A Method with Tri-axial **Acceleration Sensor for Fall Detection of the Elderly in Daily Activities**

Nan Bao, Cong Feng, Yan Kang, Lisheng Xu, Yuhang Du, Lei Zhang, Feifei Yang, Qingchao Li, Northeastern University, P.R. China.

Handle Reaction Vector Analysis with Fuzzy Clustering and Support Vector Machine during FES-assisted Walking Rehabilitation

Weixi Zhu, Dong Ming, Baikun Wan, Xiaoman Cheng, Hongzhi Qi, Yuanyuan Chen, Rui Xu, *Tianjin* University, P.R. China; Weijie Wang, University of Dundee, United Kingdom.

Shadow Expert Technique (SET) for Interaction Analysis in **Educational Systems**

Christian Stickel, Martin Ebner, Graz University of Technology, Austria: Andreas Holzinger, Medical University of Graz, Austria.

Intelligent Provision of Semantic Web Services in Educational Systems

Marija Zelic, Marko Rosic, University of Split, Croatia; Vlado Glavinic, University of Zagreb, Croatia.

Educational Impact of Structured Podcasts on Blind

Maria Claudia Buzzi, Marina Buzzi, Barbara Leporini, Giulio Mori, Consiglio Nazionale delle Ricerche (CNR), Italy.

Learning Styles and Navigation Patterns in Web-based **Education**

Jelena Nakic, Nikola Marangunic, Andrina Granic, University of Split,

Accessible Education for Autistic Children: ABA-based Didactic SW

Silvia Artoni, Lucca Associazione Sindromi Autistiche (LASA), Italy; Maria Claudia Buzzi, Marina Buzzi, Consiglio Nazionale delle Ricerche (CNR), Italy; Claudia Fenili, Associazione Sindromi Autistiche (ASA), Italy; Simona Mencarini, Lucca Associazione Sindromi Autistiche (LASA), Italy.

Intelligent Working Environments for the Ambient Classroom

Maria Korozi, Stavroula Ntoa, Margherita Antona, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

Towards Ambient Intelligence in the Classroom

George Margetis, Asterios Leonidis, Margherita Antona, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

Legal and Policy Implications of **Cloud Computing**

Eve Hill, Brown Goldstein & Levy, United States.

From Clouds to Rain: **Consolidating and Simplifying Online Communication Services** with Easy One Communicator

Jeffery Hoehl, University of Colorado, United States; Gregg Vanderheiden, University of Wisconsin-Madison, United States.

Untapped Markets in Cloud Computing: Perspectives and **Profiles of Individuals with Intellectual and Developmental Disabilities and their Families** Ann Caldwell, The Arc of the United

Implications of Cloud **Computing for People with** Cognitive Disabilities

States, United States,

James Sullivan, Clayton Lewis, Jeffery Hoehl, University of Colorado, United States.

Opportunities in Cloud Computing for People with Cognitive Disabilities: Designer and User Perspective.

Clayton Lewis, *University of* Colorado, United States; Nancy Ward, theArcLink, United States.

VMR S188

Dive into the Movie - New Technique to Make Audience Attainable into the Contents

Room: Manatee

Chair(s): Shigeo Morishima, Waseda University, Japan; Yasushi Yagi, Osaka University, Japan; Satoshi Nakamura, National Institute of Information and Communications Technology, Japan.

Instant Movie Casting with Personality: Dive Into the Movie System

Shigeo Morishima, Waseda University, Japan: Yasushi Yaqi, Osaka University, Japan; Satoshi Nakamura, National Institute of Information and Communications Technology, Japan.

Realistic Facial Animation by **Automatic Individual Head Modeling** and Facial Muscle Adjustment

Akinobu Maejima, Hiroyuki Kubo, Shigeo Morishima, Waseda University, Japan.

3-D Sound Reproduction System for Immersive Environments based on the **Boundary Surface Control Principle**

Seigo Enomoto, Yusuke Ikeda, National Institute of Information and Communications Technology, Japan; Shiro Ise, Kyoto University, Japan; Satoshi Nakamura, National Institute of Information and Communications Technology, Japan.

Providing Immersive Virtual Experience with First-person Perspective Omnidirectional Movies and Three Dimensional Sound Field

Kazuaki Kondo, Kyoto University, Japan; Yasuhiro Mukaigawa, Osaka University, Japan; Yusuke Ikeda, Seigo Enomoto, National Institute of Information and Communications Technology, Japan; Shiro Ise, Kyoto University, Japan; Satoshi Nakamura, National Institute of Information and Communications Technology, Japan; Yasushi Yaqi, Osaka University, Japan.

The Online Gait Measurement for Characteristic Gait Animation Synthesis

Yasushi Makihara, Mayu Okumura, Yasushi Yagi, Osaka University, Japan; Shigeo Morishima, Waseda University, Japan.

Personalized Voice Assignment **Techniques for Synchronized Scenario Speech Output in Entertainment** Systems

Shin-ichi Kawamoto, Japan Advanced Institute of Science and Technology (JAIST), Japan; Tatsuo Yotsukura, OLM Digital Inc., Japan; Satoshi Nakamura, National Institute of Information and Communications Technology, Japan; Shigeo Morishima, Waseda University, Japan.

Measuring and Modeling of Multilayered Subsurface Scattering for

Yasushi Yagi, Osaka University, Japan.

Human Skin Tomohiro Mashita, Yasuhiro Mukaigawa, Room: Park

Chair(s): P.L. Patrick Rau, Tsinghua University, P.R. China; Chih-Ning Chu, Chung Yuan Christian University,

Employee Experience Management of Convenience Store in Beijing

Jing Guo, P.L. Patrick Rau, Tsinghua University, P.R. China.

Smart Store Understanding Consumer's Preference through **Behavior Logs**

Akihiro Ogino, Kyoto Sangyo University, Japan; Taketo Kobayashi, Yusuke Iida, Toshikazu Kato, Chuo University, Japan.

Design Convenience Stores for Chinese Teenagers

Jia Zhou, P.L. Patrick Rau, Hui Li, Wei Jiang, Bayan Konirbay, Christian Seyfert, Kanta Sribunnak, Christoph Winkler, Tsinghua University, P.R. China.

User Experience Design for Convenient Store's Kiosk

Chih-Ning Chu, Chung Yuan Christian University, Taiwan; P.L. Patrick Rau, Tsinghua University, P.R. China; Calvin Lai, Shih Chien University, Taiwan; Peiling Liu, National Taiwan University, Taiwan.

Can I Help You?: Towards the Improvement of Occupational **Experience for Convenience** Store Employees in Taiwan

Yuan-Ling Chiao, Ching-Hu Lu, Hwei-Wen Yeh, Yuan-Yun Chou, Peiling Liu, National Taiwan University, Taiwan.

OCSC S190

Social Spaces for Virtual Gameplay and Learning - New Inquiries

Room: Escambia

Computing

Online Communities and

Chair(s): Anthony Faiola, Indiana University, United States; Alexander Voiskounsky, *Moscow* Lomonosov State University, Russia.

"Your Team Cohesion is Low": A Systematic Study of the Effects of Social Network Feedback on **Mediated Activity**

Luciano Gamberini, Francesco Martino, Anna Spagnolli, Roberto Bau, Michela Ferron, University of Padova, Italy.

Preschoolers as Video Gamers

Alexander Voiskounsky, *Moscow* Lomonosov State University, Russia.

A Virtual World Prototype for Interacting with a Music Collection

Jukka Holm, *Tampere University* of Technology, Finland; Arto Lehtiniemi, Nokia Research Center, Finland.

Effects of a Synchronized Scoring Interface on Musical Quality

YUJI TAKAI, Masao Ohira, Kenichi Matsumoto, Nara Institute of Science and Technology, Japan.

Promoting Reflective Learning: The Role of Blogs in the Classroom

Rahayu Ahmad, Wayne Lutters, UMBC, United States.

AC **S191**

Augmented Cognition Applications

Room: Jackson

Chair(s): Martha Crosby, University of Hawaii at Manoa, United States; Marc Grootjen, TNO/EagleScience, Netherlands.

Adaptive Attention Allocation Support: Effects of System **Conservativeness and Human** Competence

Peter-Paul Van Maanen, TNO, Netherlands; Teun Lucassen, University of Twente, Netherlands; Kees Van Dongen, TNO, Netherlands.

Performance Measures to Enable Agent-based Support in Demanding Circumstances

Fiemke Both, Mark Hoogendoorn, Rianne Van Lambalgen. Rogier Oorburg, Michael De Vos, VU University Amsterdam, Netherlands.

The Brain as Target Image **Detector: The Role of Image** Category and Presentation Time

Anne-Marie Brouwer, Jan Van Erp, Bart Kappe, TNO, Netherlands; Anne Urai, TNO / University College Utrecht, Netherlands.

Augmented Phonocardiogram **Acquisition and Analysis**

Nancy Reed, Todd Reed, University of Hawaii at Manoa, United States.

Developing and Automating a Prototype for Assessing Levels of Student Involvement

Curtis Ikehara, Martha Crosby, University of Hawaii at Manoa, United States.

Cognitive Adaptable Man Machine Interfaces for the Firefighter Commander: Design Framework and Research Methodology

Maurits De Graaf, Thales NL, Netherlands; Michel Varkevisser, Masja Kempen, Thales Research & Technology, Netherlands; Nicolas Jourden, Thales NL, Netherlands.

Estimating the Level of Motion Sickness based on EEG Spectra

Li-Wei Ko, Chun-Shu Wei, National Chiao Tung University, Taiwan; Tzyy-Ping Jung, *University of* California San Diego, United States; Chin-Teng Lin, National Chiao Tung University, Taiwan.

DHM **S192**

Product Design & Human Interface

Room: Madison

Chair(s): Ravindra Goonetilleke, Hong Kong University of Science & Technology, Hong Kong; Ameersing Luximon, The Hong Kong Polytechnic University, Hong Kong.

Three-dimensional Grading of Virtual Garment with Design **Signature Curves**

Roger Ng, The Hong Kong Polytechnic University, Hong Kong.

3D Parametric Body Model Based on Chinese Female Anhtropometric Analysis

Sixiang Peng, Chee-kooi Chan, W.H. Ip, Ameersing Luximon, The Hong Kong Polytechnic University, Hong Kong.

Mass Customization Methodology for Footwear Desian

YiFan Zhang, Ameersing Luximon, Xiao Ma, The Hong Kong Polytechnic University, Hong Kong; Xiaoling Guo, Zhongshan Boai Hospital, P.R. China; Ming Zhang, The Hong Kong Polytechnic University, Hong Kong.

Preliminary Study on Dynamic Foot Model

Ameersing Luximon, Yan Luximon, The Hong Kong Polytechnic University, Hong Kong.

Footbed Influences on Posture and Perceived Feel

Thilina Weerasinghe, Ravindra Goonetilleke, Hong Kong University of Science & Technology, Hong Kong.

StabilitySole: Embedded Sensor Insole for Balance and **Gait Monitoring**

Peyton Paulick, Hamid Djalilian, Mark Bachman, University of California, Irvine, United States.

DUXU HCD **S193 S194 S195**

Experience, and Usability

Design, User

Design and Service

Room: Sarasota

Chair(s): Toshiki Yamaoka, Wakayama University, Japan.

Structure of FUN Factors in the **Interaction with Products**

Sayoko Tominaga, Toshihisa Doi, Toshiki Yamaoka, Wakayama University, Japan; Yuka Misyashita, Masayoshi Toriumi, NISSAN MOTOR CO., LTD, Japan.

Designing of an Effective Monitor Partitioning System with Adjustable Virtual Bezel

Sang-su Lee, Hyunjeong Kim, Yongki Lee, Minseok Sim, Kun-Pyo Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

The Impact of Robots Language Form on People's Perception of **Robots**

Yunkyung Kim, Sonya Kwak, Myungsuk Kim, Korea Advanced *Institute of Science and Technology* (KAIST), Korea.

Research in the Use of Product **Semantics to Communicate Product Design Information**

Chung-Hung Lin, Ling Tung University, Taiwan.

Understanding the Business Realities; An Interview Technique which can Visualize the Job Problems

Ayako Yajima, Fujitsu, Ltd., Japan; Toshiki Yamaoka, Wakayama University, Japan; Yuji Shiino, Fujitsu, Ltd., Japan.

A Proposal of Service Design **Evaluation Method**

Toshiki Yamaoka, Wakayama University, Japan.

Electronic Medication Reminder for Older Adults

Yi-Lin Lo, Chang-Franw Lee, Wang-Chin Tsai, National Yunlin University of Science and Technology, Taiwan.

User Experience Design Methods

Room: Lexington

Chair(s): Michael Albers, East Carolina University, United States.

Designing Products and Devices

Room: Jade

Chair(s): Claudia Mont'Alvao, PUC -Rio de Janeiro, Brazil

A Product Design Approach by **Integrating Axiomatic Design** and TRIZ

Shiaw-Tsyr Uang, Minghsin University of Science and Technology, Taiwan: Cheng-Li Liu, Vanung University, Taiwan; Mali Chang, Minghsin University of Science and Technology,

Different UI, Same UX: A Design Concept for Implementing a Locally-Optimized and Globally-**Unified Interaction Experience**

Sung Woo Kim, KT R&D Center, Korea; Hankyung Jo, SAMSUNG Electronics, Korea; Da Yun Ha, Kookmin University,

Motivating Change and **Reducing Cost with the Discount** Video Data Analysis Technique

Jody Wynn, Jeremiah Still, Missouri Western State University, United

The Application of the Concept of Affordance to a Creative **Design Method**

Chien-Kuo Teng, Shih Chien University, Taiwan; Ming-Chuen Chuang, National Chiao Tung University, Taiwan.

A study of Interface Design Method on Crossing Mediadimension

Hung-Pin Hsu, National Chiao Tung University, Taiwan.

Developing Idea Generation for the Interface Design Process with Mass Collaboration System

Daeeop Kim, Sang-su Lee, Seungwoo Maeng, Kun-Pyo Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

Designing Pervasive Games for Learning

Carmelo Ardito, Rosa Lanzilotti, Universita degli Studi di Bari, Italy; Dimitrios Raptis, Christos Sintoris, Nikoleta Yiannoutsou, Nikolaos Avouris, University of Patras,

Greece; Maria Francesca Costabile, Universita degli Studi di Bari, Italy.

An Air Conditioning Control Method Based on Biological **Fluctuation**

Hiroki Matsumoto, Yoshio Iwai, Yutaka Nakamura, Hiroshi Ishiguro, Osaka University, Japan.

Prospecting a New Physical Artifact of Interaction for iDTV: Results of Participatory **Practices**

Leonardo Miranda, Heiko Hornung, M. Cecilia Baranauskas, University of Campinas (UNICAMP), Brazil.

Designing Notebook Computers to Ensure a Comfortable User **Experience: Effects of Surface** Temperature, Material, Locality, and Ambient Temperature

Eric Baugh, Rina Doherty, Intel Corporation, United States.

An Experiment About how to **Feel Temperature Change of** Mouse

Shigeyoshi lizuka, Kanagawa University, Japan.

Customized Usability Engineering for a Solar Control Unit: Adapting Traditional Methods to Domain and Project Constraints

Patricia Bohm, Tim Schneidermeier, Christian Wolff, University of Regensburg, Germany.

Methodology for Evaluating Multimodal Biometric **Authentication on Mobile** Devices

Claudia Tambascia, Robson Eudes Duarte, Ewerton Martins Menezes, CPqD Foundation, Brazil.

Design and Evaluation of the Customized Product Color Combination Interfaces Using 3D Model and 2D Illustration Display

Cheih-Ying Chen, National Pingtung University of Education, Taiwan; Ying-Jye Lee, National Kaohsiung University of Applied Sciences, Taiwan.

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HIMI **S196**

Psychological and Physiological Model Applied to Human Interface Design

Room: Sarasota

Chair(s): Shin'ichi Fukuzumi, NEC Corporation, Japan.

Feasibility Study of Predictive Human Performance Modeling Technique in Field Activities

Naomi Yano, Toshiyuki Asahi, Shin'ichi Fukuzumi, NEC Corporation, Japan; Bonnie John, IBM T. J. Watson Research Center, United States.

Effect of Menstrual Distress on Task Performance

Keiko Kasamatsu, Mi Kyong Park, Seiko Taki, Tokyo Metropolitan University, Japan.

Bereitschaftspotential Modeling by DBNM and Its Application to BCI

Shino Takata, Toshimasa Yamazaki, Maiko Sakamoto, Kvushu Institute of Technology, Japan; Takahiro Yamanoi, Hokkai Gakuen University, Japan; Kenichi Kamijo, NEC Green Innovation Research Labs, Japan.

Basic study of Analysis of **Human Brain Activities during** Car Driving

Noboru Takahashi, Shunii Shimizu, Yukihiro Hirata, Tokyo University of Science, Suwa, Japan; Hiroyuki Nara, Hokkaido University, Japan; Hiroaki Inoue, Tokyo University of Science, Suwa, Japan; Nobuhide Hirai, Senichiro Kikuchi, Eiju Watanabe, Satoshi Kato, Jichi Medical University,

Construction of a Model for Discriminating between Electroencephalographic Patterns at the Time of Incorrect **Inputs Based on Sensitivity Spectrum Analysis**

Raita Ohori, Daiki Shinkai, Yoshimitsu Nagai, Syohei Ishizu, Aoyama Gakuin University, Japan.

A Study of Attention Control by **Using Eye Communication with** an Anthropomorphic Agent

Tatsuya Mita, Ryo Wada, Noriaki Kuwahara, Kazunari Morimoto, Kyoto Institute of Technology, Japan.

ERACLE: Electromyography System for Gesture Interaction

Paolo Belluco, Monica Bordegoni, Umberto Cugini, Politecnico di Milano, Italy.

HCI **S197**

Executable Models to Bridge Design Time and Runtime of Interactive Systems

Room: Lake

Chair(s): Birgit Bomsdorf, Fulda University of Applied Sciences, Germany; Sebastian Feuerstack, Universidade Federal de Sao Carlos, **Innovative User Interfaces for Navigation and Guidance**

S198

Room: Manatee

Chair(s): Tom Plocher, Honeywell Labs, United States.

S199 Human Interaction in Mobility

Room: Palm Beach

Chair(s): Bertrand David, Ecole Centrale de Lyon, France.

Intertwined Modeling and Implementation of Interactive Systems using HOPS

Anke Dittmar, Peter Forbrig, University of Rostock, Germany.

Building Multimodal Interfaces out of Executable, Model-based **Interactors and Mappings**

Sebastian Feuerstack Ednaldo Pizzolato, Universidade Federal de Sao Carlos, Brazil.

Configurable Executable Task Models supporting the **Transition from Design Time to** Runtime

Birgit Bomsdorf, Stefan Grau, Martin Hudasch, Jan-Torsten Milde, Fulda University of Applied Sciences,

User Interface Representation **Using Simple Components**

Javier Rodeiro Iglesias, *University* of Vigo, Spain; Pedro Teixeira-Faria, Polytechnic Institute of Viana do Castelo, Portugal.

Using Sound Patterns to Enhance Directional Sound for Emergency Route Guidance

Tom Plocher, Zhao Xia Janet Jin, Honeywell Labs, United States: Foong-Yeen Donny Chan, Honeywell Technology Solutions-China, P.R. China.

Believe What You Hear, Not What You See - Vision Interferes with **Auditory Route Guidance in Complex Environment**

Ying Wang, Huiting Zhang, Lu Yu, Kan Zhang, Xianghong Sun, Chinese Academy of Sciences, P.R. China; Tom Plocher, Honeywell Labs, United

Implementing Effective Tactile Symbology for Orientation and Navigation

Bruce Mortimer, Gary Zets, Greg Mort, Curtis Shovan, Engineering Acoustics, Inc., United

A Knowledge Elicitation Study for a Speech Enabled GIS to Handle Vagueness in Communication

Hongmei Wang, Northern Kentucky University, United States.

Kansei Stroll Map: Walking Around a City Using Visualized Impressions of Streetscapes

Yuichiro Kinoshita, Satoshi Tsukanaka, Takumi Nakama, University of Yamanashi, Japan.

Behavioral Cost-Based Recommendation Model for Wanderers in Town

Kenro Aihara, Hitoshi Koshiba, Hideaki Takeda, National Institute of Informatics, Japan.

The Effect of Time Orientation and Representation of Points of Interests on the Use of Mobile **Tour Guide**

Fei Gao, Qin Gao, Tsinghua University, P.R. China.

Gaze-directed Hands-free Interface for Mobile Interaction Gie-seo Park, Jong-gil Ahn,

Gerard Kim, Korea University, Korea. XML in Formal Specification, Verification and Generation of Mobile HCI

Ines Riahi, Meriem Riahi, Laboratoire CRISTAL, Tunisia; Faouzi Moussa, Universite de Tunis, Tunisia.

Field to File: A Tool for Activity **Documentation Work in Remote Mobility Environments**

Raul Casillas, Alberto Moran, Universidad Autonoma de Baja California, Mexico.

Innovative User Interfaces for Wearable Computers in Real Augmented Environment

Yun Zhou, Bertrand David, Rene Chalon, Ecole Centrale de Lyon,

Interaction in Mobility: The **Evaluation of Interactive** Systems Used by Travellers in **Transportation Contexts**

Christophe Kolski, University of Valenciennes, France; Guillaume Uster, INRETS, France; Jean-Marc Robert, Ecole Polytechnique de Montreal, Canada; Kathia Oliveira, University of Valenciennes, France; Bertrand David, Ecole Centrale de Lyon, France.

Introducing Mobility in Serious Games: Enhancing Situated and **Collaborative Learning**

Sebastien George, Audrey Serna, Universite de Lyon, France.

16:00 - 18:00 **THURSDAY** S200 UAHCI S201 S202

Human System Interaction

Room: Jackson

Chair(s): Michiya Yamamoto, Kwansei Gakuin University, Japan.

Proposal of a Method for Promotion of Continuous Pro-Environmental Behavior with Easy Communication

Saizo Aoyagi, Tomoaki Okamura, Hirotake Ishii, Hiroshi Shimoda, *Kyoto University, Japan*.

Proposal of an Office Work Productivity Model Based on Short Pauses in Mental Tasks

Kazune Miyagi, Show Kawano, Hong Zhe Jin, Hiroshi Shimoda, Hirotake Ishii, *Kyoto University, Japan*.

Promotion Project for Communication between Artisans and Consumers Supported by Media Technology

Ritsuko Izuhara, Sho Yokokawa, Shinya Suzuki, Kanazawa Institute of Technology, Japan.

A Configuration Method of Visual Media by Using Characters of Audiences for Embodied Sports Cheering

Kentaro Okamoto, Michiya Yamamoto, Kwansei Gakuin University, Japan; Tomio Watanabe, Okayama Prefectural University, Japan.

Development of Embodied Visual Effects which Expand the Presentation Motion of Emphasis and Indication

Yuya Takao, Michiya Yamamoto, Kwansei Gakuin University, Japan; Tomio Watanabe, Okayama Prefectural University, Japan.

Synchronization and Fluctuation of Rhythm in Musical Cooperative Performance

Tomohito Yamamoto, *Kanazawa Institute of Technology, Japan*.

ShoeBox: a Natural Way of Organizing Pictures According to User's Affinities

Bojan Blazica, Daniel Vladusic, *Xlab* d.o.o., *Slovenia*; Dunja Mladenic, *Jozef Stefan Institute, Slovenia*.

Personal Health Systems (PHS) Integration With Ambient Assisted Living (AAL) : Is Ambient Assisted Health (AAH) a Reality?

Room: Hamilton

Chair(s): Nicos Maglaveras, Centre for Research and Technology Hellas (CERTH) / Aristotle University of Thessaloniki, Greece.

New Trends in Non-visual Interaction

Room: Liberty

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

Design Access in Human Communication and Interaction

S203

Room: Madison

Chair(s): Fong-Gong Wu, National Cheng Kung University, Taiwan.

The REMOTE AAL Project: Remote Health and Social Care for Independent Living of Isolated Elderly with Chronic Conditions

Evangelos Bekiaris, Alexandros Mourouzis, Centre for Research and Technology Hellas (CERTH), Greece; Nicos Maglaveras, Centre for Research and Technology Hellas (CERTH) / Aristotle University of Thessaloniki, Greece.

A Novel Design Approach for Multi-device Adaptable User Interfaces: Concepts, Methods and Examples

Alexandros Mourouzis, Centre for Research and Technology Hellas (CERTH), Greece; Asterios Leonidis, Michalis Foukarakis,

Margherita Antona, Foundation for Research & Technology - Hellas (FORTH), Greece; Nicos Maglaveras, Centre for Research and Technology Hellas (CERTH) Aristotle University of Thessaloniki,

Adaptive Implicit Interaction for Healthy Nutrition and Food Intake Supervision

Felix Kamieth, Andreas Braun, Christian Schlehuber, *Fraunhofer, Germany*.

Interactive Personalization of Ambient Assisted Living Environments

Alexander Marinc, Carsten Stocklow, Andreas Braun, Fraunhofer, Germany; Carsten Limberger, Technical University of Darmstadt, Germany; Cristian Hofmann, Arjan Kuijper, Fraunhofer, Germany.

Results of the Usability and Acceptance Evaluation of a Cardiac Rehabilitation System

Cecilia Vera Munoz, Maria Teresa Arredondo, Ignacio Peinado, Manuel Ottaviano, JoseManuel Paez, Arturo Diaz De Barrionuevo, Universidad Politecnica de Madrid, Spain.

User Interface Framework for Ambient Intelligence Platforms

Patricia Abril-Jimenez, Cecilia Vera Munoz, Maria Teresa Arredondo, *Universidad Politecnica de Madrid, Spain*; Haydee Alvarez, *SIEMENS, S.A., Spain*; Jose Baragano Galan, *Universidad Politecnica de Madrid, Spain*.

Emergent Design: Bringing the Learner Closer to the Experience Joseph Defazio, Kevin Rand, *Indiana* University, United States.

New Trends in Non-visual Interaction – Sonification of Maps

Vidas Lauruska, Siauliai University, Lithuania.

Pregnancy Test for the Vision-Impaired Users

Tereza Hykova, Adam Sporka, Jan Vystrcil, Martin Klima, Pavel Slavik, Czech Technical University in Prague, Czech Republic.

Fuzzy-Logic Controller for Speaker-Independent Speech Recognition System in Computer Games

Moyen Mustaquim, *Uppsala University*, *Sweden*.

Introducing TactoWeb: A Tool to Spatially Explore Web Pages for Users with Visual Impairment

Gregory Petit, Ecole Polytechnique de Montreal, Canada; Aude Dufresne, Universite de Montreal, Canada; Jean-Marc Robert, Ecole Polytechnique de Montreal, Canada.

Audiopolis, Navigation through a Virtual City Using Audio and Haptic Interfaces for People Who are Blind

Jaime Sanchez, Javiera Mascaro, *University of Chile, Chile.*

A-Cross: An Accessible Crossword Puzzle for Visually Impaired Users

Stavroula Ntoa, Ilia Adami, Foundation for Research & Technology - Hellas (FORTH), Greece; Giannis Prokopiou, University of Crete, Greece; Margherita Antona, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

Importance of Computer Technology to the Blind and Partially Sighted People Frances Candiru, Uganda National

Association of the Blind, Uganda.

iAWN: Designing Smart Artifacts for Sustainable Awareness

Tay-Sheng Jeng, Yu-Pin Ma, Yang-Ting Shen, *National Cheng Kung University, Taiwan*.

A Method to Solve the Communication Gap between Designers and Users

Jeichen Hsieh, Chia-Ching Lin, Tunghai University, Taiwan; Pao-Tai Hsieh, Tai-Chung Institute of Technology, Taiwan.

The Comparison of Different Sensory Outputs on the Driving Overtake Alarm System

Yu-Chun Huang, Chia-Jung Tsai, Jo-Yu Kuo, Fong-Gong Wu, *National Cheng Kung University, Taiwan*.

Exploration of the Cultural Image of Chinese Form Using Culture Identity Design

Ying-Jye Lee, National Kaohsiung University of Applied Sciences, Taiwan; Cheih-Ying Chen, National Pingtung University of Education, Taiwan.

Visual Design Elements of Photos on Taiwanese Female Clothing On-line Sales

Ro-Han Chang, Tsai-Rong Yu, Yao-Cheng Tsai, *Chung Yuan Christian University, Taiwan*.

Museum Exhibit Content Recommendation and Guidance System Focusing on Experience Design

Ding-Bang Luh, *National Cheng Kung University, Taiwan*; Tsai-Lin Yang, *Shu-Te University, Taiwan*; Chih-lin Chiang, Ssu-ling Huang, *National Cheng Kung University, Taiwan*.

Product Form Feature Selection for Mobile Phone Design using LS-SVR and ARD

Chih-Chieh Yang, Southern Taiwan University, Taiwan; Meng-Dar Shieh, National Cheng Kung University, Taiwan; Kuang-Hsiung Chen, Pei-Ju Lin, Southern Taiwan University, Taiwan. **S204**

John Conomikes Jr., Zachary Pacheco, Carnegie Mellon University, United States; Salvador Barrera, Juan Antonio Cantu, Lucy Beatriz Gomez, Christian De los Reyes, Juan Manuel Mendez-Villarreal, Universidad de Monterrey (UDEM), Mexico; Takeo Shime, Yuki Kamiya, Hedeki Kawai, Kazuo Kunieda, Keiji Yamada, NEC Corporation, Japan.

Sample Size Estimation for **Statistical Comparative Test of Training by Using Augmented Reality Via Theoretical Formula** and OCC Graphs: Aeronautical Case of a Component Assemblage

Fernando Suarez-Warden, Yocelin Cervantes-Gloria, Eduardo Gonzalez Mendivil, ITESM -Monterrey Campus, Mexico.

Augmented Reality: An Advantageous Option for Complex Training and **Maintenance Operations in Aeronautic Related Processes**

Horacio Rios, Mauricio Hincapie, Andrea Caponio, Emilio Mercado Field, Eduardo Gonzalez Mendivil, ITESM - Monterrey Campus, Mexico.

Collaborative Mixed-Reality Platform for the Design **Assessment of Cars Interior**

Giandomenico Caruso, Samuele Polistina, Monica Bordegoni, Marcello Aliverti, Politecnico di Milano,

Design Criteria for AR-based **Training of Maintenance and** Assembly Tasks

Sabine Webel, Ulrich Bockholt, Jens Keil, Fraunhofer, Germany.

Spatial Clearance Verification Using 3D Laser Range Scanner and Augmented Reality

Hirotake Ishii, Shuhei Aoyama, Yoshihito Ono, Weida Yan, Hiroshi Shimoda, Kyoto University, Japan; Masanori Izumi, Japan Atomic Energy Agency, Japan.

IMAR: Highly Parallel Architecture for Markerless Augmented Reality in Aircraft Maintenance

Andrea Caponio, Mauricio Hincapie, Eduardo Gonzalez Mendivil, ITESM -Monterrey Campus, Mexico.

IDGD S205

Culture and Product Design

Room: Park

Chair(s): Haiying Wang, **Design and Global Development** Northeastern University, P.R. China.

Decision Support System for Industrial Designer based on Kansei Engineering

Fu Guo, Long Ren, Zhenke He, Haiying Wang, Northeastern University, P.R. China.

Study on the Perception of Car Appearance based on Fuzzy Inference

Fu Guo, Yu Sun, Chao Chen, Haiying Wang, Chongyang Liu, Northeastern University, P.R. China.

Discussion of Design and **Experiential Marketing in** Ming-Show Pottery Cultural **Creative Product**

I-Yu Chen, Chi-Hsiung Chen, Cheng-Hsui Chen, National Yunlin University of Science and Technology, Taiwan.

A Study on the Application of **Cultural Elements in Product** Design

Wen-chih Chang, Ming-rein Hsu, National Taiwan University of Science and Technology, Taiwan.

Changing the TV Industry through User Experience Design

Daria Loi, Intel Corporation, United States.

OCSC S206

Next Generation Social Media: Mass Collaboration as a **Business Model**

Room: Taylor

Chair(s): Hans-Jorg Bullinger, Fraunhofer, Germany.

Social Computing for Home Energy Efficiency: Technological and Stakeholder Ecosystems

Marc Torrent-Moreno, Rafael Gimenez, Regina Enrich, Barcelona Digital Technology Centre, Spain; Jose Javier Garcia, Barcelona Digital Technology Center, Spain; Maria Perez, Gas Natural Fenosa, Spain.

A Context Centric Approach to **Utilize Social Media Services** on Public Terminals

Micha Block, Jasmin Link, University of Stuttgart, Germany; Simon Thiel, Fraunhofer, Germany.

CICRO: An Interactive Visual Interface for Crowd **Communication Online**

Masao Ohira, Hitoshi Masaki, Kenichi Matsumoto, Nara Institute of Science and Technology, Japan.

Online Design Discussion Sites: Emerging Resource for Creative Design

Moushumi Sharmin, *University* of Illinois at Urbana-Champiagn, United States; Brian Bailey, University of Illinois at Urbana-Champaign, United States.

A Real-time Disaster Situation **Mapping System for University** Campuses

Kayo lizuka, Senshu University, Japan; Yasuki lizuka, Tokai University, Japan; Kyoko Yoshida, Senshu University, Japan.

Online Crowdsourcing in the **Public Sector: How to Design Open Government Platforms**

Giordano Koch, Zeppelin University, Germany; Johann Fuller, Hyve AG, Germany; Sabine Brunswicker, Fraunhofer, Germany.

S207

Applications of Functional Near Infrared Imaging Measurement

Room: Escambia

Chair(s): Banu Onaral, Drexel University, United States.

Brain in the Loop: Assessing Learning using fNIR in Cognitive and Motor Tasks

Patricia Shewokis, Hasan Ayaz, Meltem Izzetoalu, Drexel University, United States; Scott Bunce, Penn State Milton S. Hershey Medical Center; Penn State College of Medicine, United States; Rodolphe Gentili, University of Maryland, United States; Itamar Sela, Kurtulus Izzetoglu, Banu Onaral, Drexel University, United States.

Brain Activity of Young and Adult Hebrew Speakers During Lexical Decision Task: fNIR Application to Language

Itamar Sela, Drexel University, United States; Tsipi Horowitz-Kraus, University of Haifa, Israel; Meltem Izzetoglu, Patricia Shewokis, Kurtulus Izzetoglu, Banu Onaral, Drexel University, United States; Zvia Breznitz, University of Haifa, Israel.

Combining fNIRS and EEG to Improve **Motor Cortex Activity Classification** during an Imagined Movementbased Task

Darren Leamy, NUI Maynooth, Ireland; Ronan Collins, Adelaide & Meath Hospital, Ireland; Tomas Ward, NUI Maynooth,

Estimation of Cognitive Workload during Simulated Air Traffic Control using Optical Brain Imaging Sensors

Hasan Ayaz, Drexel University, United States; Ben Willems, Federal Aviation Administration, United States; Scott Bunce, Penn State Milton S. Hershey Medical Center; Penn State College of Medicine, United States; Patricia Shewokis, Kurtulus Izzetoglu, Drexel University, United States; Sehchang Hah, Atul Deshmukh, Federal Aviation Administration, United States; Banu Onaral, Drexel University, United States.

Applications of Functional Near Infrared Imaging: Case Study on UAV **Ground Controller**

Kurtulus Izzetoglu, Hasan Ayaz, Justin Menda, Meltem Izzetoglu, Anna Merzagora, Patricia Shewokis, Kambiz Pourrezaei, Banu Onaral, Drexel University, United States.

Implementation of fNIRS for Monitoring Levels of Expertise and Mental Workload

Scott Bunce, Penn State Milton S. Hershey Medical Center; Penn State College of Medicine, United States; Kurtulus Izzetoglu, Hasan Ayaz, Patricia Shewokis, Meltem Izzetoglu, Kambiz Pourrezaei, Banu Onaral, Drexel University, United

DHM S208

Human Performance Modeling in Aviation

Room: Union

Chair(s): Jianwei Niu, University of Science and Technology Beijing, P.R. China; Zhizhong Li, Tsinghua University, P.R. China.

Anthropometric Measurement of the Feet of Chinese Children

Linghua Ran, Xin Zhang, Chunzhi Chao, Taijie Liu, *China* National Institute of Standardization, PR China

Human Dimensions of Chinese Minors

Xin Zhang, China National Institute of Standardization, P.R. China; Yanyu Wang, University of Science and Technology Beijing, P.R. China; Linghua Ran, China National Institute of Standardization, P.R. China; Ailan Feng, Ketai He, University of Science and Technology Beijing, P.R. China; Taijie Liu, China National Institute of Standardization, P.R. China; Jianwei Niu, University of Science and Technology Beijing, P.R.

Ergonomics Evaluation of Three Operation Postures for Astronauts

Dongxu Li, National University of Defence Technology, P.R. China; Yan Zhao, China Astronaut Training and Research Center, Beijing, China,

Task Complexity related Training Effects on Operation Error of Spaceflight Emergency Task

Yijing Zhang, Bin Wu, China Astronaut Training and Research Center, P.R. China; Xiang Zhang, Wang Quanpeng, Min Liu, China Astronaut Research and Training Center, P.R. China.

Using Physiological Parameters to Evaluate Operator's Workload in Manual Controlled Rendezvous and Docking (RVD)

Bin Wu, China Astronaut Training and Research Center, P.R. China; Fang Hou, University of Science and Technology Beijing, P.R. China; Zhi Yao, China Astronaut Research and Training Center, P.R. China; Jianwei Niu, *University of Science and Technology* Beijing, P.R. China; Weifen Huang, China Astronaut Research and Training Center, P.R. China.

HCD S209

User-centered Smarter Products Design and Modeling

Room: Nassau

Chair(s): Karel Vredenburg, IBM, Canada; April Lewis, Oak Ridge National Laboratory, United States; Waldemar Karwowski, Tareq Ahram, University of Central Florida, United States.

Social Networking Applications: Smarter Product Design for Complex Human Behaviour Modeling

Tareg Ahram, Waldemar Karwowski, University of Central Florida, United

Smarter Design: Organizational, Methodological, and **Technological Approaches**

Karel Vredenburg, David Schwartz, IBM, Canada.

Virtual Office, Community Computing (VOCC), Designing an Energy Science Hub **Collaboration System**

April Lewis, Gilbert Weigand, Oak Ridge National Laboratory, United States.

Secure Online Game Play with Token: A Case Study in the Design of Multi-Factor **Authentication Device**

Shinji Yamane, Aoyama Gakuin University, Japan.

Smart Sol - Bringing User **Experience to Facility** Management: Designing the User Interaction of a Solar **Control Unit**

Patricia Bohm, Tim Schneidermeier, Christian Wolff, University of Regensburg, Germany.

Towards a paperless Air Traffic Control Tower

Tanja Bos, NLR - National Aerospace Laboratory, Netherlands; Marian Schuver - van Blanken, Hans Huisman, Air Navigation Service Provider LVNL, Netherlands.

The Impact of Human-Centred Design Workshops in Strategic **Design Projects**

Andre Liem, Norwegian University of Science and Technology, Norway; Elizabeth Sanders, MakeTools LCC, United States.

DUXU **S210**

User Experience in the Physical and Human Environment

Room: Lexington

Chair(s): Si Jung «Jun» Kim, University of Central Florida, United States.

User Experience in Business

Room: Jade

Chair(s): Andreas Auinger, Upper Austria University of Applied Sciences, Austria.

S211

continues >>

Experience, and Usability Listen! Somebody is Walking towards Your Car (Introducing the Awareness-3D Sound System into the Driver to Increase the Pedestrian's Safety)

Mohammad Ardavan, Fang Chen, Chalmers University of Technology, Sweden.

DraWiing Together: Exploring Collaborative User Engagement in Art Exhibitions

Hyungsin Kim, Georgia Institute of Technology, United States; Hyun Jean Lee, Yonsei University, Korea; Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

Experience-based Curiosity Model: Curiosity Extracting Model regarding Individual **Experiences of Urban Spaces**

Chihiro Sato, Shigeyuki Takeuchi, Naohito Okude, Keio University, Japan.

End-User Composition Interfaces for Smart **Environments: A Preliminary Study of Usability Factors**

Yngve Dahl, SINTEF ICT, Norway; Reidar-Martin Svendsen, Telenor Corporate Development, Norway.

A Guideline for an Outpatient **Guidance System for Use in General Hospitals**

Gunhee Kim, Korea Institute of Science and Technology (KIST), Korea; Jukyung Park, Saarland University, Germany; Manchul Han, Hyunchul Park, Dayoung Jung, Sehyung Park, Korea Institute of Science and Technology (KIST), Korea; Seongil Lee, Sungkyunkwan *University, Korea*; Sungdo Ha, Korea *Institute of Science and Technology* (KIST), Korea.

Multitouch Tables for Collaborative Object-based Learning

Jacob George, Eric De Araujo, Desiree Dorsey, Scott McCrickard, Greg Wilson, Virginia Tech, United

A Multi-Tiered Approach to **Enterprise Support Services**

Coimbatore Chandersekaran, William Simpson, Institute for Defense Analyses, United States.

Electronic Invoicing in SMEs

Lasse Lumiaho, Jussi Ramanen, Aalto University, Finland.

The New Experience for **Business: Why User Experience** is the Differentiation Strategy in the Cloud Context

Andrey Sirotkin, Bronan McCabe, VTT Technical Research Centre of Finland, Finland.

A Study of Rapid Business **Application Development in the** Cloud

Jie Cui, Jing Min Xu, IBM Research, P.R. China; Huiping Lin, Weiping Li, Zi Mu Sun, Peking University, P.R. China.

User Studies on Mobile Ticketing Jussi Ramanen, Sirpa Riihiaho, Aalto University, Finland; Mikko Erkkila, Antti Seppala, Tieto Corporation, Finland.

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DUXU S212

Usability Studies

Room: Fulton

Chair(s): Martin Maguire, Loughborough University, United Kingdom.

User Perception of Touch Screen Latency

Glen Anderson, Rina Doherty, Subhashini Ganapathy, Intel Corporation, United States.

A Camera-aided Legibility **Assessment Protocol of Displays** for Enhanced Human-computer Interaction

Hongyi Cai, University of Kansas, United States.

Effects of Menu Types and Item Lengths on Operation Efficiency Yu-Hsuan Chang, T. K. Philip Hwang,

National Taipei University of Technology, Taiwan. **Effects of Physical Display Size**

on GUI Designers' Perception and Implementation of Usability Guidelines

Selvihan Kaptan, Bahcesehir University, Turkey; Mehmet Gokturk, Gebze Institute of Technology, Turkey.

Usability Analysis in Gesture Operation of Interactive E-books on Mobile Devices

Ching-Hua Huang, Chao-Ming Wang, National Yunlin University of Science and Technology, Taiwan.

Optimisation of Sound Localisation for Emergency Vehicle Sirens through a Prototype Audio System

John David Moore, Stephen Boslem, Vassilis Charissis, Glasgow Caledonian University, United Kingdom.

HCI 2013 International

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7th International Conference on **Universal Access in Human-Computer Interaction**

5th International Conference on Virtual, Augmented and Mixed Reality

5th International Conference on **Cross-Cultural Design**

5th International Conference on **Online Communities and Social Computing**

7th International Conference on **Augmented Cognition**

4th International Conference on **Digital Human Modeling**

2nd International Conference on Design, User Experience and Usability

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

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Note:

The number of the poster board is indicated on the left.

Posters Available for viewing at the following hours:

Tuesday 12 July 09:00 - 18:30

Wednesday 13 July 09:00 - 18:30

Thursday 14 July 09:00 - 18:00

001. Usability Methods Planner Tool

Nigel Bevan, Professional Usability Services, United Kingdom; Xavier Ferre, Tomas Anton-Escobar, Universidad Politecnica de Madrid, Spain.

002. An Optimal Human Adaptive Algorithm to find Action-Reaction **Word-pairs**

Arpit Agarwal, Rahul Banerjee, Varun Pandey, Riya Charaya, Birla Institute of Technology & Science, Pilani, India.

003. Calibration Time Reduction through Source Imaging in Brain **Computer Interface (BCI)**

Minkyu Ahn, Hohyun Cho, Sung Chan Jun, Gwangju Institute of Science and Technology (GIST), Korea.

004. How much Features in Brain-Computer Interface are Discriminative? - Quantitative Measure by Relative Entropy

Sangtae Ahn, Sungwook Kang, Sung Chan Jun, Gwangju Institute of Science and Technology (GIST), Korea.

005. Becoming Friends on Online Social Networking Services

Wonmi Ahn, Borum Kim, Kwang-Hee Han, Yonsei University, Korea.

006. A Three-Dimensional Fingertip Interface

Yangkeun Ahn, Kwangmo Jung, Korea Electronics Technology Institute, Korea; Jiman Hong, Soongsil University, Korea.

007. An Interactive Multimedia System for Monitoring the Progressive **Decline of Memory in Alzheimer's Patients**

Hala Al-Muhanna, Rawan Alwabil, Hailah Al-Mazrua, Noura Al-Fadhel, Areej Al-Wabil, King Saud University, Saudi Arabia.

008. Modeling Users in Web Transactional Tasks with Behavioral and **Visual Exploration Patterns**

Areej Al-Wabil, Mashael Al-Saleh, King Saud University, Saudi Arabia.

009. Personal Smart Space for Diabetics

Manal AlBahlal, Jalal AlMuhtadi, King Saud University, Saudi Arabia.

010. Contextual Awareness as Measure of Human-Information Interaction in Usability and Design

Michael Albers, East Carolina University, United States.

011. On the Applicability of Digital Human Models for Personal **Equipment Design**

Thomas Alexander, Jessica Conradi, Fraunhofer, Germany.

012. User Interface Design for the Interactive Use of Online Spoken **German Journalistic Texts for the International Public**

Christina Alexandris, University of Athens, Greece.

013. Introducing CAPER, a Collaborative Platform for Open and Closed Information Acquisition, Processing and Linking

Carlo Aliprandi, Synthema Srl, Italy; Andrea Marchetti, Consiglio Nazionale delle Ricerche (CNR), Italy.

014. The Evaluation of the Applicability of Distance Education in Vocational Colleges by the Students of Erzurum Vocational College, Computer Technologies Department, Erzurum, Turkey

Yusuf Ziya Ayik, Ataturk University, Turkey.

015. An Efficient Algorithm for Performance Evaluation of Job Stress and **HSE Factors in Petrochemical Plants with Noise and Uncertainty**

Ali Azadeh, University of Tehran, Iran; Mahsa Rouzbahman, University of Toronto, Canada; Mortezza Saberi, University of Tafresh, Iran; Iraj Mohammadfam, University of Hamadan Medical Science, Iran.

016. An Adaptive Neural Network Algorithm for Assessment and Improvement of Job Satisfaction with Respect to HSE and Ergonomics Program: The Case of a Gas Refinery

Ali Azadeh, University of Tehran, Iran; Mahsa Rouzbahman, University of Toronto, Canada; Mortezza Saberi, University of Tafresh, Iran; Iraj Mohammadfam, University of Hamadan Medical Science, Iran.

017. Evaluating Information Visualizations with Working Memory Metrics Alisa Bandlow, Laura Matzen, Kerstan Cole, Courtney Dornburg, Charles Gieseler, John Greenfield, Laura McNamara, Susan Stevens-Adams, Sandia National Laboratories, United States.

018. Secure Transmission of Medical Images by SSH Tunneling Felipe Basile, Universidade Mogi das Cruzes, Brazil; Flavio Cezar Amate, Universidade de Mogi das Cruzes / UMC, Brazil.

019. Measuring Human Interaction in Digital Television Using Profiles and Geolocation

Valdecir Becker, University of Sao Paulo, Brazil; Mercelo Knorich Zuffo, State University of Sao Paulo, Brazil.

020. A Study on Human Error in the Interaction with the Computer Systems

Luiz Begosso, (1)Fundacao Educacional do Municipio de Assis - FEMA. (2)FATEC -Ourinhos., Brazil; Maria Alice Siqueira Mendes Silva, Universidade Estadual Paulista - UNESP, Brazil; Thiago Henrique Cortez, Fundacao Educacional do Municipio de Assis - FEMA, Brazil.

021. Rule Based Trajectory Segmentation Applied to an HMM-based **Isolated Hand Gesture Recognizer**

Jounghoon Beh, University of Maryland, United States; David Han, Office of Naval Research, United States; Hanseok Ko, Korea University, Korea.

- 022. Professional Graphic Designers Approaching Visual Interface Design Joanne Beriswill, Mississippi State University, United States.
- 023. Black Boxes Debunked: What Graphic Designers Wish You Knew Joanne Beriswill, Mississippi State University, United States.
- 024. Sounds in Space: 3D Audio Experiences through Tangible Navigation Andrew Blakney, Sudhir Mudur, Concordia University, Canada.

025. Digital Inclusion Index (DII) - Measuring ICT Supply and Usage to **Support DI Implementation Planning Policies**

Graziella Bonadia, Nyvea Silva, Cristiane Ogushi, CPqD Foundation, Brazil.

026. An Evaluation of SignBright: A Storytelling Application For Sign Language Acquisition and Interpersonal Bonding Amongst Deaf and Hard of Hearing Youth and Caregivers.

Melissa Burton, Chad Harbig, Mariam Melkumyan, Lei Zhang, Jiyoung Choi, *Iowa* State University, United States.

027. Serious Game for Cognitive Testing of Elderly Sangwoo Byun, Changhoon Park, Hoseo University, Korea.

028. A Usability Model for Government Web Sites

029. Co-discovery Method and its Application with Children as Research

Deborah Carstens, Annie Becker, Florida Institute of Technology, United States.

Alessandra Carusi, Claudia Mont'Alvao, PUC - Rio de Janeiro, Brazil.

030. Discussing Validation of 3D Character Animation Demonstrating **Ushiro-Ukemi Pedagogical Progression**

Mauro Carvalho, Bruno Carvalho, Felipe Carvalho, Heidi DO Junior, Gerson G Cunha, Luiz Landau, Estelio HM Dantas, Federal University of Rio de Janeiro, Brazil.

031. Collaborative Analysis and Communities of Practice in Health Sciences

Juan Alberto Castillo, Universidad del Rosario, Colombia.

032. EEG-based Measurement of Subjective Parameters in Evaluations Daniel Cernea, Peter-Scott Olech, Achim Ebert, University of Kaiserslautern, Germany; Andreas Kerren, Linnaeus University, Sweden.

033. Digital Modeling of Manual Lifting Joint Trajectories Using Two Different Interpolation Approaches

Chien-Chi Chang, Xu Xu, Liberty Mutual Research Institute for Safety, United States; Gert Faber, Harvard School of Public Health, United States; Idsart Kingma, VU University Amsterdam, Netherlands; Jack Dennerlein, Harvard School of Public Health, United States.

034. Leisure Activities for the Elderly - The Influence of Visual Working Memory on Mahjong and Its Video Game Version

Chih-Lin Chang, Hsiuping Institute of Technology, Taiwan; Tai-Yen Hsu, National Taichung University, Taiwan; Fang-Ling Lin, Chuen-Der Huang, Hsiuping Institute of Technology, Taiwan; I-Ting Huang, National Taichung University, Taiwan.

- 035. **PC-based Warning Mechanism System of Fall Risk in Elderly** Chih-Sheng Chang, *Fo Guang University, Taiwan*; Cherng-Yee Leung, *Tatung University, Taiwan*; Jeih-Jang Liou, *Fo Gung University, Taiwan*.
- 036. **Usability Analysis Of Website With Unconventional Layout** Ro-Han Chang, Ying-Ya Su, *Chung Yuan Christian University, Taiwan*.
- 037. Multi-touch Surface Table with Multi-point Tactile Feedback
 Siam Charoenseang, Navakun Sribang, King Mongkut's University of Technology
 Thonburi (KMUTT), Thailand.
- 038. **Human–Robot Collaboration with Augmented Reality**Siam Charoenseang, Tarinee Tonggoed, *King Mongkut's University of Technology Thonburi (KMUTT), Thailand.*

039. An Empathic Approach in Assistive Technology to Provide Job Accommodations for Disabilities

Chien-Bang Chen, De Montfort University, United Kingdom.

040. The Application of Interactive Media Display Technology in Environmental Science Learning

Chun-Ching Chen, Chien-Ming Chen, National Taipei University of Technology, Taiwan.

- 041. A Study on Interface Design Guidelines of Web Maps for Elder Users Chun-Wen Chen, Kevin Tseng, Chang Gung University, Taiwan.
- 042. **A Study on the C/R Ratio of Direct-Operation Multi-Touch Interface** Kuan-Hung Chen, Chun-Wen Chen, Wenzhi Chen, *Chang Gung University, Taiwan.*

043. The Provision of Digital Information in the Seat Comfort of the Seat Design

Kuen-Meau Chen, National United University, Taiwan; Siu-Tsen Shen, National Formosa University, Taiwan; Stephen Prior, Middlesex University, United Kingdom.

$044.\,$ Suggested Considerations on the Design of Multi-touch Interfaces for Commercial Presentation

Ting-Han Chen, XXtraLab DESIGN Co., Taiwan.

045. Impact of Prior Knowledge and Computer Interface Organization in Information Searching Performances: A Study Comparing Younger and Older Web Users

Aline Chevalier, *Universite de Toulouse, France*; Paulette Rozencwajg, Benjamin Desjours, *Universite Paris Ouest Nanterre, France*.

046. The Problematic of Beauty Performed in the Collaborative Action of Technology and Human

HyunKyoung Cho, ASPECT, Virginia Tech, United States.

- 047. **The Politics of Collaborative Action of Technology and Human** HyunKyoung Cho, *ASPECT, Virginia Tech, United States*.
- $048.\,$ Making Pixel Patterns Automatically for Camouflage Using Color Information from their Background

Woon Jung Cho, Wonmi Ahn, Myungshik Kim, Jeeyea Park, Seungduk Kim, Kwang-Hee Han, *Yonsei University, Korea*.

- 049. How the Shapes of School Emblems for Colleges Convey Imagery Mu-Chien Chou, Chungyu Institute of Technology, Taiwan.
- 050. **Methodologies for Evaluating Player Experience in Game Play** Kimberly Chu, Chui Yin Wong, Chee Weng Khong, *Multimedia University, Malaysia*.
- 051. **System of Systems for Sensor and Actuator Networks** Tiffany Elise Chua, Mark Merlo, Mark Bachman, *University of California, Irvine, United States*.

052. Smart Clothes Are New Interactive Devices

Gi-Soo Chung, Korea Institute of Industrial Technology (KITECH), Korea; Hee-Cheol Kim, inje University, Korea.

053. Service Components for Unified Communication and Collaboration of an SOA-based Converged Service Platform

Ki-Sook Chung, Young-Mee Shin, Electronics and Telecommunications Research Institute (ETRI), Korea.

054. Get Your Mobile App out the Door

Heather Cottingham, Michele Snyder, Oracle, United States.

055. Sketching Haptic System Based on Point-based Approach for Assisting People with Down Syndrome

Mario Covarrubias, Monica Bordegoni, Umberto Cugini, Politecnico di Milano, Italy.

056. Extensible CP-based Autonomous Search

Broderick Crawford, Ricardo Soto, *Pontificia Universidad Catolica de Valparaiso, Chile*; Carlos Castro, Eric Monfroy, *Universidad Tecnica Federico Santa Maria, Chile*.

057. The effect of damping in an input device on human positioning performance

Koen Crommentuijn, Dik Hermes, Eindhoven University of Technology, Netherlands.

058. How Does This Look? Desirability Methods for Evaluating Visual Design

Edward De Guzman, Julie Schiller, Autodesk, Inc., United States.

059. Decision Making under Stressful Conditions – A VR Study within the European Project SAVE ME

Marcel Delahaye, Patrick Lemoine, Evelyne Stucki, COAT Basel, Switzerland; Phil Blythe, Gareth Evans, University of Newcastle upon Tyne, United Kingdom; Evangelos Bekiaris, Mary Panou, Centre for Research and Technology Hellas (CERTH), Greece; Marc Graf, Ralph Mager, COAT Basel, Switzerland.

060. Multi-Touch Table as Conventional Input Device

Andreas Dippon, Technische Universitat Munchen, Germany; Florian Echtler, Munich University of Applied Sciences, Germany; Gudrun Klinker, Technische Universitat Munchen, Germany.

061. Applying User-Centered Techniques to Develop a Radiology Teaching File System

Marcelo Dos Santos, Asa Fujino, University of Sao Paulo, Brazil.

062. Fine-Grained Adaptive User Interface for Personalization of a Word Processor: Principles and a Preliminary Study

Martin Dostal, Zdenek Eichler, Palacky University of Olomouc, Czech Republic.

- 063. On the Differences in Usage of Word Processing Applications Martin Dostal, Palacky University of Olomouc, Czech Republic.
- 064. An Analysis of Usage Patterns in Utilization of Interaction Styles Martin Dostal, *Palacky University of Olomouc, Czech Republic.*

065. A Hybrid Approach to User Activity Instrumentation in Software Applications

Martin Dostal, Zdenek Eichler, Palacky University of Olomouc, Czech Republic.

066. Head-Free, Remote Eye-Gaze Detection System with Easy Calibration Using Stereo-Calibrated Two Video Cameras

Yoshionbu Ebisawa, Kazuki Abo, Kiyotaka Fukumoto, Shizuoka University, Japan.

067. Development of Learning Achievement Index for Project Human Resource Management

Yusuke Emori, Takuya Furusawa, Tsutomu Konosu, *Chiba Institute of Technology, Japan*.

068. Virtual Bridge: AR-based Mobile Interaction for Easy Multimedia Control of Remote Home Devices

DongJin Eun, Taik Heon Rhee, Seonghoon Kang, Minsuk Choi, Sangil Lee, Hark-Joon Kim, SAMSUNG Electronics, Korea.

069. What Makes Difference in Mobile Application Sales in Countries? Hyeyoung Eun, Hyunsuk Kim, Sungmin Hong, Hongik University, Korea.

070. Quality and Usability Assessment for Health Information Websites: Can Commonly Used Evaluation Criteria be Appropriately Applied to Assess Chinese-Language Websites?

Chang Fang-Fang, Ku Ōhia-Hua, Wang Kung-Jeng, *National Taiwan University of Science and Technology, Taiwan*; Wu Wei-Li, *National Taiwan Normal University, Taiwan*.

071. Usability Study of TEL Recommender System and E-assessment Tools United

Beatriz Florian, Ramon Fabregat, University of Girona, Spain.

072. Design and Development of Information Display Systems?for Monitoring Overboard

Tadasuke Furuya, *Tokyo University of Marine Science and Technology, Japan*; Atsushi Suzuki, Atsushi Shimamura, Takeshi Sakurada, Yoichi Hagiwara, Takafumi Saito, *Tokyo University of Agriculture and Technology, Japan*.

073. **Perceived Multimedia Quality: the Impact of Device Characteristics** Gheorghita Ghinea, Kyle Patterson, *Brunel University, United Kingdom.*

074. Design and Implementation of a Low-cost Projected Virtual Reality System to Support Learning Processes

Rodrigo Gomez, Helmuth Trefftz, EAFIT University, Colombia.

075. Computer Interaction and the Benefits of Social Networking for People with Borderline Personality Disorder: Enlightening Mental Health Professionals

Alice Good, Arunasalam Sambhanthan, Vahid Panjganj, Samuel Spettigue, *University of Portsmouth, United Kingdom*.

076. Psycognition: Cognitive Architectures for Augmented Cognition Systems

Karmen Guevara, Independent Research & Consultancy, United States.

077. **Usability Testing with Children: What We Have Overlooked** Hanayanti Hafit, *Universiti Tun Hussein Onn Malaysia*; Fariza Razak, Haryani Haron,

Universiti Teknologi MARA (UiTM), Malaysia.

078. hvMuseum: A Participatory Online Museum of Everyday Artifacts for Cultural Awareness

Young-ae Hahn, Savannah College of Art and Design, United States.

079. Activity-centered Design: An Appropriation Issue

Yvon Haradji, EDF R&D, France; Germain Poizat, Universite de Bourgogne, France; Florence Motte, EDF R&D, France.

080. Interface Design to Support Situation Awareness in Virtual Puppetry Keisha Harthoorn, Stephen Hughes, *University of Northern Iowa, United States*.

081. Eye Position Effect on Audio-visual Fusion Involves New Proposals for Multimodal Interface Design

David Hartnagel, Alain Bichot, Patrick Sandor, Corinne Roumes, IRBA, France.

082. Performance and Comfort when Using Motion-Controlled Tools in Complex Tasks

Ines Ånn Heber, RWTH Aachen University, Germany; Michael Oehl, Leuphana University of Lueneburg, Germany; Christine Sutter, RWTH Aachen University, Germany.

083. Ebook Readers: An iPod for Your Books in the Cloud

Ann-Marie Horcher, Maxine Cohen, Nova Southeastern University, United States.

084. The Usability Assessment of Web-based Learning Systems

Chen-Wei Hsieh, Hong-Xon Chen, Yung-Chi Hsu, Sherry Chen, *National Central University, Taiwan*.

085. The Ambient From the Young Passengers' Perception in the Carriage of Taiwan High Speed Rail

Jeichen Hsieh, Tunghai University, Taiwan; Chan Yo Shan, Thung Hai University, Taiwan.

086. Analysis of Casual Relationships between Blog Design Criteria Chun Cheng Hsu, *National Chiao Tung University, Taiwan*.

087. Design Improvement Requirements for the Upper Extremity Rehabilitation Devices in Taiwan

Lan-Ling Huang, Chang-Franw Lee, National Yunlin University of Science and Technology, Taiwan; Mei-Hsiang Chen, Chung Shan University of Medicine, Taiwan.

088. The Study of the Interaction of Public Art with Digital Technology Shih Yin Huang, *TaTung University, Taiwan*; Ming-Shean Wang, *Mingdao University, Taiwan*; Ming-Shean Wang, Mingdao University, Taiwan; Ming-Shean Wang, Mingdao University, Mingd

089. An Effective Disaster Evacuation Assist System Utilized by an Ad-hoc Network

Yasuki lizuka, Tokai University, Japan; Kyoko Yoshida, Kayo lizuka, Senshu University, Japan.

090. Conjoint Analysis Method that Minimizes the Number of Profile Cards

Hiroyuki Ikemoto, TOSHIBA Corporation, Japan; Toshiki Yamaoka, Wakayama University, Japan.

091. Observation Research Method of Comsumer Behavior for Marketing Decision Support

Hideyuki Imai, Noriko Hara, LION CORPORATION, Japan; Toshiki Yamaoka, Wakayama University, Japan.

092. Fundamental Study of the Pictogram-scanning-BCI

Hiroyuki Inada, Hisaya Tanaka, Kogakuin Univercity, Japan.

093. Web Resource Selection for Dialogue System Generating Natural Responses

Masashi Inoue, Takuya Matsuda, Shoichi Yokoyama, Yamagata University, Japan.

094. The Cross-cultural Adaptation of the Work Role Functioning Questionnaire to Turkish

Ahsen Irmak, Gonca Bumin, Hacettepe University, Turkey; Rafet Irmak, Ahi Evran University, Turkey.

095. Exercise Reminder Software for Office Workers

Ahsen Irmak, *Hacettepe University, Turkey*; Rafet Irmak, *Ahi Evran University, Turkey*; Gonca Bumin, *Hacettepe University, Turkey*.

096. A Study on the Cognitive Differences between Beginners and Experts Regarding Cooking Processes

Keisuke Ishihara, Toshiki Yamaoka, *Wakayama University, Japan*; Kazumi Tateyama, Chinatsu Kasamatsu, *AJINOMOTO CO.,INC, Japan*.

097. Properties of Shadow-Cursor for Calibrating Screen Coordinates of Tabletop Displays

Makio Ishihara, Fukuoka Institute of Technology, Japan; Yukio Ishihara, Kyushu University, Japan.

098. Locating Projectors Using Intensity of Reflected Beams Based on Phong Shading Model

Yukio Ishihara, Kyushu University, Japan; Makio Ishihara, Fukuoka Institute of Technology, Japan.

099. Embodied Communication Support using a Presence Sharing System under Teleworking

Yutaka Ishii, Tomio Watanabe, Okayama Prefectural University, Japan.

100. Visibility Experiment and Evaluation of 3D Character Representation on Mobile Displays

Hiromu Ishio, Shunta Sano, Tomoki Shiomi, Tetsuya Kanda, Hiroki Hori, Keita Uemoto, Asei Sugiyama, Minami Niwa, Akira Hasegawa, *Nagoya University, Japan*; Shohei Matsunuma, *Nagoya Industrial Science Research Institute, Japan*; Masaru Miyao, *Nagoya University, Japan*.

101. On-line Communication as a Part of the "Symbolic Politics" Evgeniy Ishmenev, Russian Academy of Sciences, Russia.

102. A Displaying Method of Food Photos to Know Child's Dietary Life for Parents

Kenta Iwasaki, Kazuyoshi Murata, Yu Shibuya, Kyoto Institute of Technology, Japan.

103. **Research on the Role of the Sketch in Design Idea Generation** Yuichi Izu, *TOSHIBA Corporation, Japan*; Koichirou Sato, Yoshiyuki Matsuoka, *Keio University, Japan*.

104. Using Pre-Session Homework to Elicit More Insights during Web Usability Testing

Christopher Jewell, Franco Salvetti, Microsoft, United States.

105. **R&D Information System to Support Knowledge Creation** Hyojeong Jin, Il Yeon Yeo, Youn-Gyou Kook, Byung-Hee Lee, Jaesoo Kim, *Korea Institute of Science and Technology Information (KISTI), Korea.*

106. Initial Perspectives From Preferences Expressed Through Comparisons

Nicolas Jones, Armelle Brun, Anne Boyer, LORIA - Nancy Universite, France.

107. Red for Romance, Blue for Memory

Ilyung Jung, Myungshik Kim, Kwang-Hee Han, Yonsei University, Korea.

108. WARAI PRODUCT: Proposal to the design approach designing the product that causes laughter

. Takaaki Kamei, Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

109. Personalized ATMs: Improve ATMs Usability

Armin Kamfiroozie, Marzieh Ahmadzadeh, Shiraz University of Technology, Iran.

110. **Memory Makers - the Experience of Camera Usage by Women** Yu-Lung Kao, *Cheng Gung University, Taiwan*; Ju-Joan Wong, *National Yunlin University of Science and Technology, Taiwan*.

111. Seven Wonders: An Interactive Game for Learning English as a Foreign Language in Junior High-School

George Kapnas, Stavroula Ntoa, George Margetis, Margherita Antona, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

112. A New Method for Designing a Sitemap

Soheila Khodaparasti, Marzieh Ahmadzadeh, Shiraz University of Technology, Iran.

- 113. A Virtual Mouse System Using Finger-Gestures of Twisting-in Takashi Kihara, Makio Ishihara, *Fukuoka Institute of Technology, Japan*.
- 114. Who Are The People That Experience Soft Usability Problems? Chajoong Kim, Henri Christiaans, Delft University of Technology, Netherlands.
- 115. Immersive Video Game Based on Exercise Prescription Daegun Kim, Changhoon Park, *Hoseo University, Korea*.
- 116. Time: A Premise of Virtual Life

Hee-Cheol Kim, Inje University, Korea.

- 117. Unique Motivation for Using Global Social Network Site in Korea Hyosun Kim, Kwang-Hee Han, Yonsei University, Korea.
- 118. Promoting Positive Employee Health Behavior with Mobile Technology Design

Hyungsin Kim, Georgia Institute of Technology, United States; Hakkyun Kim, Concordia University, Canada; Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

119. Games for Health: Design Cognition-focused Interventions to Enhance Mental Activity

Hyungsin Kim, Viraj Sapre, Ellen Yi-Luen Do, Georgia Institute of Technology, United

- 120. **The Effect of Induced Priming on Product Perceived Usability** Jihyun Kim, Myungshik Kim, Kwang-Hee Han, *Yonsei University, Korea*.
- 121. Color Image Effect of Online Community on Age: Focusing on Self-expression

Jihyun Kim, Yonsei University, Korea; Hyeryeong Kim, LG electronics, Korea; Kwang-Hee Han, Yonsei University, Korea.

122. Composite Context Information Model for Adaptive Human Computing

Sukyoung Kim, Eung-Ha Kim, Youngll Choil, Electronics and Telecommunications Research Institute (ETRI), Korea.

123. EEG Based Comparative Measurement of Visual Fatigue Caused by 2D and 3D Displays

Young-Joo Kim, Eui Chul Lee, National Institute for Mathematical Sciences, Korea.

124. Control of Five Fingers of Computer Graphics Hand Using Electromyographic Signal Measured with Multi-Channeled Small Laplacian Electrodes

Takuya Kimura, Akinori Ueno, Tokyo Denki University, Japan.

125. Extracts Cognitive Artifacts from Text Through Combining Human and Machine Learning in an Iterative Fashion

Ryan Kirk, Iowa State University, United States.

- 126. Reducing Uncertainty in a Human-centered Design approach: Using Actor-Network Theory Analysis to Establish Fluid Design Guidelines Ryan Kirk, Anna Prisacari, *Iowa State University, United States*.
- 127. Verification of Centrality to Extract Proper Factors in Model Construction Process by Using Creativity Technique

Kodai Kitami, Ryosuke Saga, Kazunori Matsumoto, Kanagawa Institute of Technology, Japan.

128. Pen Tip Position Estimation Using Least Square Sphere Fitting for Customized Attachments of Haptic Device

Masanao Koeda, Masahiko Kato, Osaka Electro-Communication University, Japan.

- 129. **User-Centered Approach for NEC Product Development** Izumi Kohno, Hiromi Fujii, *NEC Corporation, Japan*.
- 130. Idea Creation Method Based on Memory Nozomi Koyatsu, Kazuhiko Yamazaki, *Chiba Institute of Technology, Japan*.
- 131. **Modeling Human Behavior for Energy-usage Prediction**Anand Kulkarni, Karla Conn Welch, Cindy Harnett, *University of Louisville, United States*
- 132. Corrected Human Vision System and the McGurk Effect Ladislav Kunc, Pavel Slavik, Czech Technical University in Prague, Czech Republic.
- 133. Interface Design for Home Energy Users: A Preference Study Janelle LaMarche, Olga Sachs, Fraunhofer Center for Sustainable Energy Systems, United States.
- 134. Helping Hands versus ERSP Vision: Comparing Object Recognition Technologies for the Visually Impaired

Marc Lawson, Ellen Yi-Luen Do, Georgia Institute of Technology, United States; James Marston, David Ross, Atlanta Vision Loss Center, United States.

135. Fault Diagnosis of Induction Motors Using Discrete Wavelet Transform and Artificial Neural Network

In Soo Lee, Kyungpook National University, Korea.

136. The Beauty Formation of Digital Media Projects via Sticking Jewels Techniques Applied to the Research and Education of Culture Creative Design

Jhih-Wei Lee, Chun-Ming Huang, Chung Yuan Christian University, Taiwan.

137. **The Effect of a Visual Element on Musical Emotion**Jieun Lee, *Hokkaido University, Japan*; Mitsuko Hayashi, *Hokkaido University of Education HAKODATE, Japan*; Masashi Nosaka, *Hokkaido University, Japan*.

138. The Expansibility of User Interfaces using Peripheral Multisensory Stimulation

Ju-Hwan Lee, Korean German Institute of Technology, Korea.

139. A Framework for a User Friendly Wireless Sensor Network Configuration System

Julia Lee, Lawrence Henschen, Northwestern University, United States.

140. Study on Providing Multi-faceted Information on Technology Intelligence Service

Mikyoung Lee, Seungwoo Lee, Pyung Kim, Hanmin Jung, Won-Kyung Sung, Korea Institute of Science and Technology Information (KISTI), Korea.

141. Kansei Evaluation of the Projection for the Approach to Universal Design: Computerization of Tactile Sensibility

Miyong Lee, Kazuhiro Nishida, Yoshihiro Narita, Hokkaido University, Japan.

142. Facial Landmark Extraction for Lip Tracking of Patients with Cleft Lip Using Active Appearance Model

Nayoung Lee, University of North Carolina at Chapel Hill, United States; Chuck Heaston, 3dMD, United States; Rey Ada, Terry Hartman, University of North Carolina at Chapel Hill, United States; Carroll-Ann Trotman, University of Maryland, United States.

143. FlexRemote: Exploring the Effectiveness of Deformable User Interface as an Input Device for TV

Sang-su Lee, Seungwoo Maeng, Daeeop Kim, Kun-Pyo Lee, Wonkyum Lee, Sangsik Kim, Sungkwan Jung, Korea Advanced Institute of Science and Technology (KAIST), Korea.

144. Design and Implementation of Deformation Based Gesture Interaction

Wonkyum Lee, Sungkwan Jung, Sangsik Kim, Woojin Ahn, Sang-su Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

145. A Scrutinized Analysis Method of the Human Error Potential due to the Introduction of New Digital Devices to Nuclear Power Plants Yong Hee Lee, Korea Atomic Energy Research Institute, Korea.

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146. Kinematic Analysis of Remote Target Pointing Hand Movements in a 3D Environment

Yung-Hui Lee, Shu-Kai Wu, *National Taiwan University of Science and Technology, Taiwan*

147. Exploring the Relationship between Thinking Style and Collaborative Design Outcomes

Chiung Cheng Liao, Wenzhi Chen, Chang Gung University, Taiwan; Hsien-Hui Tang, National Taiwan University of Science and Technology, Taiwan.

148. Gender in the Digital Age: Women's Participation in Designing Social Software

Tania Cristina Lima, Julio Cesar Dos Reis, Center for Information Technology Renato Archer (CTI), Brazil.

149. A New Design of the Multi-channels Mobile and Wireless EEG System

Chin-Teng Lin, Wan-Ru Wang, I-Jan Wang, Lun-De Liao, *National Chiao Tung University, Taiwan*; Sheng-Fu Chen, *National Health Research Institutes, Taiwan*; Kevin Tseng, *Chang Gung University, Taiwan*; Li-Wei Ko, *National Chiao Tung University, Taiwan*.

150. On-line Handwritten Signature Verification using Hidden Semi-Markov Model

Daw-Tung Lin, Yu-Chia Liao, National Taipei University of Technology, Taiwan.

151. **Believable Agents, Engagement, and Health Interventions** Christine Lisetti, *Florida International University, United States*.

152. **Simulating Additional Area on Tele-Board's Large Shared Display** Peter LoBue, Raja Gumienny, Christoph Meinel, *Hasso Plattner Institute, Germany*.

153. A Framework of Motion Capture System Based Human Behaviours Simulation for Ergonomic Analysis

Ruina Ma, Damien Chablat, Fouad Bennis, Ecole Central de Nantes, France; Liang Ma, Tsinghua University, P.R. China.

154. Propose of Process-State-Table for Task Analysis

Masami Maekawa, Sosa Design Inc. / Wakayama University, Japan.

155. Identifying Product Opportunity based on Interactivity

Seungwoo Maeng, Daeeop Kim, Sang-su Lee, Kun-Pyo Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea.

156. A Study of User Needs for the 'Techno Kitchen'

Martin Maguire, Colette Nicolle, Russell Marshall, Ruth Sims, Clare Lawton, Loughborough University, United Kingdom; Sheila Peace, John Percival, The Open University, United Kingdom.

157. StudyBuddy: Improving Learning Process through Technology-Augmented Studying Environments

George Margetis, Stavroula Ntoa, Maria Bouhli, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

158. Assessing the Use of Cognitive Resources in Virtual Reality

William Marsh, Jonathan Kelly, Veronica Dark, James Oliver, *lowa State University*, *United States*

159. Improving Academic Performance and Motivation in Engineering Education with Augmented Reality

Jorge Martin-Gutierrez, *Universidad de La Laguna, Spain*; Manuel Contero, *Universidad Politecnica de Valencia, Spain*.

160. **Augmented Reality Approach to Domestic Maintenance Tasks** Jorge Martin-Gutierrez, Irene Ines Santos, *Universidad de La Laguna, Spain*.

161. Emotional Expression by a Person's Grip on a Tactual Communication Tool

Yasuhiro Matsuda, Tsuneshi Isomura, Kanagawa Institute of Technology, Japan.

162. Gaze Analysis Tool for Web Usability Evaluation

Takuo Matsunobe, Wakayama University, Japan.

163. Modeling Attention Allocation in a Complex Dual Task with and without Auditory Cues

Brian McClimens, Derek Brock, Naval Research Laboratory, United States.

164. Leveraging Card-based Collaborative Activities as Culturally Situated Design Tools

Scott McCrickard, DeMarcus Townsend, Woodrow Winchester, Virginia Tech, United States; Tiffany Barnes, University of North Carolina at Charlotte, United States.

165. Le-ADS: Early Learning Disability Detection System for Autism and Dyslexia

Nor'ain Mohd Yusoff, Nor Syarafina Rusli, Ruhaiza Ishak, Multimedia University, Malaysia.

166. Components based Integrated Management Platform for Flexible Service Deployment in Plant Factory

Aekyung Moon, Song Li, Kyuhyung Kim, Electronics and Telecommunications Research Institute (ETRI), Korea.

167. Accessing Previously Shared Interaction States through Natural Language

Arthi Murugesan, NRC/NRL, United States; Derek Brock, Wende Frost, Dennis Perzanowski, Naval Research Laboratory, United States.

168. Use of Hand Free Mouse for Game Control

Moyen Mustaquim, Uppsala University, Sweden.

169. Usability Evaluation for Software Keyboard on High-performance Mobile Devices

Takao Nakagawa, Hidetake Uwano, Nara National College of Technology, Japan.

170. Study of Communication Aid which Supports Conversation Held at Railway Station

Kaoru Nakazono, *NTT Corporation, Japan*; Mari Kakuta, *International Christian University, Japan*; Yuji Nagashima, *Kogakuin University, Japan*.

171. Sociable Tabletop Companions at "Dinner Party"

Hye Yeon Nam, Ellen Yi-Luen Do, Georgia Institute of Technology, United States.

172. Evaluation of Robot Based Embedded System Study Environment in Technical High School

Yosuke Nishino, *Hachioji Soshi High School, Japan*; Eiichi Hayakawa, *Takushoku University, Japan*.

$173.\,$ Usability Evaluation Method Employing Elements of "Thinking" and "Seeking"

Nobuyuki Nishiuchi, Takehiro Ando, Mi Kyong Park, *Tokyo Metropolitan University, Japan*.

174. Extending Authoring for Adaptive Learning to Collaborative

Dade Nurjanah, Hugh Davis, Thanassis Tiropanis, University of Southampton, United Kinadom.

175. A Collaborative Tool for Communities of Practice to Share Best

Justus Nyagwencha, Cheryl Seals, Tony Cook, Auburn University, United States.

176. An Experimental Comparison of Brain Activity in Professional and Non-Professional Sewers during the Use of Sewing Needles

Masako Omori, Yukari Morishita, Asuka Kawakita, Kobe Women's University, Japan.

177. **Development of AR Display System for Dental Surgical Simulator** Katsuhiko Onishi, Shota Ito, Yusuke Kawamura, Hiroshi Noborio, *Osaka Electro-Communication University, Japan*.

178. Interaction Design of Encouraging Daily Healthcare Habit with Communication Robots

Junichi Osada, NEC Design and Promotion Co. Ltd., Japan; Tomoharu Yamaguchi, Ryohei Sasama, Keiji Yamada, NEC Corporation, Japan.

179. Quality of Community in Social Games

Kohei Otake, Tadakazu Fukutomi, Tomofumi Uetake, Senshu University, Japan.

180. The use of innovative input technology to enhance operator performance

Robbert Ouwerkerk, NLR - National Aerospace Laboratory, Netherlands.

181. Effect of Target Size and Duration of Visual Feedback on Touch Screen

Jeeyea Park, Kwang-Hee Han, Yonsei University, Korea.

182. Classic Art for Modern People

Nikolaos Partarakis, Sokratis Kartakis, Margherita Antona, George Paparoulis, Constantine Stephanidis, Foundation for Research & Technology - Hellas (FORTH), Greece.

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183. Designing for Cultural Connections

Anicia Peters, Britta Mennecke, Jose Camou, K. Candan Herdem, Lei Zhang, lowa State University, United States.

184. Can Digital Signage Help Consumers Eat Healthier?

Anicia Peters, Brian Mennecke, Iowa State University, United States.

185. Constraint-based Nurse Rostering for the Valparaiso Clinic Center in Chile

Renzo Pizarro, Gianni Rivera, Ricardo Soto, Broderick Crawford, Pontificia Universidad Catolica de Valparaiso, Chile; Carlos Castro, Eric Monfroy, Universidad Tecnica Federico Santa Maria, Chile.

186. Development of an Economical Haptic Stimulus Device

Greg Placencia, Mansour Rahimi, Behrokh Khoshnevis, University of Southern California, United States.

187. Information and Communication Technology (ICT) and Special Education System in the Kingdom of Saudi Arabia: A Case Study

Mukhtar Rana, University of Hail, Saudi Arabia; Mohammed Fakrudeen, Anglia Ruskin University, India; Mahdi H. Miraz, University of Hail, Saudi Arabia; Sufian Yousef, Anglia Ruskin University, Cambridge, UK, United Kingdom; Alshammari Torqi, University of Hail, Saudi Arabia.

188. EEG-based Measure of Cognitive Workload during a Mental

Brice Rebsamen, Kenneth Kwok, Trevor Penney, National University of Singapore,

189. ICT Training of Maestros of Primary Schools Located in Barrios Carenciados in Argentina. A Twofold Challenge: How they Can Master New ICT Technologies and Transform the Way they Teach

Osvaldo Rodriguez, Universidad Nacional de La Plata, Argentina.

190. An Armband-type Touch-free Space Input Device for HCI

Dong Wan Ryoo, Junseok Park, Electronics and Telecommunications Research Institute (ETRI), Korea.

191. Relationship between Emotional State and Physiological and Psychological Measurements Using Various Types of Video Content during TV Viewing

Kiyomi Sakamoto, Panasonic Corporation / Osaka City University, Japan; Shigeo Asahara, Panasonic Corporation, Japan; Kuniko Yamashita, Akira Okada, Osaka City University, Japan.

192. Can Culture Translate to the Virtual World?

Raghavi Sakpal, DaleMarie Wilson, University of North Carolina at Charlotte, United

193. Development of the Many Nodes Connected and Simple Operated **HD Remote Lecture System by Automatic Control**

Takeshi Sakurada, Yoichi Hagiwara, Tokyo University of Agriculture and Technology, Japan; Tadasuke Furuya, Tokyo University of Marine Science and Technology, Japan.

194. Enhancing Flexibility of Production Systems by Self-Optimization

Robert Schmitt, Carsten Wagels, RWTH Aachen University, Germany; Mario Isermann, Fraunhofer, Germany; Marcel Mayer, RWTH Aachen University, Germany.

195. Examining the Current State of Group Support Accessibility - An **Expanded Study**

John Schoeberlein, Yuanqiong Wang, Towson University, United States.

196. Relations between Kansei Information and Movement Characteristics in Point-light Displays of Dance

Nao Shikanai, Ritsumeikan University / Japan Society for the Promotion of Science, Japan; Kozaburo Hachimura, Ritsumeikan University, Japan.

197. Consideration of the Human-Computer Interface in the Operation Room in the Era of Computer Aided Surgery

Kazuhiko Shinohara, Tokyo University of Technology, Japan.

198. The Design of the Satellite Spaces for Informal Learning and its Validity Assessment

Syoko Shiroma, Kazuyoshi Yamauch, Natsuko Ohtake, Ehime University, Japan.

199. Function-based Visual and Haptic Rendering in Shared Virtual

Alexei Sourin, Nanyang Technological University, Singapore.

200. 'STISIM-Drive' Meets 'MotorcycleSim': Using Driving Simulation Software to Develop a Unique Motorcycle Simulator for Rider Behavior

Alex Stedmon, David Crundall, Elizabeth Crundall, Rose Saikayasit, Editha Van Loon, The University of Nottingham, United Kingdom; Alex Irune, Dimax Technology Ltd, United Kingdom; Patrick Ward, University of Nottingham, United Kingdom; Neil Greig, The Institute of Advanced Motorists, United Kingdom.

201. Persona-Storyboard Fusion: A Hybrid Approach to Improving Design Artifacts

Michael Stewart, Jennifer Francois, Hongbo Zhang, Scott McCrickard, Virginia Tech, United States.

202. AirportLogic: Usability Testing, Prototyping, and Analysis of an **Airport Wayfinding Application**

Bennett Stone, Yun Wang, Iowa State University, United States.

203. Connecting with Dysphonia: Human-Computer Interface for **Amyotrophic Lateral Sclerosis Patients**

Chun-Yang Su, Chang Gung University, Taiwan; Ju-Joan Wong, National Yunlin University of Science and Technology, Taiwan.

204. Japanese Sentence Input Method using Acceleration Sensor

Masaki Sugimoto, Tokyo Institute of Technology, Japan; Kazufumi Nakai, Nobuo Ezaki, Toba National College of Maritime Technology, Japan; Kimiyasu KIYOTA, Kumamoto National College of Technology, Japan.

205. Modeling of Purchasing Behavior for Application on Merchandise Display and Package Design

Kotaro Suzuki, Nobuyuki Nishiuchi, Mi Kyong Park, Tokyo Metropolitan University, Japan.

206. Studying Analysis Method for the Design Innovation

Inaba Takashi, Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

207. Do They Use Different Set of Non-verbal Language in Turn-taking in **Distributed Conferences?**

Hidekazu Tamaki, Suguru Higashino, NTT Cyber Solutions Laboratories, Japan; Minoru Kobayashi, Masayuki Ihara, NTT Corporation, Japan.

208. Verbalizing Images

Lisa Tang, Jim Carter, University of Saskatchewan, Canada.

209. Experiencing Accessibility Issues and Options

Lisa Tang, University of Saskatchewan, Canada; David Fourney, Ryerson University, Canada; Jim Carter, University of Saskatchewan, Canada.

210. Where to Put the Search Concepts in the Search Result Page?

Tong Tat, Robert Luk, The Hong Kong Polytechnic University, Hong Kong.

211. Balancing Trust and Automation Needs for Effective Home Energy Management

Hari Thiruvengada, Pallavi Dharwada, Anand Tharanathan, Wendy Foslien, Sriharsha Putrevu, John Beane, Honeywell Labs, United States.

212. EEG Measurements towards Brain Life-Log System in Outdoor **Environment**

Hideaki Touyama, Kazuya Maeda, Toyama Prefectural University, Japan.

213. Decoding of Hand Shapes based on ElectroMyoGraphic Signals during Playing Guitar Chords

Hideaki Touyama, Masafumi Mizuguchi, Toyama Prefectural University, Japan.

214. Assessing Health Information Websites For Inclusion of Web 2.0 **Features**

Adam Townes, Michelle Rogers, Drexel University, United States.

215. Taiwanese Facebook Users' Motivation & the Access of Information Technology

Chun-Ming Tsai, Yu-Ting Huang, Taipei Municipal University of Education, Taiwan; Ji-Lung Hsieh, National Taiwan Normal University, Taiwan.

216. Adopting User-Centered Design for the Translating of Barrier-free **Design Codes/Regulations**

Tsai-Hsuan Tsai, Wen-Ko Chiou, Chang Gung University, Taiwan; Huey-Yann Liao, Architecture and Building Research Institute, Ministry of the Interior, Taiwan; Tai-Xian Tseng, Chang Gung University, Taiwan.

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217. Floating 3D Video Conference

Kun-Lung Tseng, Wen-Chao Chen, Tung-Fa Liou, Kang-Chou Lin, *Industrial Technology Research Institute, Taiwan*.

218. **Defining a Process for Cross-Product User Interface Consistency** Leslie Tudor, Cheryl Coyle, *SAS Institute, United States*.

219. User research for senior users

Kaori Ueda, Kazuhiko Yamazaki, Chiba Institute of Technology, Japan.

220. **Kansei Modeling on Visual Impression from Small Datasets** Shunsuke Uesaka, Kazuki Yasukawa, Toshikazu Kato, *Chuo University, Japan*.

221. Physiological Measurement Applied In Maritime Situations: A Newly Developed Method To Measure Workload On Board Of Ships

Wendie Uitterhoeve, MARIN, Netherlands; Marcella Schalken, Maritiem Instituut De Ruyter, Netherlands; Dick Ten Hove, MARIN, Netherlands.

222. Tweaking HCI Methods for m-design

Alicia Valls Saez, Muriel Garreta-Domingo, Gemma Aguado, Marta Lopez Reyes, *UOC - Universitat Oberta de Catalunya, Spain.*

223. Exploring Whole-Hand Gestures in a Tabletop Environment for Urban Modeling

Peter Vandoren, Karel Frederix, Karin Coninx, Frank Van Reeth, Hasselt University - tUL - IBBT, Belgium.

224. Audio-Haptic Description in Movies

Lakshmie Narayan Viswanathan, Troy McDaniel, Sethuraman Panchanathan, Arizona State University, United States.

225. Input Interface Using Fingertip

Ryo Wada, Tomohiro Hase, Ryukoku University, Japan.

226. A Movie Recommendation Mechanism Based on User Ratings in the Mobile Peer-to-Peer Environment

Chian Wang, Dai-Yang Lin, National Changhua University of Education, Taiwan.

227. The Effects of Stereoscopic Display Luminance and Ambient Illumination on Visual Comfort

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228. Visual Perception Model for Sense of Materials

Wenhao Wang, Toshikazu Kato, Chuo University, Japan.

229. Physiological Correlates of Emotional State

Andrea Webb, Meredith Cunha, S R Prakash, John Irvine, Charles Stark Draper Laboratory, United States.

230. Feeling Home – Tangible Information Visualization in Smart Home Environments in Relation to the Concept of Transhumanism

Florian Weingarten, Sahin Albayrak, Technische Universitat Berlin, Germany.

231. Connecting Generations: Preserving Memories with Thanatosensitive Technologies

Cyndi Wiley, Yun Wang, Ryan Musselman, Beverly Krumm, *Iowa State University, United States*.

232. Preferred Setting of Keyboard and Mouse for Using a Supine Computer Workstation

Hsin-Chieh Wu, Ho-Rong Chu, Chaoyang University of Technology, Taiwan.

233. Product Pleasure Enhancement: Cultural Elements Make Significant Difference

Tyan Yu Wu, Chang Gung University, Taiwan.

234. Software Testing Method Considering the Importance of Factor Combinations in Pair-wise Testing

Ruoan Xu, Yoshimitsu Nagai, Syohei Ishizu, Aoyama Gakuin University, Japan.

235. Window Control Interface to Attract Teacher's Gaze Area for Watching a Reaction of Remote Learners

Takumi Yamaguchi, Haruya Shiba, Naohisa Matsuuchi, Yusuke Nishiuchi, *Kochi National College of Technology, Japan*; Kazunori Shimamura, Takahiko Mendori, *Kochi University of Technology, Japan*.

236. Encouraging Daily Healthcare Habit with Communication Robots Tomoharu Yamaguchi, Ryohei Sasama, NEC Corporation, Japan; Junichi Osada, NEC Design and Promotion Co. Ltd., Japan; Keiji Yamada, NEC Corporation, Japan.

237. Using on-Bicycle Rider Assistant Device While Cycling: a Hazard Perception Assessment

Chao Yang Yang, Cheng Jer Wu, Chang Gung University, Taiwan.

238. A Study on the Operator's Erroneous Responses to the New Human Interface of a Digital Device to be introduced to Nuclear Power Plants Oh Yeon Ju, Yong Hee Lee, Yun Yong Hun, Korea Atomic Energy Research Institute, Korea.

239. Recognition Method for Foot Written Characters

Masahiro Yonezawa, Takako Nonaka, Tomohiro Hase, Ryukoku University, Japan.

240. Earthquake Disaster Prevention Support Tool -Visualization of Prevention Effectiveness by Utilizing Augmented Reality

Kyoko Yoshida, Masahiro Urabe, Hayato Tsuchiya, Senshu University, Japan; Yasuki lizuka, Tokai University, Japan; Kayo Iizuka, Senshu University, Japan.

241. To Substitute Fast-Forward/Backward Keys for Numeric Keypad of TV Remote Controller

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General Information

Conference Location

The Conference is hosted at the Hilton Orlando Bonnet Creek hotel, Orlando's newest AAA 4-Diamond hotel. Adjacent to Hilton is Waldorf Astoria® Orlando, the first newly built Waldorf Astoria® since the legendary original in New York City. Both are in an enviable location called Bonnet Creek with a prime location in the heart of 482 acres of mature woodlands and natural waterways, surrounded on three sides by Walt Disney World® Resort. The hotel offers complimentary shuttle service to the four major Disney theme parks: Magic Kingdom, EPCOT, Animal Kingdom, and Hollywood Studios.

Orlando is located near the geographic center of Florida. Its year-round mild weather is one of the reasons why the Orlando area has become a popular tourist, vacation and business travel destination. The city annually hosts thousands of events, trade shows, conferences, meetings and other business-oriented gatherings. The Kennedy Space Center, the Walt Disney World Resort, the Universal Studios, the Central Florida Zoological Park, are some of Orlando's famous attractions.

Gala Reception

The Gala Reception will take place right after the Opening Plenary Session, on Monday, 11 July 2011.

All Conference participants and accompanying persons, who carry an HCl International 2011 badge, will be permitted entrance.

Extra Gala Reception Tickets will be available from the Conference Secretariat by Monday, 11 July, 17:00 hrs.

Important note: Service of alcoholic beverages is subject to state and local laws. You must be of legal drinking age to drink alcohol. Please be ready to provide your ID upon request.





	Coffee Breaks					
Day / Time	Saturday, 9 July	Sunday, 10 July	Monday, 11 July	Tuesday, 12 July	Wednesday, 13 July	Thursday, 14 July
10:00 - 10:30			Citrus / Collier	Bonnet Creek Ballroom	Bonnet Creek Ballroom	Bonnet Creek Ballroom
10:30 - 11:00	Citrus / Collier	Citrus / Collier				
15:00 - 15:30			Citrus / Collier			
15:30 - 16:00	Citrus / Collier	Citrus / Collier		Bonnet Creek Ballroom	Bonnet Creek Ballroom	Bonnet Creek Ballroom

Lunch				
Participants are kindly asked to make their own arrangements for lunch, during the following lunch breaks:				
Saturday, 9 July	12:30 - 14:00		Tuesday, 12 July	12:30 - 13:30
Sunday, 10 July	12:30 - 14:00		Wednesday, 13 July	12:30 - 13:30
Monday, 11 July	12:00 - 13:30		Thursday, 14 July	12:30 - 13:30

Internet Park

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

The Internet Park is open during the following hours:

Speakers	'nrenarati	on room	

The speakers' preparation room (*Room:* **Broward**) is equipped with a laptop computer and a projector for PowerPoint presentations.

Internet P	Location	
Saturday, 9 July	00.00 10.00	.00
Sunday, 10 July	09:00 - 18:00	Bonnet Creek Ballroom Foyer North
Monday, 11 July	09:00 - 17:00	r oyer north
Tuesday, 12 July	09:00 - 18:00	
Wednesday,13 July		Inside Bonnet Creek Ballrom
Thursday, 14 July		Donnet Creek Banroni

eparation room	Speakers' prep	
	Tuesday, 12 July	
09:00 - 18:00	Wednesday,13 July	
	Thursday, 14 July	

Information for Presenters

Paper Presentations

Papers are allocated approximately 15 minutes for presentation, with an additional 2-3 minutes for questions and answers following each talk. Session Chairs introduce the speakers and moderate the discussion.

Each presentation room will be equipped with a laptop computer and a projector for PowerPoint presentations. The available software may also allow for other types of presentations, such as embedded videos.

Hardware specifications of laptops:

- Intel Core2 Duo T7500 or better
- 1GB memory or better
- VGA Nvidia Quadro NVS 135M or better
- DVD/CD

Software available on laptops (all in English language):

- MS Windows XP Pro SP3
- MS Office 2007
- MS Internet Explorer 8
- MS Windows Media Player
- Adobe Acrobat Reader

Laptops will have a USB port accepting USB memory devices.

Presenters who wish to run specialized software need to bring their own laptop. Prior to their session, they should inform the session chair and test that their computer works with the projector in the room.

MAC computers are also acceptable. MAC users must bring their own adapter to connect to the VGA cable or their own cable.

Internet connection will be available in the presentation rooms.

Poster Presentation

Poster set-up will take place between 09:00 and 11:00 on Tuesday 12 July 2011.

Poster removal will take place between 18:00 and 20:00 on Thursday 14 July 2011.

The posters will be mounted on poster boards (one poster per board - with landscape orientation) with push pins which will be available on site.

The size of the poster boards is:

- Width: 48 inches (1,22 meters)
- Length: 96 inches (2,43 meters)
- Height: 78 inches (1,98 meters)

while the usable area size is:

- Length: 94 inches (2,38 meters)
- Height: 46 inches (1,17 meters)

Presenters can mount multiple single sheets of paper, larger posters, pictures, or any printed materials on the boards.

The poster area will be located together with the Exhibition area at the **Bonnet Creek Ballroom**.

Both areas will be open the following hours:

- Tuesday, 12 July, 09:00 to 18:30
- Wednesday, 13 July, 09:00 to 18:30
- Thursday 14 July, 09:00 to 18:00

Authors of posters are kindly asked to make themselves available during these days of the Conference to present their work and answer questions about their poster to Conference participants.

It is up to the presenters to arrange the date(s) and time(s) they will be available. They may wish to indicate on the poster board

when they will be available to provide brief presentations and answer questions about their poster to Conference participants.

Exhibitors

Exhibits may not be dismantled or removed until the close of the Exhibition. All exhibitor materials must be removed from the exhibit facility by 14 July at 21:00 hrs. Exhibitors should arrange with their carrier to pick-up their outbound freight directly from the facility:

> HILTON ORLANDO BONNET CREEK 14100 BONNET CREEK RESORT LANE ORLANDO, FL 32821

To ensure all exhibitor materials are removed from the exhibit facility by the Exhibitor Move-Out deadline, all carriers should check-in by 14 July at 20:00 hrs.

Message Boards

Three message boards will be allocated near the Conference Secretariat, at the **Bonnet Creek Ballroom Foyer North**:

- · one for announcements of the Conference Organizers,
- one for use by the Conference participants, and
- one for job announcements

Display Boards and Tables

Display boards and tables for Conference participants who wish to share or distribute promotional material, are available near the Conference Secretariat, at the Bonnet Creek Ballroom Foyer North.

Smoking Policy

HCI International 2011 is a smoke-free Conference. There are easily accessible outdoor areas at the Convention Center where smoking is permitted.

Mobile Phone Courtesy

HCI International 2011 requests that all mobile phones, pagers and other equipment with audible alarms be turned off in all sessions as a courtesy to the presenters and to the other attendees.

Business Center IKON

The Hilton Orlando Bonnet Creek Business Center, is located in the **Ground Level**, next to the stairs, providing a wide range of services. Open:

Monday - Friday 7:00 - 19:00 Saturday - Sunday 8:00 - 17:00

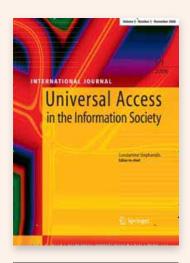
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ISSN 1615-5289 (print) ISSN 1615-5297 (electronic)

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