



(index.html)

FINAL PROGRAM

SUN, 19 JULY (./SUNDAY) | MON, 20 JULY | TUE, 21 JULY (./TUESDAY) | WED, 22 JULY (./WEDNESDAY) | THU, 23 JULY (./THURSDAY)
| FRI, 24 JULY (./FRIDAY)

The times indicated are in "Central European Summer Time - CEST (Copenhagen)"

09:00 – 11:00 (monday#2122)

11:30 – 13:30 (monday#94)

09:00 – 11:00 (CEST - Copenhagen)

Human-Computer Interaction

S061: Lean and HCI in Practice

Chair(s): Yu-Hsiu Hung, *Taiwan*

- **Applying Holo360 Video and Image Super-Resolution Generative Adversarial Networks to Virtual Reality Immersion**
Chia Hui Feng, Yu-Hsiu Hung, Chao-Kuang Yang, Liang-Chi Chen, Wen-Cheng Hsu, Shih-Hao Lin, *Taiwan*
- **The Effect of Different Icon Shape and Width on Touch Behavior**
Hsi-Jen Chen, Yung-Chueh Cheng, Wei-Hsiang Hung, *Taiwan*
- **The Behaviour Observations of Using Rearview Mirror with Distance Indicator**
Cheng-Yong Huang, *Taiwan*
- **Development and Technical Experience of Plastic Injection Machine for STEAM Education**
Jui-Hung Cheng, Hsin-Hung Lin, *Taiwan*

S062: Research on AI Art and Practice - I

Chair(s): Yi Ji, *P.R. China*

- **The Image of Presence and the Presence of the Image**
Kenneth Feinstein, *Malaysia*
- **Baguamarsh: An Immersive Narrative Visualization for Conveying Subjective Experience**
Fei Jiang, *P.R. China*; Don Derek Haddad, Joseph Paradiso, *United States*
- **Improvised Music for Computer and Augmented Guitar: Performance with Gen~ Plug-ins**
Scott L. Simon, *Australia*
- **User Loyalty Analysis of Knowledge Payment Platform**
Xin Wang, Bin Jiang, *P.R. China*
- **Anthropomorphic Design for Everyday Objects**
Shi Qiu, *P.R. China*
- **Research on the Design of Interactive Waiting Interface based on the Elderly User Experience**
Haoyu Xu, *P.R. China*

S063: Input Methods and Techniques - II

Chair(s): Buntarou Shizuki, *Japan*





(index.html)

- **A Defocus Based Novel Keyboard Design**
Priyanshu Gupta, Tushar Goswamy, Himanshu Kumar, K.S. Venkatesh, *India*
- **SilverCodes: Thin, Flexible, and Single-Line Connected Identifiers Inputted by Swiping with a Finger**
Minto Funakoshi, Shun Fujita, Kaori Minawa, Buntarou Shizuki, *Japan*
- **Identification Method of Digits for Expanding Touchpad Input**
Takuto Nakamura, Buntarou Shizuki, *Japan*
- **A Mouth Gesture Interface Featuring a Mutual-Capacitance Sensor Embedded in a Surgical Mask**
Yutaro Suzuki, Kodai Sekimori, Yuki Yamato, Yusuke Yamasaki, Buntarou Shizuki, Shin Takahashi, *Japan*

S064: Emotions in HCI - II

Chair(s): Panikos Heracleous, *Japan*

- **The Effect of Naturalness of Voice and Empathic Responses on Enjoyment, Attitudes and Motivation for Interacting with a Voice User Interface**
Jacqueline Urakami, Sujitra Sutthithatip, Billie Akwa Moore, *Japan*
- **The Effect of Personal Pronouns on Users' Emotional Experience in Voice Interaction**
Jianhong Qu, Ronggang Zhou, Liming Zou, Yanyan Sun, Min Zhao, *P.R. China*
- **Integrating Language and Emotion Features for Multilingual Speech Emotion Recognition**
Panikos Heracleous, Yasser Mohammad, Akio Yoneyama, *Japan*
- **Recent Multimodal Communication Methodologies in Phonology, Vision, and Touch**
Chutisant Kerdvibulvech, *Thailand*

Human Interface and the Management of Information

S065: Virtual Reality and Haptic Application - I

Chair(s): Kentaro Kotani, Daiji Kobayashi, *Japan*

- **Methodology of controlling subjective speed while watching CG images**
Yuki Motomura, Hiroki Hashiguti, Takafumi Asao, Kentaro Kotani, Satoshi Suzuki, *Japan*
- **Improvement of SPIDAR-HS and Construction of Visual Rod Tracking Task Environment**
Hiroya Suzuki, Ryuki Tsukikawa, Daiji Kobayashi, Makoto Sato, Takehiko Yamaguchi, Tetsuya Harada, *Japan*
- **Evaluation of speech input recognition rate of AR-based drawing application on operation monitor for communication support during endoscopic surgery**
Takuto YAJIMA, Takeru Kobayashi, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao, Kazutaka Obama, Atsuhiko Sumii, Tatsuto Nishigori, *Japan*
- **Influence of Visual Gap of Avatar Joint Angle on Sense of Embodiment in VR Space Adjusted via C/D Ratio**
Takehiko Yamaguchi, Hiroaki Tama, Yuya Ota, Yukiko Watabe, Sakae Yamamoto, Tetsuya Harada, *Japan*
- **Development of Empowered SPIDAR-tablet and Evaluation of a System Presenting Geographical Information Using it**
Yuki Hasumi, Keita Ueno, Sakae Yamamoto, Takehiko Yamaguchi, Makoto Sato, Tetsuya Harada, *Japan*
- **One-Handed Character Input Method for Smart Glasses**
Toshimitsu Tanaka, Yuri Shibata, Yuji Sagawa, *Japan*





(index.html)

- **Learning Support for Historical Interpretation Using Semantically Enhanced Historical Cartoons**
Daiki Muroya, Kazuhisa Seta, Yuki Hayashi, *Japan*
- **Multimodal Interaction-aware Integrated Platform for CSCL**
Aoi Sugimoto, Yuki Hayashi, Kazuhisa Seta, *Japan*
- **Services Task Model Based Dialogue Scenarios Design Towards L2 WTC Support Oriented Dialogues Authoring Tool**
Emmanuel Ayedoun, Yuki Hayashi, Kazuhisa Seta, *Japan*
- **Development of VR Learning Spaces Considering Lecture Format in Asynchronous e-Learning**
Takumi Baba, Toru Tokunaga, Toru Kano, Takako Akakura, *Japan*
- **Educational Environment of Video System using Superimposing Symbols to Support for Skill Training**
Naka Gotoda, Yusuke Kometani, Rihito Yaegashi, Toshihiro Hayashi, *Japan*
- **“Two Way or Go Away”: Development of DPP(Digital Presentation Platform) which supports to make a College Teachers get Two-way Communication Classroom as a Facilitators**
Keizo Nagaoka, Ryoji Kubota, *Japan*

S067: Evidence Based Design and UX for Design Process

Chair(s): Keiko Kasamatsu, Takeo Ainoya, *Japan*

- **Development of Multi-DoF Robot Arm with Expansion and Contraction Mechanism for Portability**
Taiga Yokota, Naoyuki Takesue, *Japan*
- **User Experience Analysis for Visual Expression Aiming at Creating Experience Value According to Time Spans**
Cairen Zhuoma, Keiko Kasamatsu, Takeo Ainoya, *Japan*
- **Hearing method for user requirement extract in participatory design -designing for service involving local residents-**
Fuko Oura, Takeo Ainoya, Keiko Kasamatsu, *Japan*
- **The Research of Regional Cultural Image of China -- Exemplifying with Guangdong Culture Area --**
He Jiang, Keiko Kasamatsu, Takeo Ainoya, *Japan*
- **Examination of communication tools for " The left-behind children "**
Minzhi Deng, Keiko Kasamatsu, Takeo Ainoya, *Japan*
- **Research on Payment UX Status during the Share Cycle Services between Japan and China**
Jiahao Jiang, Keiko Kasamatsu, Takeo Ainoya, *Japan*

Engineering Psychology and Cognitive Ergonomics

S068: Training and Simulation

Chair(s): Wen-Chin Li, *United Kingdom*





(index.html)

- **Understanding Human Behaviour in Flight Operation using Eye-Tracking Technology**
Wojciech Tomasz Korek, Arthur Mendez, Hafiz Ul Asad, Wen-Chin Li, Mudassir Lone, *United Kingdom*
- **Measuring Situation Awareness in Control Room Teams**
Carolina Barzantny, Carmen Bruder, *Germany*
- **Safety Challenges of AI in Autonomous Systems Design – Solutions from Human Factors Perspective Emphasizing AI Awareness**
Hannu Karvonen, Eetu Heikkilä, Mikael Wahlström, *Finland*
- **Assessing Professional Cultural Differences Between Airline Pilots and Air Traffic Controllers**
Wesley Tsz-Kin Chan, Wen-Chin Li, *United Kingdom*
- **The Application of Safety II in Commercial Aviation – the Operational Learning Review (OLR)**
Pete McCarthy, *Hong Kong*

S069: Approaches to Human-Autonomy Teaming - IIChair(s): Axel Schulte, Simon Schwerd, *Germany*

- **Allocation of Moral Decision-making in Human-agent Teams: A Pattern Approach**
Jasper Van der Waa, Jurriaan Van Diggelen, Luciano Cavalcante Siebert, Mark Neerincx, Catholijn Jonker, *Netherlands*
- **A Concept on the Shared Use of Unmanned Assets by Multiple Users in a Manned-Unmanned-Teaming Application**
Gunar Roth, Axel Schulte, *Germany*
- **Experimental Validation of an Eye-Tracking-Based Computational Method for Continuous Situation Awareness Assessment in an Aircraft Cockpit**
Simon Schwerd, Axel Schulte, *Germany*
- **Human-in-the-loop Evaluation of a Manned-Unmanned System Approach to derive Operational Requirements for Military Air Missions**
Sebastian Lindner, Axel Schulte, *Germany*

Universal Access in Human-Computer Interaction**S070: Medical Design**Chair(s): Kevin C. Tseng, Hsieh-Chun Hsieh, *Taiwan*

- **A Feasibility Study on the Application of Virtual Reality Technology for the Rehabilitation of Upper Limbs after Stroke**
Le Wang, *P.R. China*; Jean-Lon Chen, Alice M. Wong, Kevin C. Tseng, *Taiwan*
- **Designing System Architecture for the Catering Management System of Chang Gung Health and Culture Village**
Ellie Li, Alice M. Wong, Kevin C. Tseng, *Taiwan*
- **Research on the Visually Impaired Individuals Shopping with Artificial Intelligence Image Recognition Assistance**
Chia Hui Feng, Ju Yen Hsieh, Yu-Hsiu Hung, Chung-Jen Chen, Cheng-Hung Chen, *Taiwan*
- **Development of Night Time Calling System by Eye Movement using Wearable Camera**
Kazuki Sakamoto, Takeshi Saitoh, Kazuyuki Itoh, *Japan*
- **Lego Robots in Puppet Play for Children with Cerebral Palsy**
Hsieh-Chun Hsieh, Chun-Kai Liu, Peter Kuan-Hao Cheng, *Taiwan*

Virtual, Augmented and Mixed Reality



(index.html)

-
- **A Mixed-reality Shop System Using Spatial Recognition to Provide Responsive Store Layout**
Hao Dou, Jiro Tanaka, *Japan*
 - **Interactive Mixed Reality Cooking Assistant for Unskilled Operating Scenario**
Ke-Yu Zhai, Yi-Ming Cao, Wen-jun Hou, Xue-Ming Li, *P.R. China*
 - **Construction of Human-Robot Cooperation Assembly Simulation System Based on Augmented Reality**
Qiang Wang, Xiumin Fan, Mingyu Luo, Xuyue Yin, Wenmin Zhu, *P.R. China*
 - **Interactive Narrative in Augmented Reality: An Extended Reality of the Holocaust**
Yunshui Jin, *P.R. China*; Minhua Ma, *United Kingdom*; Yun Liu, *P.R. China*
 - **A Color Design System in AR Guide Assembly**
Xupeng Cai, Shuxia Wang, Guangyao Xu, Weiping He, *P.R. China*

Cross-Cultural Design

S072: Kansei Issues in Cross-Cultural Design - I

Chair(s): Kuohsiang Chen, *Taiwan*; Szu-Chi Chen, *Australia*

- **The Craft Aesthetics of the Cultural Relics Collection in the Qing Dynasty**
Mei-Jin Hsiao, Shu-Hua Hsueh, *P.R. China*
- **Applications of Asian Abstract Imagery in Modern Fabric Design**
Feng Tzu Chiu, *P.R. China*
- **Cultivate Deeper Cross-cultural Context into Foreign Language Teaching**
Shu-Hua Hsueh, Mei-Jin Hsiao, *P.R. China*
- **The Current Situation of AI Foreign Language Education and Its Influence on College Japanese Teaching**
Tzu-Hsuan Kuo, *P.R. China*
- **Research on Kansei of Visual Literacy of Regional Cultural Experience in Product Shaping Design**
Min Shi, *P.R. China*

S073: Design for Cross-Culture - I

Chair(s): Rungtai Lin, Po-Hsien Lin, *Taiwan*





(index.html)

- **A Service Design Framework for Brand Experience in the Creative Life Industry – A Case Study of the Millennium Gaea Resort Hualien in Taiwan**
Shu-Hua Chang, Rungtai Lin, *Taiwan*
- **Research on the Development Path of “New Technology” and “Traditionalization” of Chinese Embroidery**
Shuang Ou, Minghong Shi, Wei Deng, *P.R. China*; Rungtai Lin, *Taiwan*
- **Research on the Cognitive Differences of Different Types of Interactive Artworks**
Yang Gao, Jun Wu, *P.R. China*; Rungtai Lin, *Taiwan*
- **The Conformity Utilization on Community Resources on Base of Urban Renewal ——Taking Xinhua Community of Shaoyang City as the Case**
Wei Bi, Yang Gao, Zidong He, *P.R. China*

S074: Affective Computing and User Experience Design - I

Chair(s): Pei-Luen Patrick Rau, *P.R. China*; Yu-Liang Chi, *Taiwan*; Xiaoang Irene Wan, *P.R. China*

- **Quantification of Natural Multimodal Interaction Capacity**
Jian Zheng, Pei-Luen Patrick Rau, Jingyu Zhao, *P.R. China*
- **Trends in Human-Computer Interaction in the 5G Era: Emerging Life Scenarios with 5G Networks**
Jingyu Zhao, Andong Zhang, Pei-Luen Patrick Rau, Lili Dong, Liang Ge, *P.R. China*
- **Towards the ethnic understanding of Taiwanese indigenous peoples: A Mashup based on semantic web and open data**
Yu-Liang Chi, Han-Yu Sung, Ying-Yuan Lien, *Taiwan*
- **Improving Memory Recall and Measuring User Ability Through Gamified Techniques with ‘Chatty’: An E-learning Application for Foreign Languages**
Hyeyeon Park, *Korea*; Jacob D. Burke, *United States*; Volny Blin, *France*; Harris Chrysanthou, *Cyprus*
- **Contrastive Study on User Satisfaction of Weibo and Instagram Common Users**
Huijun Qin, *P.R. China*

Social Computing and Social Media

S075: Data Based Social Signal Processing - I

Chair(s): Hung-Hsuan Huang, Shogo Okada, Ryo Ishii, *Japan*





(index.html)

- **Investigation on the Fusion of Multi-modal and Multi-person Features in RNNs for Detecting the Functional Roles of Group Discussion Participants**
Hung-Hsuan Huang, Toyoaki Nishida, *Japan*
- **Methods of Efficiently Constructing Text-dialogue-agent System using Existing Anime Character**
Ryo Ishii, Ryuichiro Higashinaka, Koh Mitsuda, Taichi Katayama, Masahiro Mizukami, Junji Tomita, Hidetoshi Kawabata, Emi Yamaguchi, Noritake Adachi, Yushi Aono, *Japan*
- **Personality Trait Classification based on Co-occurrence Pattern Modeling with Convolutional Neural Network**
Ryo Kimura, Shogo Okada, *Japan*
- **Effects of Linguistic Proficiency and Conversation Topic on Listener's Gaze in Triadic Conversation**
Ichiro Umata, Koki Ijuin, Tsuneo Kato, Seiichi Yamamoto, *Japan*

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

S076: Human Modeling for Nursing and Medical Art

Chair(s): Akihiko Goto, Yasuko Kitajima, *Japan*

- **Neural Network Risks Suggested by Optical Illusions**
Hiroyuki Nishimoto, *Japan*
 - **Verifying the Usefulness of Monitoring Sensors Used by Caregivers in Nursing Homes**
Yasuko Kitajima, Isamu Kajitani, Mitsuhiro Nakamura, Keiko Homma, Yoshio Matsumoto, Jukai Maeda, *Japan*
 - **Deep Learning based Gesture Classification for Hand Physical Therapy Interactive Program**
Maleewan Rungruanakul, Thitirat Siriborvornratanakul, *Thailand*
 - **Comfort Evaluation of the Range of Motion of Human Upper Limb Joints**
Zhongqi Liu, Xiaocong Niu, Qianxiang Zhou, *P.R. China*
 - **Application of Game Therapy in the Health of Future Elderly: An Experience Design Perspective**
Yuqi Liu, Ryoichi Tamura, *Japan*
-

S077: Tools for Taking Fatigue into Account in Human Task Simulations

Chair(s): Damien Chablat, *France*

- **Excessive Smartphone Use and Associated Physiological Disorders – A Survey on Research Status in India**
Bhanu Priya D, Murali Subramaniyam, *India*; Seung Nam Min, *Korea*
- **Sign Language to Speech Converter Using Raspberry-Pi**
Sravya Koppuravuri, Sukumar Sai Pondari, Deep Seth, *India*
- **Determining Endurance Limit under Intermittent Physical Operations based on a Combined Fatigue-recovery Model**
Jiawei Fu, Liang Ma, *P.R. China*
- **Research and Design of Relieving Neck Muscle Fatigue Based on Serious Game**
Dian Zhu, Zishan Song, Jingran He, Chufan Jin, Xi Chen, *P.R. China*
- **Study on the Effect of Cervical Spine Somatosensory Games of Virtual Reality and Augmented Reality on Relieving Neck Muscle Fatigue**
Zishan Song, Ting Han, Dian Zhu, Yufei Xie, Hanyue Xiao, Tianjia Shen, Jingran He, *P.R. China*





(index.html)

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- **Possibility of Using High-quality Bow Interface in VAIR Field**
Masasuke Yasumoto, Kazumasa Shida, Takehiro Teraoka, *Japan*
 - **Interactive Pavement: Moving Spatial Surface to Dynamically Convey Information**
Voraphan Vorakitphan, Takashi Ohta, *Japan*
 - **VR Appreciation System for Fountain Pens and Analysis of User Behaviors in Museum Exhibition**
Asako Soga, Takuzi Suzuki, *Japan*
 - **Proposal of Perception Method of Existence of Objects in 3D Space using Quasi-electrostatic Field**
Kenta Suzuki, Koya Abe, Hisashi Sato, *Japan*

S079: Ergonomics in Design - I

Chair(s): Marcelo M. Soares, *P.R. China*

-
- **User Experience in Kiosk Application for Traceability of Fishery Products**
José Oliveira, Pedro Miguel Faria, António Miguel Rosado da Cruz, *Portugal*
 - **Systematic Review on Using Biofeedback (EEG and Infrared Thermography) to Evaluate Emotion and User Perception Acquired by Kansei Engineering**
Jiayu Zeng, Marcelo M. Soares, Renke He, *P.R. China*
 - **A Usability Testing Comparing Two Mobile Phone Gimbals**
Keke Zhong, Junfei Liu, Zhixin Gui, Chang Meng, Marcelo M. Soares, *P.R. China*
 - **Babe: An Experience Sharing Design for Enhancing Fatherhood during Pregnancy**
Jingyu Lin, Danni Chang, *P.R. China*
 - **Does the Kindle Conform to Chinese Users' Usage Habits? A Usability Assessment of the Kindle Paperwhite**
Yuxi He, Fang Lin, Jinyao Song, Tao Su, Marcelo M. Soares, Zhixin Gui, Jiayu Zeng, *P.R. China*
 - **Research of Comfort Model of Eye Massager During Siesta in the Office**
Qi Huang, Hongmiao Liu, *P.R. China*

Distributed, Ambient and Pervasive Interactions

S080: Ambient and Civic Computing

Chair(s): Tatsuo Nakajima, *Japan*





(index.html)

Risa Kimura, Tatsuo Nakajima, *Japan*

- **Civic CrowdSensing through Location-aware Virtual Monsters**

Takuro Yonezawa, Mina Sakamura, Nobuo Kawaguchi, Jin Nakazawa, *Japan*

- **iOS crowd-sensing won't hurt a bit!: AWARE Framework and Sustainable Study Guideline for iOS Platform**

Yuuki Nishiyama, *Japan*; Denzil Ferreira, *Finland*; Yusaku Eigen, Wataru Sasaki, Tadashi Okoshi, Jin Nakazawa, *Japan*; Anind K. Dey, *United States*; Kaoru Sezaki, *Japan*

- **Tele Echo Tube for Historic House Tojo-Tei in Matsudo International Science Art Festival 2018**

Hill Hiroki Kobayashi, Daisuké Shimotoku, *Japan*

- **Development of One-Stop Smart City Application by Interdisciplinary Data Linkage**

Kenro Aihara, Atsuhiko Takasu, *Japan*

HCI in Business, Government and Organizations

S081: Interactive Sales Scenarios

Chair(s): Andrea Mueller, *Germany*

- **User Experience Testing vs. Marketing Experts – Can Empirical Research Beat Practical Knowledge in Dialog Marketing?**

Christina Miclau, Barbara Woerz, Laura Heiland, Dennis Hess, Beatrice Weber, Alice Emmler, Hans-Peter Saar, Jonas Belke, Niklas Hose, Oxana Ernst, Andrea Mueller, *Germany*

- **Protect Our Health with Cleaner Cars – How to Gain Customer Acceptance for Air Pollution Decreasing Retrofit Purchase**

Joachim Reiter, Uwe Hartmann, Larissa Greschuchna, Jaline Westrich, Aliyah Mörtl, Laura Cherkaoui, Maike Breier, Malgorzata Olbrich, Carolin Hoffmann, Andreas Franz, Johannes Wenseric, Andrea Mueller, *Germany*

- **Captivating Product Experiences: How Virtual Reality Creates Flow and Thereby Optimize Product Presentations**

Kai Israel, Lea Buchweitz, Dieter K. Tscheulin, Christopher Zerres, Oliver Korn, *Germany*

- **Usability Studies of E-Commerce Checkout Process: A Perspective from Thailand**

Patcharee Butnampetch, Panja Sasithonwan, Butsakorn Teeranan, Thippaya Chintakovid, *Thailand*

- **POS Product Presentation Concepts - Analysis of Affective, Conative and Cognitive Components in Decision Making**

Vanessa Schwahn, Achim Burkhardt, Andrea Mueller, Christina Miclau, *Germany*

Learning and Collaboration Technologies

S082: Interactive Learning Ecosystems - II

Chair(s): Francisco J. García-Peñalvo, David Fonseca, *Spain*





(index.html)

- **Development of a Visualization System to Analyze Student-Teacher Conversations**
Jun Iio, Ryuichi Sugiyama, *Japan*
- **Tirana Plug-in River: Catalyst Playful Experiences to Revitalize Albanian Informal Settlements**
Saimir Kristo, Valerio Perna, Ketj Hoxha, *Albania*
- **StickAndClick – Sticking and Composing Simple Games as a Learning Activity**
Andrea Valente, Emanuela Marchetti, *Denmark*
- **Immersive Telepresence Framework for Remote Educational Scenarios**
Jean Botev, *Luxembourg*; Francisco J. Rodríguez-Lera, *Spain*

Human Aspects of IT for the Aged Population

S083: Intelligent Environments for Healthy and Active Aging - II

Chair(s): Hsiao-Ting Tseng, *Taiwan*

- **Explore the Demands of the Elderly by Integrating QFD and Scenario-Based Design**
Shuo-Fang Liu, Chun-Han Tsai, Ching-Fen Chang, *Taiwan*
- **Active Aging AI Community Care Ecosystem Design**
Hsiao-Ting Tseng, Hsieh-Hong Huang, Chen-Chiung Hsieh, *Taiwan*
- **Research on Cognitive Training of Digital Application System Introducing Reminiscence Therapy for the Experience of People with Dementia**
PeiFen Wu, Hui-Jiun Hu, WenFu Wang, KuangYi Fan, ChunWe Huang, *Taiwan*
- **Understanding the Exclusion Issues of Mobility-as-a-Service (MaaS): the Potential Problems of Older Travellers' Involvement**
Yuanjun Li, *P.R. China*; Sharon Cook, Andrew May, *United Kingdom*
- **Research on the Standing Movement of the Elderly**
Mengjing Cai, Yinxia Li, Huimin Hu, *P.R. China*

HCI for Cybersecurity, Privacy and Trust

S084: Human Factors in Cybersecurity - II

Chair(s): Magdalene Ng, *United Kingdom*





(index.html)

- **The Impact of Advertisements on User Attention During Permission Authorization**
Yousra Javed, *Pakistan*; Elham Al Qahtani, Mohamed Shehab, *United States*
- **Examining Human Individual Differences in Cyber Security and Possible Implications for Human-Machine Interface Design**
Laura M. Bishop, Phillip L. Morgan, Phoebe M. Asquith, George Raywood-Burke, Adam Wedgbury, Kevin Jones, *United Kingdom*
- **Assessing the human factor of cybersecurity: Can surveys tell the truth?**
Špela Orehek, Gregor Petrič, Jan Šinigoj, *Slovenia*
- **Not Annoying the User for Better Password Choice: Effect of Incidental Anger Emotion on Password Choice**
Laheem Khan, Kovila P.L. Coopamootoo, Magdalene Ng, *United Kingdom*
- **Natural vs. Technical Language Preference and their Impact on Firewall Configuration**
Artem Voronkov, Leonardo A. Martucci, *Sweden*

HCI in Games

S085: Digital Game and Playful Experiences

Chair(s): Amir Zaib Abbasi, *Pakistan*

- **Serious Games Design for and with Adolescents: Empirically based Implications for Purposeful Games**
Barbara Göbl, Dayana Hristova, Suzana Jovicic, Helmut Hlavacs, *Austria*
- **Customer Inspiration via Advertising Value of Pop-Up Ads in Online Games**
Amir Zaib Abbasi, *Pakistan*; Ali Hussain, *Malaysia*; Helmut Hlavacs, *Austria*; Muhammad Umair Shah, *Canada*; Ding Hooi Ting, *Malaysia*; Umair Rehman, *Canada*
- **Virtual Tourism in a Game Environment: Untangling Judged Affordances and Sense of Place**
Ingvar Tjostheim, *Norway*; John A. Waterworth, *Sweden*
- **A simulation game to acquire skills on Industry 4.0**
ROSSANO VERONICA, Rosa Lanzilotti, Teresa Roselli, *Italy*
- **Games for Cybersecurity Decision-making**
Atif Hussain, Kristen Kuhn, Siraj Ahmed Shaikh, *United Kingdom*
- **Mixed Method Approach to Evaluate Web 2.0 Applications in Business Games**
Susann Zeiner-Fink, Anne Goy, Angelika C. Bullinger, *Germany*

HCI in Mobility, Transport and Automotive Systems

S086: Highly Automated Driving: What Drivers Need

Chair(s): Josef F. Krems, *Germany*





(index.html)

- **User Perception and the Effect of Forms and Movements in Human-Machine Interaction Applying Steer-by-Wire for Autonomous Vehicles**
Dokshin Lim, Jihoon Lee, Sung Mahn Kim, *Korea*
- **The More You Know, the More You Can Trust: Drivers' Understanding of the Advanced Driver Assistance System**
Jiyong Cho, Yuni (JeongYun) Heo, *Korea*
- **Decision-making in Interactions between Two Vehicles at a Highway Junction**
Asaya Shimojo, Yuki Ninomiya, Shota Matsubayashi, Kazuhisa Miwa, Hitoshi Terai, Hiroyuki Okuda, Tatsuya Suzuki, *Japan*
- **Vehicle movement as implicit communication cue: Comparing pedestrians' detection performance between simulation and test track**
Claudia Ackermann, Matthias Beggiano, *Germany*
- **User Needs in Automated Driving: Why and How to Support the User in Trip Planning?**
Tobias Hecht, Klaus Bengler, *Germany*
- **Evaluation of Driver Drowsiness while Using Automated Driving Systems on Driving Simulator, Test Course and Public Roads**
Toshihisa Sato, Yuji Takeda, Motoyuki Akamatsu, Satoshi Kitazaki, *Japan*

S087: Proposals on Smart Mobility - I

Chair(s): To be announced

- **From the Parking Lot to Your Gate: A Need-Centered Approach for Optimizing User Experience in Automated Valet Parking System**
Jun Ma, Xuejing Feng, Zaiyan Gong, Qianwen Zhang, *P.R. China*
- **A Filed Study of External HMI for Autonomous Vehicles When Interacting with Pedestrians**
Ya Wang, Qiang Xu, Xiaojun Luo, Jifang Wang, *P.R. China*
- **A Decision Support System for Terminal Express Delivery Route Planning**
Jiazhuo Fu, Wenzhu Liao, *P.R. China*
- **Investigating the Influencing Factors of User Experience in Car-sharing Services: an Application of DEMATEL Method**
Yufei Xie, Hanyue Xiao, Tianjia Shen, Ting Han, *P.R. China*
- **Smart and Seamless: Investigating User Needs and Recognition for Smartphone-Automobile Interactive Features**
Hsinwen Chang, *Taiwan*; Liping Li, *P.R. China*

Design, Operation and Evaluation of Mobile Communications

S088: Mobile Social Media and Mobile Commerce

Chair(s): Shuiqing Yang, Peiyan Zhou, *P.R. China*





(index.html)

- **Factors Influencing Mobile Tourism Recommender Systems Adoption by Smart Travellers: Perceived Value and Parasocial Interaction Perspectives**
Dedi I. Inan, Zaenal Abidin, Achmad Nizar Hidayanto, Muhammad Erlangga Rianto, Fadhlan Zakiri, Muhammad Dimas Praharsa, *Indonesia*; Kongkiti Phusavat, *Thailand*
- **Optimization of Online Dispute Resolution Process in Mobile Electronic Commerce --A Case of the ODR Platform's Process Optimization in China Zhejiang Province**
Lifan Yang, Tianjiao Niu, *P.R. China*
- **The effect of mobile app design features on student buying behavior for online food ordering and delivery**
Narayan Prabhu, Vishal Soodan, *India*

Culture and Computing

S089: HCI from Within: Developing Locally and Regionally Relevant HCI Theory - I

Chair(s): Torkil Clemmensen, *Denmark*; Jyoti Kumar, *India*

- **Detriments to Cultural Sensitivity in HCI Design Processes: Insights from Practitioners' Experiences in India**
Jyoti Kumar, Surbhi Pratap, *India*
- **Open City Museum: Unveiling the Cultural Heritage of Athens through an -Augmented Reality Based- Time Leap**
Georgios Kallergis, Marios Christoulakis, Aimilios Diakakis, Marios Ioannidis, Iasonas Paterakis, Nefeli Manoudaki, Marianthi Liapi, Konstantinos-Alketas Oungrinis, *Greece*
- **The application of urban AR technology in cultural communication and innovation**
Yueyun Fan, *Italy*; Yaqi Zheng, *P.R. China*
- **Deep Fake and Cultural Truth - Custodians of Cultural Heritage in the Age of a Digital Reproduction**
Susan Hazan, *Israel*
- **Wechat Redesign for Foreigners Living in China from Culturally Adaptive Design Perspective**
Qinyan Zhang, *Finland*

Artificial Intelligence in HCI

S090: AI for Core Tasks in Application Domains - II

Chair(s): To be announced

- **Joking AI via Visual cues**
Ryota Suzuki, Kota Yoshida, Munetaka Minoguchi, Kazuki Tsubura, Takumu Ikeya, Akio Nakamura, Hirokatsu Kataoka, *Japan*
- **Multi-view Visual Question Answering Dataset for Real Environment Applications**
Yue Qiu, Yutaka Satoh, Ryota Suzuki, Kenji Iwata, *Japan*
- **Interactive Method to Elicit Local Causal Knowledge for Creating a Huge Causal Network**
Genki Yamashita, Taro Kanno, Kazuo Furuta, *Japan*
- **What Emotions Make One or Five Stars? Understanding Ratings of Online Product Reviews by Sentiment Analysis and XAI**
Chaehan So, *Korea*
- **A Heterogeneous Ensemble Learning-based Acoustic Fall Detection Method for Elderly People in Indoor Environment**
XiaoLing Li, JiaWei Li, JiaRui Lai, ZiMing Zheng, WeiWei Jia, Bin Liu, *P.R. China*





(index.html)

11.30 - 13.30 (CEST - Copenhagen)

Human-Computer Interaction

S091: Research on AI Art and Practice - II

Chair(s): Yi Ji, *P.R. China*

- **Design and Research of Intelligent Products for the Management of Chronic Diseases of the Elderly**
Xinxin Sun, Zhenzhou Li, Minglin Yang, *P.R. China*
 - **Research on Interaction Design of Artificial Intelligence Mock Interview Application Based on Goal-directed Design Theory**
Yingying Miao, Wenqian Huang, Bin Jiang, *P.R. China*
 - **Research on Evaluation of Perceptual Experience Quality of Web-based Panoramic Navigation System Based on Cognitive Mechanism**
Haowei Wang, Bin Jiang, Qianwen Chen, *P.R. China*
 - **Research on Gesture Interaction Design for Home Control Intelligent Terminals**
Bin Jiang, Xuewei Wang, Yue Wu, *P.R. China*
 - **Research on Evaluation Index System of Artificial Intelligence Design Based on User Experience**
Qianwen Chen, Haowei Wang, *P.R. China*
-

S092: Input Methods and Techniques - III

Chair(s): Vasilis Kouroumalis, *Greece*

- **Floating Hierarchical Menus for Swipe-based Navigation on Touchscreen Mobile Devices**
Alen Salkanović, Ivan Štajduhar, Sandi Ljubic, *Croatia*
 - **The Potential of Gesture-Based Interaction**
Kasper Rise, Ole Andreas Alsos, *Norway*
 - **Gesture-based interaction: Visual gesture mapping**
Kasper Rise, Ole Andreas Alsos, *Norway*
 - **Semi-automatic Annotation of OCT Images for CNN Training**
Sebastian Schleier, Noah Stolz, Holger Langner, Rama Hasan, Christian Roschke, Marc Ritter, *Germany*
-

Human Interface and the Management of Information

S093: Improvement in Learning and Educational Environments using ICT - II

Chair(s): Takahito Tomoto, Yusuke Kometani, Takako Akakura, *Japan*





(index.html)

- **Music Interpretation Support System - Integration Support Interface of Impressions from Listening to Music and Reading its Score -**
Tomoko Kojiri, Akio Sugikami, *Japan*
- **Development of a Prototyping Support Tool for a Data Utilization Skill-Development Program: Development and Evaluation of a Camera Sensor Pod with an AI-Based People-Counting Function**
Yusuke Kometani, Koichiro Yonemaru, Naoto Hikawa, Kyosuke Takahashi, Naka Gotoda, Takayuki Kunieda, Rihito Yaegashi, *Japan*
- **Decision Support System with Institutional Research: A Student-Centered Enrollment Advising System**
Takeshi Matsuda, Yuki Watanabe, Katsusuke Shigeta, Nobuhiko Kondo, Hiroshi Kato, *Japan*

S094: Virtual Reality and Haptic Application - IIChair(s): Kentaro Kotani, Daiji Kobayashi, *Japan*

- **A Preliminary Study on Reaching Position Estimation Model for the Subtle Action Disruption**
Yoshinobu Miya, Takehiko Yamaguchi, *Japan*; Tania Giovannetti, *United States*; Maiko Sakamoto, Hayato Ohwada, *Japan*
- **Development for tablet-based perimeter using temporal characteristics of saccadic durations**
Naoki MAESHIBA, Kentaro Kotani, Satoshi Suzuki, Takafumi Asao, *Japan*
- **Virtual Environment Assessment for Tasks Based on Sense of Embodiment**
Daiji Kobayashi, Yoshiki Ito, Ryo Nikaido, Hiroya Suzuki, Tetsuya Harada, *Japan*
- **Development and Evaluation of a Pen type Thermal Sensation Presentation Device for SPIDAR-tablet**
Kaede Nohara, Yasuna Kubo, Makoto Sato, Takehiko Yamaguchi, Tetsuya Harada, *Japan*
- **Analysis of Differences in the Manner to Move Object in Real Space and Virtual Space Using Haptic Device for Two Fingers and HMD**
Yuki Aoki, Yuki Tasaka, Junji Odaka, Sakae Yamamoto, Makoto Sato, Takehiko Yamaguchi, Tetsuya Harada, *Japan*

Engineering Psychology and Cognitive Ergonomics**S095: Flight Safety and Human Factors**Chair(s): Lei Wang, *P.R. China*

- **Effects of Mental Workload and Risk Perception on Pilots' Safety Performance in Adverse Weather Contexts**
Shan Gao, Lei Wang, *P.R. China*
- **Evaluating Pilot's Perceived Workload on Interacting with Augmented Reality Device in Flight Operations**
Wen-Chin Li, *United Kingdom*; Zepu Yan, Jingyi Zhang, *P.R. China*; Graham Braithwaite, Samuel Court, Mudassir Lone, Bikram Thapa, *United Kingdom*
- **An Overview of Paper Documentation Moving to Onboard Information System (OIS) for Commercial Aircraft**
Wei Tan, Yin Jiang, *P.R. China*
- **Establishment of National Safety Performance Evaluation Indicator System**
Min Luo, Yijie Sun, Yanqiu Chen, *P.R. China*

S096: Psychological Research for Designing Better Intelligent SystemsChair(s): Jing-Yu Zhang, *P.R. China*



(index.html)

- **Whether Information Source should be Provided in the Response of Voice Interaction System?**
Yaping Zhang, Ronggang Zhou, Yanyan Sun, Liming Zou, Huiwen Wang, Min Zhao, *P.R. China*
- **The Effect of Group Membership, System Reliability and Anthropomorphic Appearance on user's trust in Intelligent Decision Support System**
Xiangying Zou, Chunhui Lv, Jing-Yu Zhang, *P.R. China*
- **Design Suggestions for Smart Tax Return Software based on Reviewing Tax Compliance literature**
Bo Zhang, Jing-Yu Zhang, *P.R. China*
- **The Cueing Effect in Retrieval of Expertise: Designing for Future Intelligent Knowledge Management System**
Liang Zhang, Xiaoqin Li, Ting Xiong, Xiaoyue Pang, Jing-Yu Zhang, *P.R. China*

S097: Studies on Human Physiology and Cognition

Chair(s): Asterios Leonidis, *Greece*

- **Hand Movements influence Time Perception of Visual Stimuli in Sub or Supra Seconds duration**
Weiqi Zheng, Han Zhao, Yichen Zhang, Jiaxin Ma, Ziyuan Ren, *P.R. China*
- **Consideration of How Different Rearview Presentations Used for Electronic Mirrors on Automobiles Affect Human Spatial Cognition**
Yutaro Kido, Sora Kanzaki, Tomonori Ohtsubo, Yoshiaki Matsuba, Daichi Sugawara, Miwa Nakanishi, *Japan*
- **Using Guided Cognitive Illusions to Compensate for the Motion Limits of 4D Seats**
Zhejun Liu, Guodong Yu, Jing Lin, Tianrun Gu, Qin Guo, *P.R. China*
- **Relationship Between Thermal Sensation and Human Cognitive Performance Based on PMV**
Jiawei Fu, Rui Yan, Fulin Wang, Liang Ma, *P.R. China*
- **The Effects of Face Inversion and the Number of Feature Differences on Eye-movement Patterns**
Min-Fang Zhao, *P.R. China*; Hubert Zimmer, *Germany*

Universal Access in Human-Computer Interaction

S098: Cutting Edge in Artificial Intelligence and Biosignal Analysis for Automatic Control Systems, Virtual Reality and the Education

Chair(s): Hiroki Takada, *Japan*





(index.html)

- **Usability Evaluation of Short Dwell-time Activated Eye Typing Techniques**
Sayan Sarcar, *Japan*
- **A Virtual Rehabilitation System for Occupational Therapy with Hand Motion Capture and Force Feedback -Implementation with Vibration Motor-**
Kouki Nagamune, Shinto Nakamura, *Japan*
- **Numerical Analysis of Bio-signal Using Generative Adversarial Networks**
Kohki Nakane, Hiroki Takada, Shota Yamamoto, Rentarou Ono, Masumi Takada, *Japan*
- **Effect of Background Element Difference on Regional Cerebral Blood Flow while Viewing Stereoscopic Video Clips**
Fumiya Kinoshita, Honoka Okuno, Hideaki Touyama, Masumi Takada, Masaru Miyao, Hiroki Takada, *Japan*
- **Relationship between Eye Movements and Individual Differences in Motion Sickness Susceptibility While Viewing Stereoscopic Movies under Controlled Consciousness**
Akihiro Sugiura, Kunihiko Tanaka, Hiroki Takada, *Japan*

S099: Designing Social Equity - Politics, Social Equality, and the Digital Society

Chair(s): Miriam E.N. Begnum, *Norway*

- **Understanding Organizations through Systems Oriented Design: Mapping Critical Intervention Points for Universal Design**
Karina Ludwig, Miriam E.N. Begnum, Linda Blaasvær, *Norway*
- **Situated Ability: A Case from Higher Education on Digital Learning Environments**
Diana Saplacan, *Norway*
- **Institutionalizing Universal Design: How Organizational Practices Can Promote Web Accessibility**
G. Anthony Giannoumis, Lars Henrik Nordli, *Norway*
- **Co-creating Persona Scenarios with Diverse Users Enriching Inclusive Design**
Kristin Skeide Fuglerud, Trenton Schulz, Astri Letnes Janson, Anne Moen, *Norway*
- **Universal Design of ICT: A Historical Journey from Specialized Adaptations towards Designing for Diversity.**
Miriam E.N. Begnum, *Norway*

S100: Design for All Methods and Tools

Chair(s): Margherita Antona, *Greece*

- **Stakeholder Journey Analysis for Innovation: A Multiparty Analysis Framework for Startups**
Jo E. Hannay, Kristin Skeide Fuglerud, Bjarte M. Østvold, *Norway*
- **User Centred Design for Accessibility in Media Content – Sign Language and Virtual Signer.**
Vaishnavi Upadrasta, Astrid Oehme, Sandra Böhm, *Germany*
- **Exploring WAI-Aria Techniques to Enhance Screen Reader Interaction: The Case of a Portal for Rating Accessibility of Cultural Heritage Sites**
Marina Buzzi, Barbara Leporini, Francesca Romano, *Italy*
- **From Accessible Interfaces to Useful and Adapted Interactions**
Laura Burzagli, Pier Luigi Emiliani, *Italy*
- **Development of a Multilingual Questionnaire for the Deaf Community – Guidelines and Challenges**
Astrid Oehme, Vaishnavi Upadrasta, Philipp Kotsch, *Germany*





(index.html)

Chair(s): Maria Matsangidou, *Cyprus*

- **Multi-Channel Interaction Design and Implementation of Medical Pendant Based on Virtual Reality Technology**
Dini Duan, Zhisheng Zhang, Hao Liu, Zhijie Xia, *P.R. China*
- **Classifying the Levels of Fear by Means of Machine Learning Techniques and VR in a Holonic-Based System for Treating Phobias - Experiments and Results**
Oana Balan, Gabriela Moise, Alin Moldoveanu, Florica Moldoveanu, Marius Leordeanu, *Romania*
- **Sampling Electrocardiography Conformation for a Virtual Reality Pain Management Tool**
Maria Matsangidou, *Cyprus*; Alexis R. Mauger, Chee Siang Ang, *United Kingdom*; Constantinos Pattichis, *Cyprus*
- **eTher – An Assistive Virtual Agent for Acrophobia Therapy in Virtual Reality**
Oana Balan, Stefania Cristea, Gabriela Moise, Livia Petrescu, Silviu-Nicolae Ivaşcu, Alin Moldoveanu, Florica Moldoveanu, Marius Leordeanu, *Romania*
- **A Virtual Reality Dental Anxiety Mitigation Tool Based on Computerized Cognitive Behavioral Therapy**
Ting Han, Hanyue Xiao, Tianjia Shen, Yufei Xie, Zeshi Zhu, *P.R. China*

S102: New Virtualities - II

Chair(s): To be announced

- **VREye: Exploring Human Visual Acuity Test Using Virtual Reality**
Shivang Shekar, Pranav Reddy Pesaladine, Sai Anirudh Karre, Y. Raghu Reddy, *India*
- **A HMD-based Virtual Display Environment with Adjustable Viewing Distance for Improving Task Performance**
Makio Ishihara, Yukio Ishihara, *Japan*
- **Desktop and Virtual-reality training under varying degrees of task difficulty in a complex search-and-shoot scenario**
Akash Rao, Sushil Chandra, Varun Dutt, *India*
- **Study on Assessing User Experience of Augmented Reality Applications**
Lei Wang, Meiyu Lv, *P.R. China*

Cross-Cultural Design

S103: Design for Cross-Culture - II

Chair(s): John Kreifeldt, *United States*; Rungtai Lin, *Taiwan*





(index.html)

- **A Study of the Qualia Characteristics of Taiwanese Food**
Cheng Hsiang Yang, Po-Hsien Lin, *Taiwan*
- **Application of Auspicious Cultural In Metalworking Jewelry Design**
Minghong Shi, Chi Zhang, *P.R. China*; Yiwen Ting, Po-Hsien Lin, *Taiwan*
- **A Case Study of Applying 'Black Humor' to Ceramic Art Performance**
Mei-Ling Hsu, *Taiwan*; Wenting Fang, *P.R. China*; Po-Hsien Lin, Rungtai Lin, *Taiwan*
- **Research on the utilization of unconventional materials in fashion styling**
Tuck Fai Cheng, *Malaysia*; Yanru Lyu, *P.R. China*; Cheng Hsiang Yang, Po-Hsien Lin, *Taiwan*
- **The Pilot Study of the Theater of the Bauhaus**
Yiwen Ting, *Taiwan*; Minghong Shi, *P.R. China*; Po-Hsien Lin, Rungtai Lin, *Taiwan*

S104: Kansei Issues in Cross-Cultural Design - II

Chair(s): Kuohsiang Chen, *Taiwan*; Szu-Chi Chen, *Australia*

- **Applied the Technology Acceptance Model to Survey the mobile-learning adoption behavior in Science Museum**
Cheng-Wei Fan, *Taiwan*
- **Explore the Appeal of Social Media in Aesthetics Communication Among Different Culture**
Kai-Shuan Shen, Kuohsiang Chen, Yen-Tao Liu, *Taiwan*
- **What Would be the Next Design Evolution under the Auspices of Industry 4.0?**
Jyh-Rong Chou, *Taiwan*
- **Interactive Assistive Technology with Corporate Sponsor and Crowdfunding for Children with Physical Disabilities**
Chien-Yu Lin, *Taiwan*
- **Research on Sticker Cognition for Elderly People Using Instant Messaging**
Cheih Ying Chen, *Taiwan*

S105: Affective Computing and User Experience Design - II

Chair(s): Pei-Luen Patrick Rau, *P.R. China*; Yu-Liang Chi, *Taiwan*; Xiaoang Irene Wan, *P.R. China*

- **A Literature Review of the Research on the Uncanny Valley**
Jie Zhang, Shuo Li, Jing-Yu Zhang, Feng Du, Yue Qi, Xun Liu, *P.R. China*
- **How to Inherit and Innovate Patterns on the Silk Road in Modern Design**
Chuan Wang, *P.R. China*
- **The effect of multisensory information on the sense of control in stressful virtual environment**
Xiaofang Sun, Pei-Luen Patrick Rau, *P.R. China*
- **PIKAR: A Pixel-Level Image Kansei Analysis and Recognition System Based on Deep Learning for User-Centered Product Design**
Yun Gong, Bingcheng Wang, Pei-Luen Patrick Rau, *P.R. China*
- **Enlightenments to the Beijing Winter Olympic Games: A Review of Main Color Schemes for Olympic Games**
Meiyu Lv, Huijun Qin, *P.R. China*





(index.html)

- **Application of Visual Saliency in the Background Image Cutting for Layout Design**
Liyu Zhu, Xueni Cao, Ying Fang, Liqun Zhang, Xiaodong Li, *P.R. China*
- **Federated Artificial Intelligence for Unified Credit Assessment**
Minh-Duc Hoang, *Australia*; Linh Le, Anh-Tuan Nguyen, *Viet Nam*; Trang Le, Hoang D. Nguyen, *Singapore*
- **Visual Saliency: How Text Influences**
Ying Fang, Liyu Zhu, Xueni Cao, Liqun Zhang, Xiaodong Li, *P.R. China*
- **Research on Computational Simulation of Advertising Posters Visual Cognition**
Xueni Cao, Ying Fang, Liyu Zhu, Xiaodong Li, Liqun Zhang, *P.R. China*

S107: Data Based Social Signal Processing - IIChair(s): Hung-Hsuan Huang, Shogo Okada, Ryo Ishii, *Japan*

- **An Examination of Gaze during Conversation for Designing Culture-based Robot Behavior**
Louisa Hardjasa, Atsushi Nakazawa, *Japan*
- **Utilization of Human-Robot Interaction for the Enhancement of Performer and Audience Engagement in Performing Art**
Nihan Karatas, *Japan*; Hideo Sekino, *United States*; Takahiro Tanaka, *Japan*
- **Review of Electronic Word-of-Mouth Based on Bibliometrics**
Peihan Wen, Ruiquan Wang, *P.R. China*
- **Analysis of Imitating Behavior on Social Media**
Ying Zhong, Haihan Zhang, *Japan*
- **Knowledge Sharing and Community Promotion in Online Health Communities: Examining the Relationship between Social Support, Community Commitment, and Trust Transfer**
Zaenal Abidin, Achmad Nizar Hidayanto, Dedi I. Inan, Amira Luthfia Fitriani, Atikah Zahrah Halim, Muhammad Farhan Mardadi, Rizkah Shalihah, *Indonesia*

Augmented Cognition**S108: EEG and Physiological Signals**Chair(s): Shunji Shimizu, *Japan*



(index.html)

- **A Preliminary Experiment on the Evaluation of Aroma Effects using biological signals**
Runqing Zhang, Chen Feng, *P.R. China*; Peeraya Sripiyan, Midori Sugaya, *Japan*
- **Examination of Stammering Symptomatic Improvement Training using Heartbeat-linked Vibration Stimulation**
Shogo Matsuno, Yuya Yamada, Naoaki Itakura, Tota Mizuno, *Japan*
- **Ensemble Usage for Classification of EEG Signals: A Review with Comparison**
Zaib Unnisa, Sultan Zia, Umair Muneer Butt, *Pakistan*; Sukumar Letchmunan, *Malaysia*; Sadaf Ilyas, *Pakistan*
- **Basic Study to Reduce the Artifact from Brain Activity Data with Auto-Regressive Model**
Shunji Shimizu, Masaya Hori, Hiroaki Inoue, Yu Kikuchi, Takuya Kiryu, Fumikazu Miwakeichi, *Japan*
- **Analyses of Impression Changes and Frontal Lobe Activity While Viewing Videos**
Anna Endo, Naoki Takahashi, Takashi Sakamoto, Toshikazu Kato, *Japan*

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

S109: Human-Robot Interaction

Chair(s): Yaqin Cao, *P.R. China*

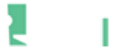
- **User Preference toward Appearance of Mobile Input Method Editor based on Kansei Engineering**
Yun Zhang, Yaqin Cao, Yi Ding, Yujie Zhao, *P.R. China*
 - **Semi-Autonomous Collaborative Mobile Platform with Pre-Diagnostics for Hospitals**
Vishal Reddy Gade, Ashish Soni, Bhargava Rajaram, Deep Seth, *India*
 - **A Visual Tracking Method to Explore the Effect of Presence on Online Consumers**
Yu Sun, *P.R. China*
 - **Threat or Opportunity -- Analysis of the Impact of Artificial Intelligence on Future Employment**
Fenglian Wang, Mingqing Hu, Min Zhu, *P.R. China*
 - **Multi-pose Face Recognition based on Block Adaptation**
Jianguo Shi, Yuanyuan Zhao, *P.R. China*
-

S110: Anthropometry, Posture and Motion Modelling and Ergonomic Applications

Chair(s): To be announced

- **Ergonomic-based Clothing Design for The Elderly**
Jingxiao Liao, Xiaoping Hu, *P.R. China*
- **Study on Chinese Elderly Women's Clothing Design based on Ergonomics**
Longlin Luo, Xiaoping Hu, *P.R. China*
- **Investigation on Heavy Truck Cab Ergonomics**
Junmin Du, Weiyu Sun, Haoshu Gu, Xin Zhang, Huimin Hu, Yang Liu, *P.R. China*
- **The effect of break on discomfort and variation in EMG activities while using a smartphone: A preliminary study in a Chinese university population**
Peilin Li, Yi Wang, Yi Ding, Yaqin Cao, *P.R. China*; Vincent G. Duffy, *United States*
- **Individual Differences in Office Comfort: What Affects Comfort Varies by Person**
Masashi Sugimoto, Fan Zhang, Noriko Nagata, Kota Kurihara, Seiro Yuge, Makoto Takata, Koji Ota, Seiji Furukawa, *Japan*





(index.html)

Chair(s): Marcelo M. Soares, *P.R. China*

- **Voice-based Bodyweight Training Support System using Smartphone**
Ruiyun Wang, Shin Takahashi, Buntarou Shizuki, Ikkaku Kawaguchi, *Japan*
 - **A Usability Study of a Brother Printer and Improvement with Ergonomic Recommendations**
Linlang Shen, Ziren Zhou, Xinran Su, Jing Wang, Marcelo M. Soares, *P.R. China*
 - **A Comparative Usability Analysis of Handheld Game Consoles**
Weiting Gao, Yun Wang, Wenzhuo Zhang, Chuan Qin, Marcelo M. Soares, *P.R. China*
 - **Research on usability evaluation and redesign of treadmill man-machine interface**
Du Qin, Wan Tiantian, Zhang Xinrui, Dai Roujing, Marcelo M. Soares, *P.R. China*
 - **Usability Assessment of the Camera GR II**
Zhanyan Luo, Tao Ruoyu, Yiling Zeng, Rui Zhang, Marcelo M. Soares, *P.R. China*
 - **Usability Testing of Bank of China Automatic Teller Machine**
Yingnan Weng, Shuxin Xia, Shuang Liang, Marcelo M. Soares, *P.R. China*
-

Distributed, Ambient and Pervasive Interactions

S112: Design with Interactivity and Connectivity

Chair(s): Jun Hu, *Netherlands*

- **Mood Board Tool—An Innovation Method in Vehicle HMI Design**
Qingshu Zeng, Mingyue Hu, *P.R. China*
 - **Designing an Interactive Platform for Intangible Cultural Heritage Knowledge of Taoyuan Woodcarving Craft**
Mingxiang Shi, Qingshu Zeng, *P.R. China*
 - **Aspects of Form, Interface, and Interaction in the Design of Wearable Devices**
Ziqiao Wang, *P.R. China*
 - **FlowGlove: A Liquid-Based Wearable Device for Haptic Interaction in Virtual Reality**
Lijuan Liu, Cheng Yao, Yizhou Liu, Pinhao Wang, Yang Chen, Fangtian Ying, *P.R. China*
 - **Computer Vision on Wheelchairs: Detecting Sleeping Behavior of People with Intellectual Disabilities**
Lang Bai, Jun Hu, *Netherlands*
 - **PuzMap: Designing A Multi-Sensory Puzzle Map for Children to Learn Geography**
Junwu Wang, Lijuan Liu, Muling Huang, Weilin Jiang, Cheng Yao, Fangtian Ying, *P.R. China*
-

S113: Designing Intelligent Environments - II

Chair(s): Justina Lydekaityte, *Denmark*





(index.html)

- **Textile Designer Perspective on Haptic Interface Design: A Sensorial Platform for Conversation between Discipline**
Riikka Townsend, *Finland*; Anne Louise Bang, Jussi Mikkonen, *Denmark*
- **Exploring the Design of Interactive Smart Textiles for emotion regulation**
Mengqi Jiang, Martijn Ten Bhömer, Hai-Ning Liang, *P.R. China*
- **Extended User Interface: NFC-Enabled Product Packaging for Enhanced User Experience**
Justina Lydekaityte, *Denmark*
- **Evaluation of the Tourists' Satisfaction of Smart Tourist Attractions Using Importance-Performance Analysis — Taking Jiuzhaigou as an Example**
Chufan Jin, Dian Zhu, Xi Chen, Jingran He, *P.R. China*

Learning and Collaboration Technologies

S114: Learning in Virtual, Augmented and Simulated Environments

Chair(s): Iliia Adami, *Greece*

- **The Use of Augmented Reality for Solving Arithmetic Problems for Preschool Children**
Siyuan Zhou, Xu Sun, Zhiyu Shi, Yanyi Lu, *P.R. China*
- **First-person Perspective Physics Learning Platform Based On Virtual Reality**
Yu Han, Yining Shi, Juanjuan Wang, Yue Liu, Yongtian Wang, *P.R. China*
- **Preschool Safety Education with Digital Media-based Learning Application– Kinder**
Cheng-Feng Sun, *United States*; Yao-Cheng Chan, Shih-Yi Chien, Yi-Ling Lin, *Taiwan*; I-Han Hsiao, *United States*
- **The Influence of Picture Book Interaction Design on Preschool Children's Reading Experience**
Liyang Wang, *P.R. China*
- **The Influence of Simulation Tool Usage on Architecture Student Design: Shifting from a Technical Perspective to a Design-Focused Perspective**
Camilla Maia, Jaewan Park, Sungeun Lee, Bokgiu Choi, Suji Choi, Sangwon Lee, *Korea*

Human Aspects of IT for the Aged Population

S115: Senior Cloud and Active Aging

Chair(s): Masatomo Kobayashi, Kenichiro Ito, *Japan*





(index.html)

- **Approaching Behavior Analysis for Improving a Mobile Communication Robot in a Nursing Home**
Misato Nihei, Mio Nakamura, Kohei Ikeda, Kazuki Kawamura, Hiroki Yamashita, Minoru Kamata, *Japan*
- **Services for Cognitive Health Co-created with Older Adults**
Mihoko Otake-Matsuura, Yoshie Taguchi, Katsutoshi Negishi, Mitsuteru Matsumura, Kiyomi Shimizu, Eiko Nagata, Hideko Nagahisa, Akane Uotani, Akira Suzuki, Mieko Yoshida, Norihisa Miyake, *Japan*
- **Combining Motivating Strategies with Design Concepts for Mobile Apps to Increase Usability for the Elderly and Alzheimer Patients**
Christian Eichhorn, David A. Plecher, Martin Lurz, Nadja Leipold, Markus Böhm, Helmut Krcmar, Angela Ott, Dorothee Volkert, *Germany*; Atsushi Hiyama, *Japan*; Gudrun Klinker, *Germany*
- **Mobile Application to Record Daily Life for Seniors Based on Experience Sampling Method (ESM)**
Takahiro Miura, Masafumi Arata, Yasushi Sukenari, Rinpei Miura, Akiko Nishino, Toshio Otsuki, Kazuhiko Nishide, Junichiro Okata, *Japan*

HCI for Cybersecurity, Privacy and Trust

S116: Privacy and Personal Data

Chair(s): To be announced

- **Parents Unwittingly Leak Their Children's Data: A GDPR Time Bomb?**
Suzanne Prior, Natalie Coull, *United Kingdom*
 - **To Allow, or Deny? That is the Question**
Panagiotis Andriotis, *United Kingdom*; Atsuhiko Takasu, *Japan*
 - **Modelling and Presentation of Privacy-Relevant Information for Internet Users**
Denis Feth, *Germany*
 - **A Study on User Preference: Influencing App Selection Decision with Privacy Indicator**
Sven Bock, *Germany*; Nurul Momen, *Sweden*
 - **Perspectives on Information Technology Artefacts in Trust-related Interactions**
Holger Koelmann, *Germany*
-

HCI in Games

S117: Modelling Learning and Optimal Performance in Games for Human and AI Players

Chair(s): Benjamin Ultan Cowley, *Finland*

- **Utilization of Neurophysiological Data to Classify Player Immersion to Distract from Pain**
Kellyann Stamp, *United Kingdom*; Chelsea Dobbins, *Australia*; Stephen Fairclough, *United Kingdom*
- **Adaptive Puzzle Generation for Computational Thinking**
Marco Scirea, *Italy*
- **Behavlet Analytics for Player Profiling and Churn Prediction**
Darryl Charles, *United Kingdom*; Benjamin Ultan Cowley, *Finland*
- **Generalised Player Modelling: why Artificial Intelligence in Games should Incorporate Meaning, with a Formalism for So Doing**
Benjamin Ultan Cowley, *Finland*





(index.html)

Chair(s): Arjan Kuijper, *Germany*

-
- **Range InSight - Visualizing Range-Related Information in Battery Electric Buses**
Jacob Stahl, Markus Gödker, Thomas Franke, *Germany*
 - **NannyCaps - Monitoring Child Conditions and Activity in Automotive Applications Using Capacitive Proximity Sensing**
Sebastian Frank, Arjan Kuijper, *Germany*
 - **A Passenger Context Model for Adaptive Passenger Information in Public Transport**
Christine Keller, Waldemar Titov, Thomas Schlegel, *Germany*
 - **A Multi-Device Evaluation Approach of Passenger Information Systems in Smart Public Transport**
Waldemar Titov, Hoa Tran, Christine Keller, Thomas Schlegel, *Germany*
 - **Privacy by Design: Analysis of Capacitive Proximity Sensing as System of Choice for Driver Vehicle Interfaces**
Sebastian Frank, Arjan Kuijper, *Germany*

Culture and Computing

S119: HCI from Within: Developing Locally and Regionally Relevant HCI Theory - II

Chair(s): Chenyue Wang, *P.R. China*

-
- **Research on Cross-Cultural Participatory Design by Design Teams Based on Chinese Cultural Background**
Rui Xi, Xin-Li Wei, De-Chuan Wang, Xian-Gang Qin, *P.R. China*; Torkil Clemmensen, *Denmark*; Wen-jun Hou, *P.R. China*
 - **TrackZenzan: Digital Flower Arrangement using Trackpad and Stylus Pen**
Anna Yokokubo, Yuyi Kato, Itiro Siio, *Japan*
 - **Research on the Regenerated Design of Blue Calico based on Computer Image Processing**
Yuanyuan Wang, Rongrong Fu, *P.R. China*
 - **Study on the Development of Ruichang Bamboo Weaving Patterns based on Computer Graphics and Machine Learning**
Miao Liu, Chenyue Wang, Jiale Zhou, *P.R. China*
 - **A Study on Symbolic Aesthetics of China's Splashed Ink Freehand Landscape Painting**
Liming Liu, *P.R. China*

Artificial Intelligence in HCI

S120: AI for Core Tasks in Application Domains - III

Chair(s): Margaux Fourie, *South Africa*



(index.html)

- **A Feature Importance Study in Ballet Pose Recognition with OpenPose**
Margaux Fourie, Dustin Van der Haar, *South Africa*
- **Socio-Technical Design of Hybrid Intelligence Systems – the Case of Predictive Maintenance**
Thomas Herrmann, *Germany*
- **Using Artificial Intelligence to Predict Academic Performance**
Arsénio Reis, Tânia Rocha, Paulo Martins, João Barroso, *Portugal*
- **Design Intelligence - Pitfalls and Challenges when Designing AI Algorithms in B2B Factory Automation**
Jennifer Heier, Jan Willmann, Karsten Wendland, *Germany*

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