

Editorial Preface

Themed Issue on Showcasing the MobileHCI'2016 Workshops

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Welcome to the latest issue of the *International Journal of Mobile Human Computer Interaction* (IJMHCI). This issue follows on from the repeated success of similarly themed issues over the past six years. It has been collated to showcase the interesting workshops run during the 18th International Conference on Human-Computer Interaction (MobileHCI'2016) in Florence, Italy. The organizers of each of the MobileHCI'2016 workshops were invited to nominate their best paper for inclusion in this themed issue or to submit a position paper highlighting the focus of their respective workshops. One of the workshops nominated a best paper, which has been extended for inclusion in this themed issue. The organizers of three of the MobileHCI'2016 workshops have contributed position papers which each provide interesting, extended insight into the topic of their workshops: these make a valuable addition to this themed issue and the field of mobile HCI more broadly. As is always the case with the MobileHCI workshops, the 2016 workshops covered an interesting spectrum, as is outlined below.

WORKSHOP ON SMARTTENTION, PLEASE! INTELLIGENT ATTENTION MANAGEMENT ON MOBILE DEVICES

- **Organisers:** Dominik Weber (University of Stuttgart, Germany); Benjamin Poppinga (Smarttention Systems, Germany); Alireza Sahami Shirazi (Yahoo Labs, USA); Martin Pielot (Telefonica Research, Spain); Sven Gehring (DFKI, Germany); Tadashi Okoshi (Keio University, Japan); Niels Henze (University of Stuttgart, Germany)
- **Best Paper:** *Adding Expressiveness to Smartwatch Notifications through Ambient Illumination* by Frederic Kerber (German Research Center for Artificial Intelligence, Germany); Sven Gehring (German Research Center for Artificial Intelligence, Germany); Antonio Krüger (German Research Center for Artificial Intelligence, Germany); and Markus Löchtefeld (Aalborg University, Denmark)

“Today, many users of mobile devices are continuously confronted with a huge variety of information: instant messaging, social media notifications, pending application updates, and calendar reminders are fighting for our attention. This leads to an information overload, which makes it hard to stay focused.

In the second Smarttention workshop, we investigated approaches towards smart attention management systems. The workshop brought together people from industry and academia who are active in areas such as attention research, context-aware computing, or multimodal interaction. Through presentations, discussions, and a wrap-up session, we created an overview of challenges in smart attention management. The presentations addressed a wide range of topics: the importance of visual attention for adaptive interfaces, reducing distraction of smartwatch users with deep learning, using

electrical muscle stimulation (EMS) to notify users, an exploration of notifications in smart home environments, and a notification dashboard that enables users to reflect on their own notifications.

The workshop paper that we nominated as best workshop paper addressed the management of smartwatch notifications through filtering and ambient illumination. In their work, the authors combined a smartwatch prototype with a filter application. Through twelve full-color LEDs on the smartwatch and aggregation and filtering of notifications, their system allows users to see an overview of their notifications at a glance. The authors conclude their paper with guidelines for smartwatch notification systems.” [Workshop Overview and Best Paper Introduction by Dominik Weber (University of Stuttgart, Germany)].

WORKSHOP ON INTERACTION TECHNIQUES FOR MOBILE COLLOCATION

- **Organisers:** Andrés Lucero (University of Southern Denmark, Denmark); Aaron Quigley (University of St Andrews, United Kingdom); Jun Rekimoto (University of Tokyo / Sony CSL, Japan); Anne Roudaut (University of Bristol, UK); Martin Porcheron (The University of Nottingham, United Kingdom); and Marcos Serrano (University of Toulouse & CNRS IRIT, France)
- **Position Paper:** *Towards Proxemic Mobile Collocated Interactions* by Andrés Lucero (Aalto University, Finland) and Marcos Serrano (University of Toulouse - IRIT, France)

“Research on mobile collocated interactions has been exploring situations in which collocated users engage in collaborative activities using their mobile devices, thus going from personal/individual multi-device workflows toward shared/multiuser experiences and interactions. Most of this research initially looked at the use of smartphones (and tablets) to study mobile collocated interactions. However, as computers get smaller, more powerful, and closer to our bodies, a rich ecosystem of small wearable devices becomes available for interaction.

The first workshop on mobile collocated interactions at MobileHCI 2011 identified several design and evaluation challenges as being the core of this research area: group size, physical distance, device-binding, operating systems, privacy, extending to public displays and tabletops, and conducting in-the-wild evaluations. More recent workshops have focused on technology and prototyping at CHI 2015, bodily exploration with wearable devices at MobileHCI 2015, and proxemics at CHI 2016. The focus of this MobileHCI 2016 workshop was to bring together a community of researchers, designers and practitioners to explore novel interaction techniques for mobile collocated interactions.” [Workshop Overview by Andrés Lucero (Aalto University, Finland) and Marcos Serrano (University of Toulouse - IRIT, France)].

WORKSHOP ON AUDIO IN PLACE: MEDIA, MOBILITY AND HCI - CREATING MEANING IN SPACE

- **Organisers:** Alan Chamberlain (The University of Nottingham, United Kingdom); Mads Bødker (Copenhagen Business School, Denmark); Adrian Hazzard (The University of Nottingham, United Kingdom); and Steve Benford (The University of Nottingham, United Kingdom)
- **Position Paper:** *Audio Technology and Mobile Human-Computer Interaction: From Space and Place to Social Media, Music Composition and Creation* by Alan Chamberlain (University of Nottingham, UK); Mads Bødker (Copenhagen Business School, Denmark); Adrian Hazzard (University of Nottingham, UK); David McGookin (Aalto University, Finland); David De Roure (University of Oxford, UK); Pip Wilcox (Bodleian Libraries, University of Oxford, UK); and Konstantinos Papangelis (Xi’an Jiaotong-Liverpool University, China)

“It’s easy to underestimate the role that the auditory realm of our existence plays in our day-to-day life. It’s something that (for a majority of people) is always there, and yet we take little time to listen or to think about the implications that this sonic world plays in the way we interact with each other and importantly with the technology that we carry around with us, that has now become part of the fabric of our everyday life. The motivation behind this Mobile HCI workshop emerged from an ongoing research project called, “Fusing Semantic and Audio Technologies for Intelligent Music Production and Consumption”. In attempting to understand and offer insights into cutting edge mobile audio technologies and related theory, we have pulled together a range of perspectives that are at the forefront of this rapidly growing field of research.” [Workshop Overview by Alan Chamberlain (University of Nottingham, UK)].

WORKSHOP ON INFERRING USER ACTION WITH MOBILE GAZE TRACKING

- **Organisers:** Miika Toivanen (Finnish Institute of Occupational Health, Finland); Kai Puolamäki (Finnish Institute of Occupational Health, Finland); Kristian Lukander (Finnish Institute of Occupational Health, Finland); Jukka Häkkinen (Department of Psychology, Finland); and Jenni Radun (University of Helsinki, Finland)
- **Position Paper:** *Inferring Intent and Action from Gaze in Naturalistic Behavior – A Review* by Kristian Lukander (Finnish Institute of Occupational Health, Finland); Miika Toivanen (Finnish Institute of Occupational Health, Finland & University of Helsinki, Finland); and Kai Puolamäki (Finnish Institute of Occupational Health, Finland)

“The goal of our workshop was to bring together a cross-domain group of individuals to (i) discuss and contribute to the problem of using mobile gaze tracking for inferring user action, (ii) advance the sharing of data and analysis algorithms as well as device solutions, and (iii) increase understanding of behavioral aspects of gaze-action sequences. The workshop proposed an interdisciplinary gathering for recognizing potential synergies, mapping solved and unsolved problems, and creating a research roadmap for the future applying the strengths of each contributing field.” [Workshop Overview by Miika Toivanen (Finnish Institute of Occupational Health, Finland & University of Helsinki, Finland)].

As always, I sincerely hope that you enjoy reading the broad spectrum of articles included in this themed issue of the IJMHCI! Finally, I would like to personally thank my postdoc research assistant – Dr Victoria Lush – for her assistance in collating this issue.

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