# Editorial Preface

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Welcome to the latest issue of the *International Journal of Mobile Human Computer Interaction* (IJMHCI). This issue sees a very clear focus on the end user, methodologically and in terms of users' perceptions of aspects of mobile device use. In this issue, articles range in focus from the role of personalization in apps designed to enhance large sports events, to the design space of bezel-initiated gestural input, to practical prediction of user emotion based on touchscreen finger gestures for the purpose of affective UI design, and finally to users' perceptions of mobile information security.

This issue commences with an article entitled *Investigation of the Role of Mobile Personalisation at Large Sports Events* by Sun Xu, Andrew May, and Qingfeng Wang. In this, the authors note that the concept of and increased expectations surrounding mobile personalization are presenting new design challenges in terms of the impact of contexts of use. Recognizing the importance of personalization in mobile user experience and the fact that spectators at large sports events often suffer from information overload and/or periods of boredom, the authors decided to explore the impact of personalization of mobile content in terms of user experience for Chinese spectators at a large sports event. After outlining the specific design and outcome measurement challenges of this particular domain of use/study, the authors describe a field study they designed in order to conduct their investigation, the goal of which was to determine the potential for personalization of mobile content to enhance the user experience for spectators at large sporting events. An interesting secondary goal of their research was to contribute to methodological know-how in terms of the application of user-centred design methods (which have a Western derivation) to Eastern cultures. The results of their investigation highlighted that personalization of content significantly enhances spectators' user experience, allowing mobile devices to be used in such settings without distracting from the overall enjoyment of the event and turning spectators from passive observers to more engaged participants. The authors discuss some design implications arising from their study, recognizing the need to overcome the limits of current adaptive systems. Finally, the authors highlight the need for cultural sensitivity in the application of methods intended to capture requirements data, to design systems with users, and to collect data during evaluation studies.

The second article is *Exploring the Design Space of Bezel-Initiated Gestures for Mobile Interaction* by Wing Ho Andy Li, Kening Zhu and Hongbo Fu. In this, the authors observe that bezel-initiated surface gestures have already achieved wide adoption in mobile interaction and that the bezel (that is, the frame surrounding a touchscreen) successfully enables supplementary gestural input to that which is initiated on the primary surface of a mobile device. They assert, however, that bezel-initiated gestures have, to date, been researcher-designed and, as such, the design space for such gestures lacks adequate study. On this basis, they discuss the design and findings of an elicitation study to explore users' perceptions of bezel-initiated gesture design. Their modified elicitation method was intended to encourage participants to design new gestures as well as to elicit insight into the design space itself, answering questions such as "(1) What bezel-initiated gestures will users commonly design? (2) What features will users mainly use for gesture design? and (3) What actions are more suitably referred by bezel-initiated gestures?" They were able to identify commonly-designed bezel-

initiated gestures for both one- and two-handed use and the dimensions of the design space utilized by participants in the process of generating these gestural designs. They were also able to highlight that bezel-initiated gestures were more intuitively applicable in some contexts that other – e.g., they were perceived as a natural fit with navigation tasks but were perceived to be harder when a target object needs to be specified. On the basis of their findings, the authors outline several suggestions which they hope will help researchers and designers when developing new interaction techniques; they also outline scope for future study surrounding bezel-initiated gestures.

In *A Predictive Linear Regression Model for Affective State Detection of Mobile Touch Screen Users* Samit Bhattacharya asserts that emotion should be used to improve the user experience associated with mobile interactive systems (by making the systems seem more natural and especially responsive to the user) but that, in order to do this, we must first be able to accurately recognize users' emotional state. Recognizing user emotion is complex, with a substantial body of work already published in this field. Such work is typically focused on the recognition of emotion based on facial expression, gesture, posture and physiological signals, typically involving computationally expensive computer vision and image processing techniques and additional hardware. In an attempt to make emotional prediction more realistic for mobile device users, Samit proposes a model to help predict, based on users' finger strokes, the affective state of a touchscreen mobile device user. The predictor is based on a linear combination of seven features of users' finger strokes which are assumed to provide an indirect indication of users' emotional states; it also assumes a user can be in one of three effective states – positive (happy, excited, elated), negative (sad, anger, fear, and disgust), or neutral (calm, relaxed, contented). Unlike previous work in this field, the seven features on which the prediction is based do not require the use of any specialized sensors, making it more universally useful. Samit reports on a validation study of the predictor which suggests prediction accuracy of approximately 91% which the author considers suitable for real world, practical use.

The final paper – *Perceived Mobile Information Security and Adoption of Mobile Payment Services in China* by Fei Gao, Pei-Luen Patrick Rau, and Yubo Zhang – looks at the issue of users' perception of mobile information security amid the rapid deployment of mobile services and applications and increasing percentage of reported mobile security issues. Researchers believe that the biggest hurdle to solving mobile security issues is the end user, with the associated implication that future security mechanisms must be designed and used properly to be effective. As such, the authors aimed to identify the factors that influence users' perceptions of mobile information security as well as to investigate the impact of such factors in order to better support mobile service design. Based on data collected using a survey, the authors were able to identify five factors influencing users' perceptions – perceived familiarity, perceived impact, perceived controllability, perceived awareness, and perceived possibility – and to highlight that, despite some overlap with perceptions of information security in general, the characteristics of mobile security threats are perceived differently to those prevalent to a desktop computer. On this basis, the authors further investigated the influence of perceived controllability, perceived impact, and perceived familiarity on uptake of mobile payment services. Interestingly, they found that "impact significantly affected intention to use, but not the perceived security of payment systems. Control level significantly affected the intention to use and the perceived security. Familiarity was found to have an effect on neither the intention to use nor the perceived security." On the basis of their findings, the authors discuss design implications for mobile payment systems.

The papers each challenge us to ensure we retain the user at the center of everything we do as HCI researchers, reminding us how much we can learn from their engagement in our ongoing research agendas. I trust that you find all the articles stimulating and useful – enjoy!

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