Welcome to this special themed edition on mobile interaction design and children. Mobile technology and children fit together so well that it is actually a surprise that this is the first collection, in a journal, of papers on that topic; there have previously been workshops and books on this area but never before such a collection of academic titles on this topic.

Research in mobile technology faces many challenges: first, there is the inherent difficulty in studying use and usage that is, by definition, on the move; then, there is the continuing debate, found in earlier editions of this journal, about what constitutes a mobile system, and, finally, there is the rapid change of technology.

Research in child computer interaction faces its own set of challenges which are of methodological, practical, and even ethical nature. Mobile technology is often used at home, or at communal play spaces, which may not be easy for researchers to access. Researchers are not always clear or consistent with each other as to how age groups are defined, or when a child becomes an adult. Theories of child development often motivate such research, but a clear understanding of how to apply them in the design of interaction is still lacking. Further, children’s abilities, interests, and expectations from mobile technology change rapidly, as the digital landscape changes dramatically even within one decade.

Given these tensions across the two, it is almost a wonder that anyone chooses to study mobile interaction design for children at all! Study it we must, however, as children are primary users of mobile devices and therefore deserve technologies that work for them, systems that meet their needs and products and services that are safe and protect their privacy. Mobile devices have enormous potential to bring education, social experiences, and fun to children in the developed and the developing worlds. It is widely suggested that it is the adoption of mobile phones, rather than of personal computers, that will bring about some narrowing of the digital divide that exists between those with, and those without, technology.

Mobile technology for children can exist in many forms, the phone is one example but there are many other mobile technologies that represent areas of immense growth potential and can deliver new experiences, specially...
fitting the needs of children, providing opportunities to support their development. Examples are network computers (following the One Laptop per Child imitative), wearable computers, and mobile game platforms. It is inevitable that children will continue to adopt and use devices initially designed for adults and standard services attractive for all ages, but an interesting research challenge emerges to invent new applications and devise novel forms of interaction tailored for children.

This special edition provides insights into many of the themes identified above. The papers collectively consider the design and evaluation of mobile technologies with children, studies of mobile interaction, applications for children on the move and discussion of the nature of mobile computing. The research methods vary also, from experimental studies through design studies to reflective writing. The fields of child computer interaction, and of interaction design and children are relatively young. It is even younger than the field of mobile human computer interaction and so one aim, in this special edition, has been to showcase together works from this disparate domain and set directions for future research. This has been achieved with papers coming from the UK, continental Europe, and the US and with authors who are experts and novices. In particular, we recommend readers to the book review, written by three remotely-located young researchers, from three different institutions. The way they worked together to achieve this paper was commendable and may be a format that could be encouraged in future journals.

Our special edition begins with a paper on the specifics of interaction. Accepting that studying interactions with children and mobile technologies is difficult (especially given the small size of mobile technologies and children), Children’s Interaction with Mobile Touch-Screen Devices: Experiences and Guidelines for Design by McKnight and Cassidy describes empirical studies carried out with children using a touch-screen Nokia Internet Tablet and other devices. The authors suggest a very useful set of guidelines for designers of touch-screen devices for children whilst also providing insights into how to carry out studies of this type. This paper is followed by Designing for Children’s Mobile Storytelling by Franckel, Bonsignore and Druin. Using the popular co-operative design methods developed at the University of Maryland, this study recounts a series of design workshops with children that culminated in the production of a portable storytelling application modelled on the iPhone. Of particular interest in this paper is the description of the design activities and the discussion as to how the designs from the children fed into the final product. Whereas the first two papers are concerned with the child and the technology, the third paper, Bits and Pieces: or, Potential Future Scenarios for Children’s Mobile Technology by Eisenbreg, Buechley and Elumeze is much more theoretical and, rather than presenting research results or the outcomes of a design exercise, this paper reflects on the relevance of the von Neumann architecture in a mobile technology world and unpacks the input process and output of computing. Illustrated by examples from wearable and tangible computing, Eisenberg et al. challenge the reader to think outside the box and present several interesting ideas for the community. Thinking outside the Scrabble box is indeed the challenge that was presented to the authors (Sintoris, Stoica, Papadimitriou, Yiannoutsou, Komis, and Avouris) of the final research paper, MuseumScrabble: Design of a Mobile Game for Children’s Interaction with a Digitally Augmented Cultural Space. This is a classic design paper that documents, in a case study format, the activity of creating a mobile game for children. The authors describe in full detail the processes they went through, ending with the evaluation of the product.

Having come to the last research paper, the reader will realize that this is a wide area for study and there is much that cannot be included in a special edition of this kind. There are clearly omissions that we would hope will be filled in future regular issues of IJMHCI. Studies on trust, privacy and security with children’s technologies, studies on collaborative use of
children’s mobile technologies, and studies of children using mobile technologies in the home are all needed by the community. Recognizing the limitations of our special edition presented here, the final paper is given over to a book review, *Children’s Role in Mobile Interaction Design: Review and Reflection* by Manches, Horton, and Yarosh. Of the three books that we, as editors, consider most pertinent to this field, two of these books we have ourselves written, but we make no apologies for this and on reading the reviews you will see that our reviewers have been critical and helpful in their review.

Concluding a preface is always an unsatisfactory task, the task is to wrap up with a catchy line or a final thought but the wish, from the editors, is that the reader will read on, through the journal to the very end and make his or her own conclusions and identify his or her big questions from which new research will emerge. The technologies that children will use in ten years time have already been imagined, but what these children will do with these technologies cannot be imagined! That is why studying ‘children and their interactions with mobile technologies’ is so fascinating and so rewarding. Read the enthusiasm in the papers presented here, catch that enthusiasm and enter into our world.

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