About the Contributors

Joanna Lumsden (PhD) is a lecturer/researcher in the School of Engineering & Applied Sciences at Aston University (Birmingham, UK) where she also designed and now manages the state-of-the-art Aston Interactive Media (AIM) Lab. Prior to moving to Aston in 2009, Joanna was a researcher with the National Research Council of Canada (NRC). Joanna is also an adjunct professor with the Faculty of Interdisciplinary Studies at the University of New Brunswick (Canada). She obtained her BSc in Software Engineering (Hons) from the University of Glasgow (Scotland, 1996), where she also later achieved her PhD in HCI in 2001. Her research interests and expertise are mainly in mobile HCI and associated evaluation techniques. She has served on program committees for several international HCI/general computer science conferences and was also editor of the Handbook of Research on User Interface Design and Evaluation for Mobile Technology.

Katrin Arning, PhD, studied psychology with a major in work- and industrial psychology at TU Darmstadt and RWTH Aachen University. Since 2007 she worked as a research assistant in a DFG-project about older drivers’ driving performance at Saarland University, Saarbrücken. In 2008 she received her PhD in psychology with a thesis on User Training for older users of Information- and Communication Technologies. Since 2008 Arning has been working as a Post-Doc at Human Technology Centre (HumTec) of RWTH Aachen University, Germany. Her main research interests focus on technology acceptance, user diversity and usability of technical systems and business process modeling languages.

Nikolaos Avouris is Professor of Software Technology and Human-Computer Interaction at the Electrical and Computer Engineering Department of the University of Patras, Greece. He is head of the Human-Computer Interaction Group. He has investigated many aspects of Interactive Systems Design and Human-machine interaction in industrial, educational and environmental fields. He has special interest and experience in the areas of distributed intelligent systems, collaborative technologies, usability and accessibility of interactive systems, design and evaluation of mobile and context aware systems and web interaction. Previously he has been with the University of Manchester, UK (1983-1984); Athens Technical Education College (1985-1986); the European Commission Joint Research Centre Ispra, Italy (1986-1993) and the Public Power Corporation of Greece (1993-1994). He was leading investigator of many collaborative research programs in Esprit, IST, Quality of Life etc. He is representative of Greece in IFIP Technical Committee 13 (Human-Computer Interaction).
Darren Black has been working at Systematic since 2007. He received his bachelor’s degree in computer science (Informatics) and his master’s degree in Human-Computer Interaction from Aalborg University in 2006. Darren’s interest is in novel applications of mobile technologies and their effects on users and environments. Darren is currently working as a System Engineer at Systematic on a project for a Danish government agency.

Beth Bonsignore is a doctoral student at the University of Maryland’s College of Information Studies and a graduate research assistant at the Human-Computer Interaction Lab (HCIL) and the Maryland Institute for Technology in the Humanities (MITH). Empirical work with KidsTeam is an integral part of her research, which lies at the intersection of New Media Literacies studies, technology development for collaborative storytelling, and social analytics for communities of learning.

Leah Buechley is an Assistant Professor at the MIT Media Lab where she directs the High-Low Tech research group. The High-Low Tech group explores the integration of high and low technology from cultural, material, and practical perspectives, with the goal of engaging diverse groups of people in developing their own technologies. Leah’s work in electronic textiles or “e-textiles” includes developing a method for creating cloth printed circuit boards (fabric PCBs) and designing the commercially available LilyPad Arduino toolkit. Her research was the recipient of the best paper award at the 2006 International Symposium on Wearable Computers and has been featured in numerous articles in the popular press including the New York Times, Boston Globe, CRAFT Magazine, Denver Post, and Taipei Times. Buechley received PhD and MS degrees in computer science from the University of Colorado at Boulder and a BA in physics from Skidmore College.

Gary Burnett has been conducting Human-Computer Interaction and Human Factors research and development relating to advanced technology within road-based vehicles since 1992. He is currently an Associate Professor in Human Factors at the University of Nottingham in the UK. He has also worked as a lecturer in HCI at the University of Nottingham and a Research Fellow at the HUSAT Research Institute at Loughborough University. His work addresses key safety, usability and acceptability issues for a number of in-car systems, and he has worked on a number of large-scale collaborative projects within this area (funded by the EU and the UK government). He also acted as a consultant to many of the major car manufacturers and system suppliers (e.g. Honda, Ford, Jaguar/LandRover, Toyota, Nissan, Alpine). He has published over 60 papers in peer-reviewed journals, conferences and edited works.

Brendan Cassidy is also a research assistant in the ChiCI Group at UCLan in the UK. He is also working on the UMSIC project. Previous to this he was at the University of Sunderland where he recently submitted his PhD thesis on the design of novel interaction devices for accessible public systems. He also holds a BSc (Hons) in Computer Science and an MRes in the Design and Evaluation of Advanced Interactive Systems from Lancaster University.

Woong Choi received the B.S. degree in electronic engineering from Yonsei University, Korea in 2009. Currently, he is pursuing his M.S. degree in electrical engineering, KAIST, focusing on Human-Computer Interaction and ubiquitous computing.
Luigi Ciminiera received the degree in electronic engineering from the Politecnico di Torino, Italy, in 1977. From 1978 to 1983, he held different positions with the Department of Control and Computer Engineering at the Politecnico di Torino, where he became a research assistant in 1983. He was the chairman of the Control and Computer Engineering Department at the Politecnico di Torino from 1999 to 2003 and he is the dean of the II School of Engineering at the Politecnico di Torino. He served as a program cochair of the 14th IEEE Symposium on Computer Arithmetic. His research interests include grids and peer-to-peer networks, distributed software systems, and computer arithmetic. He is a coauthor of two international books and more than 100 contributions published in technical journals and conference proceedings. He is a member of the IEEE.

Nils Jakob Clemmensen received his masters degree in computer science from Aalborg University in 2006. After graduating he worked as a user experience engineer on battle management and electronic warfare software projects at Systematic (DK) before joining Denmark’s third largest privately owned media company as a project manager in 2008. His professional interests are promoting agile software development based on Scrum and PRINCE2 best-practices, search driven web publishing and exploring digital publishing on mobile devices.

Allison Druin is the Director of the Human-Computer Interaction Lab (HCIL) and an Associate Professor in the University of Maryland’s College of Information Studies and Institute for Advanced Computer Studies. Her work includes: developing digital libraries for children; designing technologies for families; and creating collaborative storytelling technologies for the classroom. She is the author or editor of four books, and her most recent book was published Spring 2009: Mobile Technology for Children (Morgan Kaufmann, 2009).

Michael Eisenberg is a Professor in the Department of Computer Science and Institute of Cognitive Science at the University of Colorado, Boulder, where he and his wife Ann Eisenberg co-direct the Craft Technology Lab. The Lab’s research interests center on mathematics and science education, with an emphasis on blending novel technologies into a variety of content-rich “hands-on” and physically situated activities for children. Mike is the recipient of several major teaching awards at the University of Colorado, and is a member of the University’s “President’s Teaching Scholars” guild. Mike has authored or co-authored numerous published papers; wrote a programming textbook (“Programming in Scheme”, MIT Press, 1990); and is the author of a published play (“Hackers”, published by Samuel French).

Nwanua Elumeze is a doctoral student in Computer Science at the University of Colorado, Boulder, with a research focus on human-technology interaction design and engineering. He enjoys weaving computation into traditional craft materials to make them interactive and programmable. His current work, on ambient programming, explores how we might reprogram tangible materials and construction kits “in situ” with programs scattered throughout the environment. His past work includes: “smart tiles”, a prototype array of 100 programmable tiles; “code road”, a robot car that reads and responds to barcoded cards spread on the floor; and “birdwatcher”, a toy duck that can be programmed with flashes of light.

Parisa Eslambolchilar is a lecturer in Future Interaction Lab in the Department of Computer Science at Swansea University. She is interested in “Dynamic and Resilient Human-Computer Interaction
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Sonia Franckel began working on the research reported in this paper as a Computer Science undergraduate at the University of Maryland under the direction of Dr. Allison Druin. The work resulted in a computer science honors citation upon her graduation in May 2009. During her time at University of Maryland, Sonia worked with KidsTeam, an intergenerational design team that supports the partnership of adults and children to design new technologies. Sonia currently works at the Google and volunteers on the side for Citizen Schools to bring her passion for mobile technology to underprivileged school children.

Andrew Greaves has been studying at Lancaster University since 2003. He received his bachelor’s degree in computer science in 2006, was awarded a masters degree with distinction in 2007 in Mobile & Ubiquitous Computing and since then is working on his PhD in the area of mobile interaction with personal projectors. At present my research is exploring novel and intuitive interaction techniques for single and multi-user scenarios and collaborative co-located interactions.

Eve Hoggan studied for her PhD in the Department of Computing Science at the University of Glasgow. One major focus of her work has been on multimodal and crossmodal interaction with audio and tactile feedback. The main application of this work has been for mobile touchscreen interfaces where users could be considered as situationally impaired and may benefit from alternative forms of information presentation.

Woomin Hwang received the B.S. degree in electrical engineering from Korea University in 2004 and M.S. degree in electronic engineering from KAIST, Korea in 2006. Currently, he is pursuing his PhD degree in electrical engineering, KAIST, focusing on virtualization and file systems. His research interests include human-computer interaction and cloud computing.

Satu Jumisko-Pyykkö (MSc in software engineering) is currently a researcher and a PhD student in Tampere University of Technology. Her research interests are focused on experienced mobile 2D and 3D multimedia quality and its field evaluations. She publishes actively in this field (over 25 journal and conference publications) and she was also awarded by the best master’s thesis in Finland in human-computer studies in 2005.

Chulmin Kim received the B.S. degree in electronic engineering from KAIST, Korea in 2008. Currently, he is pursuing his M.S. degree in electrical engineering, KAIST, focusing on Flash file systems. His research interests include Human-Computer Interaction and ubiquitous computing.
Vassilis Komis, born in Heraklion - Greece (1965), holds a degree in Mathematics from the University of Crete (1987), DEA (1989) and doctoral degrees (1993) in Teaching of Computer Science (Didactique de l’Informatique) from the University of Paris 7 - Denis Diderot (Jussieu). He is currently an Associate Professor of ICT applications in Education in the Department of Educational Sciences and Early Childhood Education at the University of Patras. He is also the founder and head of Information and Communications Technologies in Education Group at the University of Patras. His publications and research interests concern the conception and the development of educational software, the implementation of collaborative systems, the teaching of computer science and the integration of ICT applications in education.

Antonio Krüger is a professor for computer science at Saarland University and the scientific director of the Innovative Retail Laboratory (IRL) at the German Research Center for AI (DFKI) since April 2009. Until then he has been a professor and the managing director at the Institute for Geoinformatics (ifgi) at the University of Münster. His main research interests are mobile and Ubiquitous Spatial Assistance Systems, combining the research fields of Intelligent User Interfaces, User Modelling, Cognitive Sciences, and Ubiquitous Computing.

Fabrizio Lamberti received his MSc degree in computer science engineering and PhD degree in computer science and systems engineering from the Politecnico di Torino, Italy, in 2000 and 2005, respectively. He has published a number of technical papers in international journals and conferences in the areas of mobile and distributed computing, wireless networking, image processing, and visualization. He has served as a reviewer and program or organization committee member for several conferences. He is a member of the Editorial Advisory Board of international journals. He is also a member of the IEEE and the IEEE Computer Society.

Markus Löchtefeld is a junior researcher at the German Research Centre for Artificial Intelligence (DFKI) in Saarbrücken where he is working in the Innovative Retail Laboratory. He received a Diplom (MSc) in Geoinformatics at the University of Münster at the Institute for Geoinformatics in 2009. Currently his research focuses on new interaction techniques for mobile phones with integrated projector. Besides that he is interested in mobile augmented reality applications as well as mobile context-aware applications.

Andreas Lorenz received a diploma degree in computer science from the University of Kaiserslautern in 2001. From 2002-2009 he worked as research associate and project manager at the Fraunhofer Institute for Applied Information Technology in Sankt Augustin. He received a doctoral degree in computer science (2009) from RWTH Aachen University and joined RWTH as Post-Doc in the DFG Research Cluster on Ultra High-Speed Mobile Information and Communication (UMIC). His research interests include human-computer interaction in ambient computing environments, mobile and nomadic information systems, user modelling and user-adaptive systems, and software engineering.

Lorna McKnight is a research assistant in the Child Computer Interaction Group (ChiCI Group) at the University of Central Lancashire (UCLan) in the UK. Currently she is working on the UMSIC project, which is a funded trans-national EU project on the usability of children’s music-making software. The
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The project is aimed at developing a music creation and sharing application for mobile devices with the aim of encouraging collaboration between children with learning difficulties or cultural differences. Previously at Lancaster University, she holds a BSc (Hons) in Computer Science, an MRes in the Design and Evaluation of Advanced Interactive Systems, and has recently completed her PhD on the use of virtual environments to support personal creativity.

Roderick Murray-Smith is a professor of computing science in the Department of Computing Science at Glasgow University, where he runs the Dynamics and Interaction research group. He works in the overlap between machine learning, interaction design and control theory. Prior to this he has held positions at the Technical University of Denmark, MIT, and Daimler-Benz Research, Berlin. He works closely with the mobile phone industry, and is a member of Nokia’s Scientific Advisory Board.

Ioanna Papadimitriou graduated from the University of Patras in 2002 with a degree in Early Childhood Education. In 2006 she received a MSc in Didactics of Science, Curriculum, Evaluation and ICT in Education from the University of Patras. Since 2003 she is a graduate student in the Department of Educational Sciences and Early Childhood Education of the University of Patras, Greece. Member of the “ICT (Information and Computer Technologies) in Education” Research Group. Preparing a PhD on collaborative educational activities supported by mobile technologies. Her research areas include educational technology, e-learning, computer supported collaborative learning (CSCL), mobile learning, museum education. She has presented papers in international conferences.

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Michael Rohs is a senior research scientist with Deutsche Telekom Laboratories at TU Berlin. His primary research interests are in mobile human-computer interaction and pervasive computing. This includes the integration of physical and virtual aspects of the user’s surroundings, sensor-based mobile interaction, and interaction techniques for handheld devices. An example is using camera phones as magic lenses for large-scale paper maps in order to overlay personalized, up-to-date information. Another example is pressure-based multi-touch-input for handheld devices for controlling 3D objects. He obtained a Ph.D. in Computer Science from ETH Zurich, Switzerland, a Diploma in computer science from Darmstadt University of Technology, Germany, and a Master’s degree in Computer Science from the University of Colorado at Boulder, USA.

Enrico Rukzio is working as an academic fellow and lecturer at the Computing Department at Lancaster University. Enrico’s research interests are physical mobile interactions and applications as well as context-aware mobile services. Enrico believes that mobile devices which were so far mostly used for interactions between the user and the device itself will more and more be used for interactions with objects in the real world. Currently he works new interaction techniques for projector phones and mobile interactions with floor displays, interactive surfaces and public displays.

Andrea Sanna graduated in electronic engineering in 1993, and received a PhD degree in computer engineering in 1997, both from Politecnico di Torino, Italy. Currently, he has an assistant professor position at the Second Engineering Faculty. He has authored and co-authored several papers in the areas of computer graphics, virtual reality, parallel and distributed computing, scientific visualization, and computational geometry. He is currently involved in several national and international projects concerning grid, peer-to-peer, and distributed technologies. He is a member of ACM and serves as reviewer for a number of international conferences and journals.

Johannes Schöning is a senior researcher at the German Research Centre for Artificial Intelligence DFKI in Saarbrücken. He received a Diplom (MSc) in Geoinformatics at the University of Münster at the Institute for Geoinformatics in 2007. His research interests are new methods and interfaces to intuitive navigate through spatial information, mobile augmented reality applications, Wikipedia as a knowledge database and home grown multi-touch surfaces. He organized the first Multi-Touch Workshop, held in Münster in 2007 and the follow up bootcamp “Build-your-own“ Multi-touch Surface in conjunction with IEEE Tabletops 2008 in Amsterdam. In 2010 he will be the general chair of Interactive Tabletops and Surfaces (ITS 2010, former Tabletops).
Hyunchul Seok received the B.S. degree in electrical engineering from Pohang University of Science and Technology (POSTECH) in 2001 and M.S. degree in electronic engineering from KAIST, Korea in 2008. Currently, he is pursuing his PhD degree in electrical engineering, KAIST, focusing on virtualization of sensor networks. His research interests include radar systems, human-computer interaction, and ubiquitous computing.

Christos Sintoris is a PhD candidate in the Electrical and Computer Engineering Department and a member of the Department’s HCI Group. He received his diploma from the Computer Engineering and Informatics Department in 2001. Before joining the HCI Group, he worked for the Research Academic Computer Technology Institute, where he designed and developed large scale Internet based services for public education. His current research focus is on ubiquitous computing, especially on mobile interaction, on mixed reality environments and on design methods and he has been actively engaged in several projects concerning the design and development of mobile context-aware applications.

Mikael B. Skov works as an associate professor at the HCI Lab at the Department of Computer Science, Aalborg University. Mikael holds a PhD in interaction design and human-computer interaction from Aalborg University in 2002. His research interests include pervasive, ubiquitous and mobile computing and he has worked in several application domains. He is especially interested in technology use and adaptation in the domestic domain. Currently, he is working on attention limited interaction techniques for in-vehicle interaction.

Adrian Stoica is a researcher in the Human Computer Interaction Group of Department of Electrical and Computer Engineering from University of Patras in Greece. He has actively participated in the design and development of mobile context-aware applications in several projects. Adrian Stoica has special interests in architectures and middleware for ubiquitous computing, mobile services, usability, interaction with hybrid spaces and mobile internet. Adrian Stoica has published several scientific articles on usability and mobile applications and services. He obtained a BSc degree in Business Informatics from University “Dunarea de Jos” of Galati, Romania. Also he has a rich background in software design and development due to several years experience as a freelance software engineer and IT consultant.

Teija Vainio is a researcher in the field of human-computer interaction at Tampere University of Technology (at the Unit of Human-Centered Technology) in Finland. She has been involved in a number of research projects in mobile human computer interaction with special research interests relating to navigation and mobile work. Her PhD thesis (in progress) addresses the design of navigation aids for mobile users and how urban planning praxis can be applied for such design.

Nikoleta Yiannoutsou holds a PhD in Educational Technology (2005) from the University of Athens. She is currently a researcher in the Department of Educational Sciences and Early Childhood at the University of Patras and an adjunct Lecturer at the University of Peloponessse. She has worked with the Educational Technology lab, University of Athens (1999 - 2005) in the design of educational software and in the infusion of ICT in the classroom. Her research interests focus on the role of new representational media in the learning process and on the design of innovative learning activities based on mobile technologies.
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Jong-Woon Yoo received the B.S. and M.S. degrees in electronic engineering from KAIST, Korea in 2005 and 2007, respectively. Currently, he is pursuing his PhD degree in electrical engineering, KAIST, focusing on human-computer interaction and energy-efficient protocols for wireless mobile networks. His research interests include sensor networks and ubiquitous computing. He is a student member of IEEE.

Martina Ziefle, PhD, is professor for communication science at RWTH Aachen University, Germany and head of a research group at the Human Technology Centre (HumTec). HumTec is funded by the Excellence Initiative of the German federal and state governments and aims at fostering high level interdisciplinary research between the humanities/social sciences and the engineering/natural sciences. Prof. Ziefle’s research addresses human factors in different technology types and usage contexts, taking demands of user diversity into account. A special focus is directed to the usability and acceptance of mobile devices which are increasingly used in novel contexts (e.g., eHealth). Her main research concern is to shape technology innovation in ways that technology development is truly balanced with the human factor. In addition to teaching and directing research on campus, Prof. Ziefle leads various projects funded by industrial and public authorities, dealing with the interaction and communication of humans with technology.