

Foreword

With increasing computing power in ever smaller form factor devices, and the growth of short range ad-hoc networking, the vision of ubiquitous computing that was sketched out in the early 90s is moving closer to reality. However, while the hardware and networking layers are seeing significant advances, software systems and applications for ubiquitous systems are still in their infancy.

As such, this book, which is comprised of papers selected from the 3rd International Workshop on Ubiquitous Computing and those obtained by an open CFP, represents a timely and useful contribution. The editors have put together a nice collection of papers that bring out key challenges in this field and present some interesting solutions.

Many of the papers describe interesting applications that can be very useful. For instance, there are papers describing traffic monitoring, visual tags on cell phones, and mobile learning. Other papers focus on technology, such as issues related to localization and middleware. There are also some interesting papers that deal with programming and system building paradigms, such as introducing the idea of activity oriented computing, or kinetic user interfaces. Finally, there is a group of papers that describe issues related to privacy and user acceptance of some of these technologies.

Between them, the chapters cover many of the key challenges faced by ubiquitous computing. The editors should be commended for producing a volume that brings together these interesting papers. The book will be a useful resource for both academic researchers and practitioners in the field.

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Anupam Joshi is a professor of computer science and electrical engineering at UMBC. Earlier, he was an assistant professor in the CECS department at the University of Missouri, Columbia. He obtained a BTech degree in electrical engineering from IIT Delhi (1989), and a Masters and PhD in computer science from Purdue University (1991 and 1993, respectively). His research interests are in the broad area of networked computing and intelligent systems. His primary focus has been on data management for mobile computing systems in general, and most recently on data management and security in pervasive computing and sensor environments. He has created agent based middleware to support discovery, composition, and secure access of services/data over both infrastructure based (e.g. 802.11, cellular) and ad-hoc wireless networks (e.g. Bluetooth). He is also interested in Semantic Web and data/web mining, where he has worked on personalizing the web space using a combination of agents and soft computing. His other interests include networked HPCC. He has published over 50 technical papers, and has obtained research support from NSF, NASA, DARPA, DoD, IBM, AetherSystems, HP, AT&T and Intel. He has presented tutorials in conferences, served as guest editor for special issues for *IEEE Personal Comm.*, *Comm. ACM* etc., and served as an associate editor of *IEEE Transactions of Fuzzy Systems* from 99-03. At UMBC, Joshi teaches courses in operating systems, mobile computing, networking, and web mining. He is a member of IEEE, IEEE-CS, and ACM.