

# MOBILE APPLICATIONS

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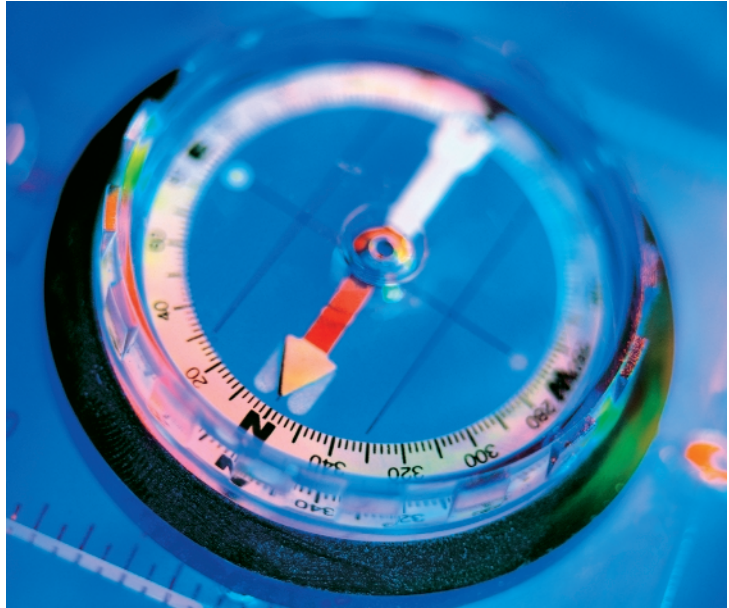
Submissions due 2 Sept. 2002

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**R**ecent advances in hardware and software technologies have created a plethora of mobile devices with a wide range of communication, computing, and storage capabilities. New mobile applications running on these devices provide users easy access to remote content and services regardless of where they are. Applications designers, however, face many challenges in areas such as content transcoding, security, deployment, profiles and personalization, user interface design, and performance.

Advances in wireless networking technologies such as 3G and 802.11 are starting to allow mobile multimedia applications to deliver audio and video to mobile devices, and new applications will soon take advantage of the ubiquity of wireless networking to create new virtual worlds. Before these applications can be realized, however, new systems must overcome important issues such as fluctuating conditions in wireless channels, seamless transition between cellular and wireless LAN modes, and mutual adjustments between application bandwidth requirements and immediate capacities. Moreover, as mobile devices become more powerful, peer-to-peer mobile computing will become an increasingly important computation paradigm. These trends in mobile devices and applications have profound implications for computing structures and network designs in the coming years.

Research papers should demonstrate the feasibility of the approach and describe the state of implementation. Evaluation of the approach and relation to other research and systems is very important. Case studies and applied papers should discuss the key factors that made the system work and should also mention the pitfalls and problems encountered.

This special issue covers all aspects of mobile applications. Topics of interest for technical papers include, but are not limited to:

- Security of mobile applications
- Mobile middleware platforms
- Design of user interface for mobile devices
- Mobile multimedia applications
- Mobile enterprise applications
- Peer-to-peer mobile computing
- Hybrid systems that seamlessly transfer between cellular and wireless LAN systems
- Emerging standards and transition issues
- Robustness and Quality of Service (QoS) issues
- Performance studies of mobile applications
- Studies of existing mobile applications