Mobile Information Systems

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Special Issue on

Mobile Applications Testing and Quality Evaluation

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Development and diffusion of mobile applications go forward at a tremendous rhythm, due to the always increasing impact of smartphones and other mobile devices on people's habitudes. Mobile applications are often developed with very fast life cycles and without paying sufficient attention to their quality and to the absence of bugs. As a consequence, many applications are uninstalled and discarded by users when they experience the presence of bugs (user comments in app stores clearly witness this phenomenon).

Testing and quality assurance represent crucial activities in the context of mobile applications, and there is a large request in both industry and scientific community for mobile testing and quality evaluation methodologies, techniques, and tools. In particular, since these activities are usually repetitive, expensive, and time-consuming, there is a remarkable request for automated techniques and tools supporting them.

Effective testing and quality evaluation processes are needed in the context of mobile applications not only to realize reliable applications but also to improve fundamental quality features such as security and privacy, usability, energy efficiency, performance, portability, compatibility, and adaptability to different execution devices and systems.

The purpose of this special issue is to involve research contributions from both the academia and the industry regarding the proposal or the experimentation of processes, techniques, and tools related to different aspects of testing and quality evaluation of mobile applications. Authors are invited to submit their relevant original research papers.

Potential topics include but are not limited to the following:

- Mobile testing automation techniques and tools
- Mobile applications security testing and evaluation
- Mobile applications energy efficiency analysis and improvement techniques
- Static/dynamic analysis techniques for ensuring the quality of mobile applications
- Mobile applications performance evaluation and monitoring
- Mobile applications for testing and monitoring the quality of mobile networks
- Mobile applications compatibility testing techniques
- Usability evaluation of mobile applications
- Context-aware and location-aware testing techniques
- Mobile applications testing processes
- Costs of mobile applications testing and quality evaluation processes
- Experiences in mobile application testing and quality evaluation
- State of the art of mobile application testing and quality evaluation techniques
- Comparative studies between existing mobile applications testing and quality evaluation techniques
- Extension and adaptation of existing testing techniques and tools to the context of mobile applications
- Proposal of mobile testing techniques exploiting the potential of cloud infrastructures

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/misy/matq/.

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