Welcome Message from the Mobile Applications Track Chair

MOBILESoft 2016

Mobile devices have revolutionized our lives. We have come to depend on them for numerous daily tasks. On our mobile devices, we store numerous pieces of private information, including our contacts, photographs, videos, and audio files. We use our mobile devices to access both our personal and enterprise email accounts, do instant messaging, manage our bank and credit-card accounts, play games, access our social-media accounts, take pictures and videos, get driving directions, and perform all kind of commercial and business transactions. For these reasons, mobile computing has generated new challenges in many areas of Computer Science, including security and privacy, application development, testing and deployment, operating systems, computer architecture and energy consumption. Many fundamental concepts had to be rethought in order to become applicable to mobile devices and applications. This has also had a disruptive effect on research. For example, given the mobile ecosystem fragmentation, researchers are now studying how to accelerate mobile application development, testing and deployment across different platforms. It is also a fact that mobile devices are almost always on and easy to steal, and are equipped with a variety of sensors, such as a Global Positioning System (GPS) tracker, compass, accelerometer, and Near Field Communication (NFC) chipset. All these sensors are capable of collecting all sort of private information related to the user, in addition to the user's private information that mobile devices are designed to contain, such as the device's unique ID as well as the user's contacts, multimedia files, passwords and social-media accounts. Applications executing on a mobile device might be able to access the user's private information and share it with remote servers without the user's consent. It is also typical for mobile devices to contain both personal and enterprise applications and data, with the risk that applications downloaded from the Internet may have access to enterprise data or manipulate the execution of enterprise applications. For all these reasons, researchers have focused on how to make mobile applications secure by preventing untrusted data from being used in security-sensitive computations and confidential data from being exposed to unauthorized observers.

The IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft) is a forum for research scientists to present novel enhancements in the area of mobile software. In 2016, MobileSoft has introduced a new track, called “Mobile Applications.” The purpose of this track is to allow both industrial and academic researchers to exchange ideas and show each other practical contributions in various areas of mobile computing, particularly application development, testing, security and privacy. As part of the Mobile Applications track of MobileSoft, researchers can demonstrate new technologies to each other and present practical results that enhance the state of the art in the field of mobile software engineering and security.

The MobileSoft 2016 Mobile Applications track is chaired by Dr. Marco Pistoia, Senior Manager and Principal Researcher at the IBM Thomas J. Watson Research Center, Yorktown Heights, New York, United States of America. Contributions to this track have been solicited by invitation. The track hosts a distinguished keynote speaker from the industry, and 20 presentations and demonstrations by researchers from all over the world. Specifically, the researchers authoring the presentations and demonstrations for the Mobile Applications track of MobileSoft 2016 are from six different countries and a total of twenty-six different organizations—seven industrial and nineteen academic research institutions. From the topics that these researchers have offered to present, it is clear that the main concerns industrial and academic researchers have identified revolve around fast application development and testing across different mobile ecosystems, as well as security and privacy of mobile applications. It is also interesting to notice that, after numerous years in which research in mobile computing focused mainly on the Android platform, researchers have now started to explore the challenges of the Apple iOS
platform. This is of considerable importance given that Apple mobile devices constitute a large segment of today's market.

We are grateful to the researchers who have accepted to present their work at the Mobile Applications track of MobileSoft 2016, as well as to the organizing and steering committees of MobileSoft 2016, who have created the concept of this track.

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MobileSoft 2016 Mobile Applications Track Chair