Message from the ADSN 2016 Workshop Organizers

The Fifteenth Assurance in Distributed Systems and Networks (ADSN 2016) Workshop focuses this time on assurance in mobile systems. Since distributed computing systems pervade all walks of our lives with accelerated pace in many different forms, including cyber-physical and embedded systems, ubiquitous and pervasive computing, and span over networks, connecting systems ranging from powerful servers to sensor networks, it is more important than ever to assure their proper functionality. Assurance is defined as capability of guaranteeing functional and non-functional system properties such as dependability, security, timeliness and adaptivity according to heterogeneous and changing requirements. Optimizing assurance has become a bigger challenge than ever with ever-growing system complexity, diverse environments and ever-shrinking time-to-market. ADSN is a unique event where a forum is provided for academics, industrial researchers and engineers who focus on next generation solutions for dependable, secure, real-time, dynamic distributed systems.

This year we have received seven manuscripts and only three were accepted after careful review by the Program Committee. We would like to thank all three Program Vice-Chairs and reviewers on the Program Committee for their valuable input and contributions. Our paper selection went extremely smoothly thanks to the reviewers and coordination of our Program Chair.

We begin with a Keynote Address by a distinguished and accomplished scientist, Prof. Kenya Sato from Doshisha University, who focuses on current and future trends in connected vehicles and dynamic maps. This talk addresses topics in automatic safe driving systems and is a quest for standardization which in turn would significantly improve assurance.

The technical session covers various aspects of system and network assurance and starts with a paper on evaluating mean-time to security breach in VM-based intrusion-tolerant systems. The method of evaluation is based on queueing theory. It is followed by an algorithm for information dissemination using location-based mobile agents in vehicular ad hoc networks. The third paper in this session tackles a protocol time assurance problem by proposing unordered file downloading methods and evaluating required time to download.

In the next session, we have another prominent and distinguished keynote speaker, Prof. Tadashi Dohi from Hiroshima University who summarizes over three decades of research on software aging. His talk entitled “When to Reboot Server Systems - Summary of Software Aging and Rejuvenation” highlights basic techniques on dealing with software aging by focusing on rejuvenation and trying to answer the fundamental question on when to rejuvenate.

Finally we feature an interesting panel discussion on key challenges in secure mobile systems design. Security of mobile devices must address security of both hardware and software as well as human behavior. Hardware threats are mainly related to physical attacks and hardware Trojans. Software threats are mostly caused by malicious software called malware. Users behavior also impacts security, and improper use may encourage and facilitate cyber attacks. The objective of this panel is to present state-of-the-art security techniques based on both static and dynamic analysis and identify challenges that designers have to resolve in order to design secure mobile systems.
We hope that you will enjoy our Program, get actively involved in the presentations and the panel discussion (after all, it is a Workshop), use ample breaks to better get to know each other, share your own experience, strike new friendships as well as get inspiration for contributions to next year’s meeting.

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