2nd Workshop on

Security and Dependability of Critical Embedded Real-Time Systems

http://certs2017.uni.lu

Co-located with the IEEE Real-Time Systems Symposium (RTSS), Paris, France

Workshop Organizers

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Steering Committee

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Important Dates

Workshop submission deadline
1st October 2017
(extended and firm)

Notification of acceptance
17th October 2017

Final versions
20th October 2017

Workshop
5th December 2017

Conference
6th December 2017 -
8th December 2017

Call for Papers

At their heart, many critical systems and system infrastructures are composed of real-time and embedded systems (RTES). For example, RTES control our power grids, maintain our smart homes, steer our vehicles or they host the software in road-side units that allow our vehicles to drive more safely and more efficiently. For sure, they will open the way to even more challenging applications, such as in autonomous and cooperating vehicles, terrestrial or aerial.

However, most of these RTES are distributed or networked, which makes them vulnerable both to accidental faults and targeted attacks and advanced and persistent threats. Worse, compromise of a few nodes may bring down the entire system, in particular if attacks persist.

The grand challenges brought in by these scenarios include ensuring continuous unmaintained operation under faults and attacks. Systems may possibly utilize easier to upgrade computation resources in mobile phones or road side units whose trustworthiness needs to be established while the RTES approaches these units. And while attackers may try to compromise the RTES' functionality or timing, we seek to protect the integrity and timeliness of systems and the privacy of their users. Mastering these challenges requires the expertise of several research areas, and so, the goal of this workshop is to bring together researchers and engineers from the security and dependability, distributed systems and real-time communities, in order to discuss and promote new and exciting research ideas and initiatives, and to identify and discuss the challenges that lie ahead for such critical applications.

CERTS'17 strives for an inclusive and diverse program and solicits short and long technical papers on open problems, experiments, case studies, new ideas, or future challenges.

See http://certs2017.uni.lu for a detailed description of contribution formats.

Scope and Topics of Interest

CERTS'17 is open to all topics at the intersection of security and dependability of embedded and real-time systems, with an emphasis on criticality and distribution. As such, areas of interest include but are not limited to the following topics:

- Security and dependability of cyber-physical and other real-time and embedded systems,
- Vulnerabilities and protective measures of CPS infrastructure,
- Fault and intrusion tolerant distributed real-time systems,
- Confidentiality and privacy in real-time and embedded systems, and
- System architectures encompassing combinations of distribution, security, dependability and timeliness.

Contribution formats include technical presentations of systems, system models and architectures, methods, tools, protocols and infrastructures to improve the dependability and security of real-time systems but also open problems and future challenges papers and experimental papers including experience reports and negative results.

Submission Formats

- Short Work-in-Progress Paper: up to two pages, standard IEEE format
- Full Paper: up to six pages, standard IEEE format

Adherence to the format is strict, but we tolerate moderately exceeding the page limit (by up to two pages) if the content so justifies. Visit http://certs2017.uni.lu for further details.

Program Committee:

Lui Sha, Christian Esposito, Hans Reiser, Danny Dolev, Antônio Augusto Fröhlich, Zbigniew Kalbarczyk, Miroslav Pajic, Ravi Prakash, Sasikumar Punnekat, Guillermo Rodriguez-Navas, José Rufino, Elad Schiller, Bryan Ward, Heechul Yun, Saman Zonouz