Call for Contributions

Submission:

1. Inform the Chair: with the Title of your Contribution
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   Please select Track Preference as NCSIoT

   Special track

NCSIoT: Novel Cloud Approaches for Securing IoT Devices

Chairs and Coordinators

Dr. Magnus Westerlund, Arcada University of Applied Sciences, Finland
magnus.westerlund@arcada.fi

Prof. Dr. Bob Duncan, University of Aberdeen, UK
bobb Duncan@abdn.ac.uk

Prof. Dr. Andreas Aßmuth, Ostbayernische Technische Hochschule (OTH) Amberg-Weiden, Germany
a.assmuth@oth-aw.de

PhD Candidate, Sebastian Fischer, Fraunhofer AISEC, Germany
sebastian.fischer@fu-berlin.de

along with

CLOUD COMPUTING 2020, The Eleventh International Conference on Cloud Computing, GRIDs, and Virtualization
October 25 - 29, 2020 - Nice, France
https://www.iaria.org/conferences2020/CLOUDCOMPUTING20.html

The proliferation of Internet of Things (IoT)-devices in society at large demands a renewed focus on securing and maintaining such systems. IoT-based systems are predicted to have a great impact on future business and the resilience of such systems must be guaranteed. This can be achieved by prevention, detection, response and mitigation of combined physical and cyber threats to IoT infrastructure.

The objective of the call is to identify novel approaches for improving resilience in the evolving IoT domain. Such approaches can identify building blocks on a system or a device level. These building blocks can include intelligent security that actively and automatically adapts its own security. Introducing cryptographic-based building blocks that strive to ensure that distributed IoT networks remain in healthy condition throughout their lifecycle are of great importance. By supporting values of openness, automation, decentralization, inclusiveness and protection of privacy we can introduce novel means that reduces the threat of surveillance and theft, while also improving the level of trust for IoT technology.

In order to be agnostic in terms of sought solution implementations, this call extends the definition of cloud to include distributed cloud solutions. Traditional cloud architectures rely mainly on a conceptually centralized service provision model, while distributed clouds, e.g. based on distributed ledger technology (e.g., blockchain technologies) originate from a peer-to-peer and a completely distributed approach. The emergence of distributed clouds that are cryptographically secured through distributed ledgers may provide infrastructure for IoT solutions that provide more transparent and accessible services, more intelligence, greater involvement and participation.

Topics include, but not limited to:

- Security solutions and architectures for IoT
Analytics-based methods for intelligent supervision
- Blockchain-based IoT management
- Footprint reducing micro- and uni-kernels for IoT devices
- Physically-defined digital fingerprinting (i.e. physically unclonable functions) for IoT nodes
- Physical and cyber threats and mitigations to IoT infrastructure
- Identity management and key-recovery protocols for IoT-networks
- Privacy-preserving data sharing
- Secure machine-to-machine communication
- Development of distributed clouds for supporting IoT installations
- Cryptographic protocols and software architectures for distributed data processing
- Security standards and protocols for IoT

**Important Datelines**
Submission: June 1, 2020
Notification: June 21, 2020
Registration: July 1, 2020
Camera ready: July 1, 2020

**Contribution Types**
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
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**Paper Format**
- See: [http://www.iaria.org/format.html](http://www.iaria.org/format.html)
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**Registration**
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- Registration fees are available at [http://www.iaria.org/registration.html](http://www.iaria.org/registration.html)

**Contact**
Chair:
Magnus Westerlund: magnus.westerlund@arcada.fi
Logistics: steve@iaria.org