Call for Contributions

1. Inform the Chair: with the title of your contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICSEA+2024+Special
Please select Track Preference as **IoTSE**
3. Note: *For 2024, all events will be held in a hybrid mode: on site or virtual choices (live, prerecorded videos, voiced presentation slides, and .pdf slides). We hope for better times allowing us to return to the traditional on site scientific events. However, we are ready to adapt any which way the conditions dictate.*

Special track

IoTSE: IoT-native Software Engineering

Chair
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along with
ICSEA 2024: The Nineteenth International Conference on Software Engineering Advances
https://www.iaria.org/conferences2024/ICSEA24.html
September 29 - October 03, 2024 - Venice, Italy

The Internet of Things (IoT) is widely recognized as the third technological revolution (after the Industrial and Internet Revolutions) or as part of the fourth industrial revolution (after the Steam, Electricity, and Digital Revolutions). Particularly, the European Commission places IoT to be at the center of the digitization of the world economy, and the US National Intelligence Council lists IoT as one of six breakthrough technologies that have significant impacts on the US interests.

Considering that software is defining everything and dominating the world, software systems play a key role in the IoT revolution and its future evolution. On the other hand, the tremendous IoT-specific challenges when blending the physical and virtual worlds in turn affect the development of software systems that support IoT. As such, it has been identified that IoT "is pulling software engineering further and further from the comfort zone of principles and techniques that have prevailed for many decades".

Following the argument about "composing practices into methods", we also advocate the empirical nature of IoT-native software engineering, i.e., exploring domain-specific best practices, identifying generic lessons from best practices, and ultimately turning the best practices and lessons into theoretical and systematic knowledge. It is worth noting that although there are already theoretical investigations to support engineering IoT software systems, those theoretical research outcomes (e.g., a framework and a checklist) are mainly based on the sparse literature and expert opinions. Thus, this special track will particularly focus on empirical evidence of best practices (e.g., real-world IoT project implementations and case studies) and evidence-based discussions, to facilitate knowledge generation in the IoT-native software engineering domain.

Subtopics for contributions include, but are not limited to:

- Software architectures and design patterns for constructing IoT applications
- Quality assurance of IoT software systems
- Empirical primary studies in software engineering for/in IoT

- Evidential assessments on the rigor, effectiveness, and relevance of a variety of software technologies in the IoT domain
- Experiences in applying theoretical and empirical knowledge of software engineering to IoT practice
- Challenges and lessons learned from adopting software engineering techniques and methods in the IoT research and practice
- Negative results showing where future software engineering for/in IoT studies are needed
- Evidence-based research agenda for maturing and enriching software engineering for/in IoT practices

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]
- Demos: two pages [posted on www.iaria.org]

Important Datelines
Inform the Chair or Coordinator: As soon as you decide to contribute
        Submission: Aug 14, 2024
        Notification: Sept 1, 2024
        Registration: Sept 11, 2024
        Camera ready: Sept 11, 2024
Note: The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chairs.

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the Open Access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICSEA+2024+Special
Please select Track Preference as **IoTSE**

Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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