CfP: 2nd International Workshop on Next-Generation Operating Systems for Cyber-Physical Systems (NGOSCPs)

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CALL FOR PAPERS

2nd International Workshop on Next-Generation Operating Systems for Cyber-Physical Systems (NGOSCPs)

Current State of the Art

Tuesday, April 21, 2020 | Sydney, Australia | https://www.cse.wustl.edu/~cdgill/ngoscps2020/ at CPS-IoT Week 2020 (April 21-24, 2020)

Overview

Building on the success of the 1st International Workshop on Next-Generation Operating Systems for Cyber-Physical Systems (NGOSCPs): On Beyond POSIX, this 2nd edition of the workshop takes a somewhat different tack towards developing an increasingly technical and influential series of follow-on workshops in subsequent years, to generate and direct research topics and results towards new tracks in conferences such as RTAS and ICCPS, and in doing so to promote further growth and development of cyber-physical systems research. Specifically, instead of soliciting a breadth of perspectives from the research community as was done last year, this year’s workshop will focus on a smaller but more in-depth set of presentations and demonstrations from several invited research groups whose established research contributions and infrastructures serve to illustrate the current state of the art in operating systems research for cyber-physical systems.

Towards that goal, this year's workshop aims to offer the CPS-IoT community an up-to-date snapshot of current research in next generation operating systems for CPS-IoT applications, in the form of invited position papers, presentations, and demonstrations of established or emerging operating systems that address different models of timing assurance, security, and other technical issues, rigorously under a well defined system model. Workshop attendees will experience in-depth explanations, demonstrations, and discussions of the work
that several top CPS-IoT systems research groups have been doing, and the
operating systems architectures, policies, and mechanisms they have been
developing as part of that research. This year's workshop thus will be somewhat
more tutorial in nature, giving the CPS-IoT community a reasonably
comprehensive and in-depth look at the state of the art in next-generation
operating systems for CPS. As with the first edition of the workshop, it also will
aim to spur a cohesive discussion among a broad swath of the cyber-physical
systems research community towards developing next-generation approaches for
operating systems that can offer higher-fidelity support for needed cyber-physical
systems semantics (timing, concurrency, power management, and properties of
physical trajectories), leveraging the presented examples as a foil for such
discussion.

**Important Dates**

- Workshop program posted - February 14, 2020
- Invited position papers due - March 2, 2020 (AoE)
- NGOSCPs 2020 workshop - April 21, 2020
- Invited slides and links due - April 27, 2020 (AoE)
- Invited slides and links posted - April 30, 2020