ACM/IEEE ICCPS 2017 CALL FOR PAPERS

8th ACM/IEEE International Conference on Cyber-Physical Systems
April 18-21, 2017 in Pittsburgh, PA, USA as part of CPSWeek 2017
http://iccps2017.cse.wustl.edu

Overview. As digital computing and communication become faster, cheaper and available in packages that are smaller and use less power, these capabilities are increasingly embedded in many objects and structures in the physical environment. Cyber-physical systems (CPS) are physical and engineered systems whose operations are monitored, coordinated, controlled and integrated by such computing and communication. Broad deployment of cyber-physical systems is transforming how we interact with the physical world as profoundly as the world wide web transformed how we interact with one another, and further harnessing their capabilities holds the possibility of enormous societal and economic impact. ACM/IEEE ICCPS is the premier single-track conference for reporting advances in all aspects of cyber-physical systems, including theory, tools, applications, systems, test-beds and field deployments.

Focus Areas. As in the previous year of the conference, ICCPS 2017 features two focus areas for submissions: one on CPS foundations (the traditional focus of ICCPS), and one on secure and resilient infrastructure CPS (the focus of the former HiCoNS conference). The entire program committee is eligible to review in both areas, but authors will be asked to specify one of the two areas during submission in order to aid with reviewer selection.

The CPS foundations (CPSF) area focuses on core science/technology to develop fundamental principles and platforms that underpin the integration of cyber and physical elements. Application domains include transportation, energy, water, agriculture, ecology, supply-chains, medical and assistive technology, sensor and social networks, and robotics. Among the relevant research areas are security, control, optimization, machine learning, game theory, mechanism design, mobile and cloud computing, model-based design, verification, data mining / analytics, signal processing, and human-in-the-loop shared or supervisory control.

The secure and resilient infrastructure CPS (HiCoNS) area focuses on the confluence of cyber- security, privacy, and CPS that impacts the operation of critical infrastructures such as smart grids, water distribution, transportation, healthcare, building automation, and process control. Of particular interest is foundational work that cuts across multiple application areas or advances scientific understanding of underlying principles for the development of high confidence (secure, reliable, robust, and trustworthy) networked CPS.

Submissions. Manuscripts should have a main body with no more than 10 pages in either ACM or IEEE two-column conference style, including figures and references. Up to 2 additional pages of appendices may follow the main body of the paper, within the same submitted .pdf file. Authors are encouraged (but not required) to register paper titles and abstracts one week before the full paper submission deadline, through the link given on the submissions page.

Important Dates. Full paper submission deadline is October 13, 2016; Author notification December 20, 2016; Camera ready papers due February 16, 2017.

Organizers. General Co-Chairs: Sonia Martinez, UC at San Diego, USA; Eduardo Tovar, CISTER/INESC TEC, ISEP, Portugal. Program Co-Chairs: Chris Gill, Washington University in St. Louis, USA; Bruno Sinopoli, Carnegie Mellon University, USA. Steering Committee: Insup Lee, University of Pennsylvania, USA; Jack Stankovic, University of Virginia, USA; Eric M. Feron, Georgia Institute of Technology, USA; Karl H. Johansson, Royal Institute of Technology (KTH), Sweden; Xenofon Koutsoukos (Ex Officio), Vanderbilt University, USA; Ian M. Mitchell (Ex Officio), University of British Columbia, Canada.