High Confidence Software and Systems Conference

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HIGH CONFIDENCE SOFTWARE AND SYSTEMS CONFERENCE

A world class community of researchers gather each year for a full week of High Confidence Software and Systems Conference activities that are structured to focus on new scientific and technological foundations that can enable entirely new generations of engineered designs that are becoming essential for effectively operating life?, safety?, security?, and mission?critical systems.

The twentieth annual HCSS Conference will be held virtually the week of September 14th. Daily themes for the program are Formal Methods at Scale, Architecture-level Formal Methods for New and Existing Systems, and Human/Machine Cognitive Security. Please see the program agenda for additional details about the upcoming conference.

Software Certification Consortium Meeting

As in prior years, the meeting of the Software Certification Consortium will be co-located with HCSS. Information about the SCC can be found at https:/\m/\ps-vo.org/group/scc.

Conference Archives


About HCSS

The pervasive role of information technology and cyber-physical systems (CPS) in our lives forces us to rely in diverse and often unexpected ways upon the correctness and integrity of those computing systems?with our privacy, safety, security, and well-being all increasingly dependent upon them.

The High Confidence Software and Systems (HCSS) Conference, now in its second decade, was created to support the interchange of ideas among researchers, practitioners, and research managers from Government, research labs, and industry practice. HCSS provides a forum for dialogue centered upon the development of scientific foundations together with innovative and enabling software and hardware technologies for the assured
engineering of complex computing systems. These systems, which include networked and cyber-physical systems, must be capable of interacting correctly, safely, and securely with humans and the physical world even while they operate in changing and possibly malicious environments with unforeseen conditions. In many cases, they must be certifiably dependable.

New foundations in science, technology, and advanced practice continue to be needed to build these systems with computing, communication, information, and control pervasively embedded at all levels. These new foundations have the potential to enable entirely new generations of engineering designs that are becoming essential for effectively operating life-, safety-, security-, and mission-critical applications, and that can enhance US competitiveness across economic and industrial sectors, while assuring the privacy, safety, and security of our Nation’s citizenry.

With a technical emphasis on mathematically-based tools and techniques, and scientific foundations supporting evidence creation and systems assurance and security, the HCSS conference pursues the goal of growing a skilled practitioner community through a program of invited speakers, panel discussions, and a relevant and compelling technical track. The conference vision is one of motivating, sustaining, and growing a community focused around the creation of dependable systems that are capable, efficient, and responsive; that can work in dangerous or inaccessible environments; that can support large-scale, distributed coordination; that augment human capabilities; that can advance the mission of national security; and that enhance quality of life, safety, and security.