Dependable Internet of Things

Abstract: IoT-driven control underpins many IoT applications in industries and smart cities. In contrast to best-effort IoT often found in consumer markets, there remain daunting challenges to develop IoT systems that not only monitor but also control physical systems in a dependable fashion. We will highlight the dependability challenges caused by communication delays, data loss and resource constraints of IoT. We will further discuss cyber-physical co-design as a fundamental approach to achieve dependable control based on IoT.

Bio: Chenyang Lu is the Fullgraf Professor in the Department of Computer Science and Engineering at Washington University in St. Louis. His research interests include Internet of Things, real-time systems, and cyber-physical systems. He is Editor-in-Chief of ACM Transactions on Sensor Networks and chaired premier conferences such as ACM SenSys, IEEE RTSS, ACM/IEEE ICCPS and ACM/IEEE IoTDI'17. He is the author and co-author of over 150 research papers with over 17,000 citations and an h-index of 56. He received the Ph.D. degree from University of Virginia in 2001. He is a Fellow of IEEE.