The Internet of Things (IoT) represents a remarkable frontier of innovation in which the everyday "things" in our homes, offices, cars, factories and cities connect to the Internet in ways that improve our lives and transform industries. The IoT market is poised to reach 70 billion connected devices by 2025. But IoT also faces several challenges related to reliability, security, real-time performance, and energy-efficiency. This talk will provide a peek into the future of the IoT revolution and how intelligent software can have a significant impact on future electronic systems. Several ongoing research efforts related to smart software design at the Embedded Systems and High-Performance Computing (EPiC) lab at Colorado State University to realize the future of IoT will also be highlighted.

Sudeep Pasricha is a University Monfort Professor and Rockwell-Anderson Professor in the Department of Electrical and Computer Engineering at the Walter Scott Jr. College of Engineering in Colorado State University. He received his Ph.D. in Computer Science from the University of California, Irvine in 2008. His research interests are broadly in the areas of algorithms and architectures for embedded systems, mobile computing, and high performance computing, with an emphasis on energy-efficient, fault-tolerant, and secure design. He has published over 180 research articles in peer-reviewed international journals and conferences. His research has been recognized with seven Best Paper Awards and multiple Best Paper nominations. He is a recipient of the 2018 IEEE Technical Committee on VLSI (TCVLSI) Mid-Career Research Achievement Award, the 2015 IEEE Technical Committee on Scalable Computing (TCSC) Award for Excellence for a Mid-Career Researcher, the 2014 George T. Abell Outstanding Mid-Career Faculty Award, and the 2013 AFOSR Young Investigator Award. He is in the Editorial Board of six prestigious journals and has served as the General Chair and Technical Program Chair of multiple IEEE and ACM conferences, including IGSC, VLSID, ESWEEK/CODES+iSSS, INIS, ICESS, and HCW. He is a Senior Member of the IEEE and ACM.