We’re poised at the transition to an exciting new world of more nimble energy management, enabled by a rich and diverse world of sensors and actuators, hybrid and electric vehicles, renewable energy sources and data-driven cloud services. Intelligent transportation systems that combine traffic data and personal schedules to manage electric vehicle charge and mobility are now possible. Houses, apartments and buildings that adapt to occupant behaviors and energy costs are beginning to appear. Computing systems whose loads follow the sun and wind, based on availability and computation demand are now realizable. Despite all this promise, we face daunting challenges in standards and adoption, in privacy and security, in economics and culture. This talk will survey some of our opportunities and challenges, with some thoughts on the shared way forward.

Refreshments will be served
Hosted by Prof. Viktor Prasanna

As corporate vice president of the Technology Policy Group, Dr. Dan Reed helps shape Microsoft’s long-term vision for technology innovations and the company’s associated policy engagement with governments and institutions around the world. The Technology Policy Group engages in strategic technical projects on security and privacy, energy and environment, science and technology, and STEM education, and the unlimited potential for cloud computing. Dr. Reed joined Microsoft in 2007 and has directed its Cloud Computing Futures initiative and led the formation of the eXtreme Computing Group (XCG) within Microsoft Research. Before coming to Microsoft, Dr. Reed held a number of strategic positions, including head of the Computer Science Department and director of the National Center for Supercomputing Applications at the University of Illinois, Chancellor’s Eminent Professor at the University of North Carolina, Chapel Hill, and director of UNC’s Renaissance Computing Institute. In addition, Dr. Reed currently serves as a member of the US FCC’s Technical Advisory Committee and has served as a member of the President’s Council of Advisors on Science and Technology (PCAST) and chair of the computational science subcommittee of the President’s Information Technology Advisory Committee (PITAC).