

The Colorado State University Computer Science Department and ISTeC present:

The Computing Revolution

Dr. Dan Reed

Scalable and Multicore Computing Strategist, Microsoft

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Abstract

Ten years – a geological epoch on the computing time scale. Looking back, a decade brought the Web and consumer email, digital cameras and music, broadband networking, multifunction cell phones, WiFi, HDTV, telematics multiplayer games, electronic commerce and computational science. It also brought spam, phishing, identity theft, software insecurity, outsourcing and globalization, information warfare and blurred the work-life boundaries. What will a decade of technology advances bring in communications and collaboration, sensors and knowledge management, modeling and discovery, electronic commerce and digital entertainment, critical infrastructure management and security?

Prognostication is always fraught with challenges, especially when predicting the effects of exponential change. Aggressively inventing the future, based on perceived needs and opportunities, is far more valuable. As Daniel Burnham famously remarked, “Make no little plans, they have no power to fire men’s spirits.” In this presentation, we present some visions of a technology-enriched future, driven by emerging technologies and by national and international policies and competitive strategies. We also discuss their implications for university futures in a rapidly changing world.

Speaker Biography

Daniel A. Reed is Microsoft’s Scalable and Multicore Computing Strategist, responsible for re-envisioning the data center of the future and coordinating Microsoft’s external multicore research program. Previously, he was the Chancellor’s Eminent Professor at UNC Chapel Hill, as well as the Director of the Renaissance Computing Institute (RENCI) and the Chancellor’s Senior Advisor for Strategy and Innovation for UNC Chapel Hill. Dr. Reed was a member of President Bush’s Council of Advisors on Science and Technology (PCAST) and a former member of the President’s Information Technology Advisory Committee (PITAC). He recently chaired a review of the federal networking and IT research portfolio for PCAST, and he is chair of the board of directors of the Computing Research Association.

He was previously Head of the Department of Computer Science at the University of Illinois at Urbana-Champaign (UIUC). He has also been Director of the National Center for Supercomputing Applications (NCSA) at UIUC, where he also led National Computational Science Alliance. He was also one of the principal investigators and chief architect for the NSF TeraGrid. He received his PhD in computer science in 1983 from Purdue University.