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The Information Science & Technology Center

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**Colorado State University's
Information Science and Technology Center (ISTeC)
presents two lectures by**



Dr. Fran Berman

**Director, San Diego
Supercomputer Center
Professor and HPC Endowed Chair,
UC San Diego**

**ISTeC Distinguished Lecture
in conjunction with the
Electrical and Computer Engineering Department and
Computer Science Department Seminar Series**

“100 Years of Digital Data”

Monday, March 31, 2008

Reception: 10:30 a.m.

Lecture: 11:00 – 12:00 noon

Location: Lory Student Center Room 214



**Joint Electrical and Computer Engineering Department
and Computer Science Department Special Seminar
*sponsored by ISTE C***

“Cyberinfrastructure Challenges in Computer Science”

Monday, March 31, 2008

Lecture: 4:00 – 5:00 p.m.

Location: Wagar Room 231

ABSTRACTS

“100 Years of Digital Data”

The Information Age has brought with it a deluge of digital data. Current estimates are that in 2006, 161 exabytes (10^{18} bytes) of digital data were created from cell phones, computers, iPods, DVDs, sensors, satellites, scientific instruments, and other sources, providing a foundation for our digital world. Migrating digital content through new generations of storage media, making sense of its content, and ensuring that needed information is accessible now and for the foreseeable future constitute some of the most critical challenges of the Information Age.

The San Diego Supercomputer Center (SDSC) is a national Center leading the development and deployment of a comprehensive infrastructure for managing, storing, preserving, and using digital data. Leveraging ongoing collaborations with the research community (National Science Foundation, Department of Energy, etc.), data preservation and archival communities (Library of Congress, National Archives and Records Administration) and other partners, SDSC is providing innovative leadership in the emerging area of Data Cyberinfrastructure. In this talk, SDSC Director Fran Berman discusses SDSC's approach to building and deploying data-oriented computational and data cyberinfrastructure, and describes the next generation of challenges and opportunities for the data that drives the Information Age.

“Cyberinfrastructure Challenges in Computer Science”

Today's researchers use a broad spectrum of tools and technologies to tackle increasingly large-scale, complex problems. Their efforts are enabled by cyberinfrastructure, the organized aggregate of technologies that coordinate and integrate today's information technology resources -- data, computation, communication, visualization, networking, scientific instruments, expertise -- to achieve their research and education goals. Cyberinfrastructure captures and provides the technological foundation for significant discovery, synthesis, and dissemination. In this talk, we focus on both the computer science opportunities and challenges of building and delivering Cyberinfrastructure.

SPEAKER BIOGRAPHY

Dr. Francine Berman is a pioneer in Grid Computing and an international leader in Cyberinfrastructure. She holds the High Performance Computing Endowed Chair in UCSD's Computer Science and Engineering Department. Since 2001, Dr. Berman has served as Director of the San Diego Supercomputer Center (SDSC) where she leads a staff of 400 interdisciplinary scientists, engineers, and technologists in the innovation, development, and provision of computational and information infrastructure. Dr. Berman is one of the two founding Principal Investigators of the National Science Foundation's TeraGrid project (providing national Grid infrastructure), and also directed the National Partnership for Advanced Computational Infrastructure (NPACI), a consortium of 41 research groups, institutions, and university partners with the goal of building national infrastructure to support research and education in science and engineering. Dr. Berman is currently co-chairing an international Blue Ribbon Task Force on Sustainable Digital Preservation and Access. For her accomplishments, leadership, and vision, Dr. Berman was recognized in 2004 as one of the top women in technology by BusinessWeek, as one of the top technologists by IEEE Spectrum, and most recently as a leader in science and technology by Newsweek.

To arrange a meeting with the speaker, please contact MaryAnn Stroub at (970) 491-2708 or mstroub@engr.colostate.edu.

ISTeC (Information Science and Technology Center) is a university-wide organization for promoting, facilitating, and enhancing CSU's research, education, and outreach activities pertaining to the design and innovative application of computer, communication, and information systems. For more information please see ISTeC.ColoState.edu.