

Special Information Science and Technology Seminar Speaker



Kwan-Liu Ma
University of California at Davis

Advanced Concepts and Techniques for Visualizing Large, Complex Data

Thursday, August 8, 2013

9:30 - 10:30 AM

**TA-3, Bldg. 0207, Room 216, Jemez/Cochiti Conference Rooms
(Study Center)**

Abstract: We are entering a data-rich era. Advanced computing, imaging, and sensing technologies enable scientists to study natural and physical phenomena at unprecedented precision, resulting in an explosive growth of data. The size of the collected information about the Web and mobile device users is expected to be even greater. To make sense and maximize utilization of such vast amounts of data for knowledge discovery and decision making, we need a new set of tools beyond conventional data mining and statistical analysis. One such a tool is visualization, which has been shown very effective in understanding large, complex data, and thus become an indispensable tool for many areas of research and practice. I will present a few new concepts and techniques that my research group at UC Davis has introduced to further advance the visualization technology as a powerful discovery and communication tool. I will show case studies using data from cyber security, biomedical studies, large-scale scientific simulations, and sociological studies.

Biography: Kwan-Liu Ma is a professor of computer science and the chair of the Graduate Group in Computer Science (GGCS) at the University of California, Davis. He leads the VIDI research group and directs the DOE SciDAC Institute for Ultrascale Visualization. Professor Ma received his PhD degree in computer science from the University of Utah in 1993. He was a recipient of the PECASE award in 2000. His research interests include visualization, high-performance computing, and user interface design. Professor Ma is an IEEE Fellow, and a founder of the IEEE Pacific Visualization Symposium and IEEE Symposium on Large Data Analysis and Visualization.

For more information contact the technical host Curt Canada, cvc@lanl.gov, 665-7453 or James Ahrens, ahrens@lanl.gov, 667-5797.