Information Science and Technology Seminar Speaker Series

**Kenneth Moreland
Sandia National Laboratories**

High Performance Visualization in the Many-Core Era

Wednesday, July 1, 2015

3:00 - 4:00 PM

TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

Abstract: High-performance visualization algorithms are experiencing a revolution driven by the emergence of high-throughput processor technology. Modern "many-core" processors require an extreme amount of problem decomposition and invalidate many of our previous assumptions about parallel computing. Many researches across the DOE labs as well as in academia and industry are partnering together to develop VTK-m, a toolkit to assist in the design and use of visualization algorithms on multi- and many-core machines. This talk will introduce VTK-m, describe the basics behind some of the key algorithms, and outline our plans to integrate with our existing visualization software infrastructure.

Biography: Dr. Kenneth Moreland is a principal member of technical staff at Sandia National Laboratories. He received the BS degrees in computer science and in electrical engineering from the New Mexico Institute of Mining and Technology in 1997. He received the MS and Ph.D. degrees in computer science from the University of New Mexico in 2000, and 2004, respectively. Dr. Moreland specializes in large-scale visualization and graphics and has played an active role in the development of several HPC products including ParaView, VTK, IceT, and Dax. His current interests the design and development of visualization algorithms and systems to run on multi-core, many-core and future-generation computer hardware.

For more information contact the technical host Curt Canada, cvc@lanl.gov, 665-7453.

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