

Seminar

Fall 2011



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI
SCHOOL OF COMPUTING

Title: Advanced Analytical and Predictive
Biology: Combining High Performance
Supercomputing with Systems Biology

Time & Location:

2:00pm, Friday, November 04, 2011

Vislab (Tec 205)

Speaker: Xianfeng (Jeff) Chen, Ph.D.
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U.S. Army Engineer Research and Development Center

Abstract: The fields of bioinformatics, systems biology, and computation biology are among the fastest evolving and dynamic areas of biological science, and the pace of change is largely driven by growth in and access to computational power. The main objective for this seminar is to outline my current effort in computational systems biology using high performance supercomputing technology in biodefense, bioenergy, and environmental science. Thus this presentation will cover: (1) an introduction of the cutting-edge systems biology, bioinformatics, and computational biology; (2) an overview of the computational and analytical challenges in these fields as well as my current work in these areas; and (3) brief description on DOD supercomputers and cyber-infrastructure establishment in supporting research areas of national critical missions in biodefense, biofuel, human health, and environmental quality monitoring and remediation.