INFO 590 BW: High Performance Visualization for Large Scale Scientific Data Analytics
(CRN 62700)

Tues/Thurs 9:30 – 10:50 am, Room 1040 NCSA
Instructor: Dr. Robert Brunner (ASTR)

As the size of data generated from numerical simulations continues to increase, visualization is now playing an increasingly more important role in assisting the scientists to obtain insight into the simulation output. To equip students with the ability to analyze very large-scale data sets, this course will provide an in-depth discussion of the state-of-the-art in large scale scientific visualization algorithms and systems. In addition to the fundamental visualization techniques, we will cover parallel implementation of selected algorithms for high-performance architectures such as the Blue Waters supercomputer. Students will get hands-on experience visualizing large-scale scientific data sets.

This course is intended for graduate students in computer science or areas related to computational sciences who are interested in learning how to use visualization to analyze large-scale scientific data sets, and also will be of interest to students who are considering scientific visualization as a research topic for their advanced studies.
Prerequisites for students include the following:

- Experience working in a Unix environment
- Experience developing and running codes written in C or C++
- Knowledge in 3D computer graphics and OpenGL/GPU programming is recommended
- Knowledge in parallel programming tools such as MPI is recommended.

For more information, please see
http://www.ncsa.illinois.edu/news/story/blue_waters_project_to_offer_graduate_course_on_visualization_in_spring_201