



BIOINFORMATICS 2014 FALL SEMINAR SERIES

Hosted by: Center for Bioinformatics and Computational Biology
Department of Computer and Information Sciences, &
Department of Electrical and Computer Engineering
<http://bioinformatics.udel.edu/seminars>

NOTE: Change of Time / Date / Venue
THURSDAY, October 2, 2014
10:30 am - 12:00 noon
Trabant Theatre

Science at Extreme Scale: Big Data and Big Compute

Lucy T. Nowell, PhD

**Computer Scientist and Program Manager, ASCR
Department of Energy's Office of Science**

ABSTRACT: Management, analysis and visualization of extreme-scale scientific data will undergo radical change during the coming decade. Coupled with changes in the hardware architecture of next-generation supercomputers, explosive growth in the volume of scientific data presents a host of challenges to researchers in computer science, mathematics and statistics, and application sciences. Failure to develop new data management, analysis and visualization technologies that operate effectively on the changing architecture will cripple scientific discovery and put national security at risk. Using examples from climate science, Dr. Lucy Nowell will explore the technical and scientific drivers and opportunities for data science research funded by the Advanced Scientific Computing Research program in the Department of Energy's Office of Science.

Bio: Dr. Lucy Nowell is a computer scientist and program manager in the Office of Advanced Scientific Computing Research (ASCR) within the Department of Energy's Office of Science. She manages a broad spectrum of ASCR-funded computer science research, with a particular emphasis on scientific data management and analysis. Dr. Nowell moved to ASCR in the spring of 2009 from Pacific Northwest National Laboratory (PNNL), where she was a Chief Scientist in the Information Analytics group. Before coming to ASCR, Dr. Nowell was on temporary duty, serving for two years as a Program Director in the area of Data, Data Analysis and Visualization with the Office of Cyberinfrastructure at National Science Foundation (NSF). She also served for four years as a research Program Manager for the Department of Defense, managing a variety of projects related to information analysis and visualization.

Dr. Nowell joined PNNL in August 1998 after a career as a professor at Lynchburg College in Virginia, where she taught a wide variety of courses in Computer Science and Theatre. She also headed the Theatre program and later chaired the Computer Science Department. While pursuing her Master of Science and doctorate in computer science at Virginia Tech in Blacksburg, Virginia, she worked as a Research Scientist in the Digital Libraries Research Laboratory and also interned with the Information Access team at IBM's T. J. Watson Research Laboratories in Hawthorne, NY. Her B.A. and M.A. in Theatre are from the University of Alabama, Tuscaloosa, and her Master of Fine Arts degree is from the University of New Orleans. She is also a graduate of an accredited life-coach training program.