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LSU Offers High Performance Computing Training to Faculty, Staff and Students

The LSU Center for Computation and Technology (CCT) in partnership with the LSU High Performance Computing (HPC) offers LSU faculty, staff and students a chance to learn computational skills to advance their current research.

All classes are free to attend, but registration is required. The training classes offered this Spring include:

Introduction to HPC, Account Allocation and Management - an introduction to the HPC environments for LONI (Louisiana Optical Network Initiative) and LSU;

Job Management with PBS/LoadLeveler - how to submit, check and customize parallel jobs in the LSU/LONI HPC Environment;

Introduction to MPI - an introduction to parallel programming concepts using MPI calls;

Molecular Dynamics, Programming to Production - fundamentals of molecular dynamics, general classical simulation protocol, and programming of a sample code to expose participants to computational chemistry;

Introduction to Hybrid Programming - using MPI to communicate from node to node and OpenMP to communicate within a node; and,

Introduction to Computational Package for Molecular Dynamics, CPMD coding.

In addition, a LONI HPC Workshop will be offered at Tulane University on March 24 & 25. This workshop is presented at the introductory level for new users, and will cover a general overview of LONI and its environment, and includes hands-on exercises on LONI supercomputers as well as demonstrations on how HPC skills can enhance computational research. User consultants will be onsite to discuss your particular interest or needs.

"CCT and HPC at LSU have provided over 100 tutorials and 20 workshops to students, faculty and staff in Louisiana since 2007. More than 1200 researchers attended the tutorials and 600 people participated in the workshops between January 2007 and February 2011," said Honggao Liu, Ph.D., LSU's CCT Deputy Director and HPC Director. "Through these training, workshops, and other support activities, we have enabled many researchers in the State to use local and national HPC resources to do their researches, enhanced the research strengths and competitiveness of the State's research campuses, and brought more grants and revenue to the State."

The Louisiana Optical Network Initiative, or LONI, is a state-of-the art, fiber optics network that connects Louisiana and Mississippi research universities to one another as well as to the National LambdaRail and Internet 2, providing the most powerful distributed supercomputer resources to the LSU academic community with over 85 teraflops of computational capacity.

HPC at LSU is a joint partnership between LSU's CCT and LSU's Information Technology Services (ITS), serves as a central point to access all HPC resources and user expertise for the University and LONI, and provides the infrastructure and support necessary to facilitate heroic research efforts, utilizing cutting-edge technology to push the limits of scientific discovery.

For more information on the training courses and for a list of pre-recorded tutorials available for self-paced learning, visit: <http://www.hpc.lsu.edu/training/>.

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