News

Press Releases
Event Announcements
CCT Weekly
Grants and Funding
Student News
Archived News

# CCT Weekly January 13- January 19, 2013

CCT Weekly, January 15, 2013

**LSU's Newest Supercomputer – SuperMike-II**

LSU is pleased to continue its decades-long leadership role in high performance computing with the addition of SuperMike-II (to be read, SuperMike the second) to its stable of supercomputing systems. This system introduces two novel capabilities for University researchers: graphical processing unit (GPU) accelerators and large-memory symmetric multiprocessing (SMP). The system's theoretical peak performance capability is in excess of 212 TeraFlops (or 212 thousand-billion floating point operations per second).

SuperMike-II represents the third generation of supercomputers deployed at LSU. It provides 10 times the processing power of Tezpur, the second generation machine installed in 2007, and over 100 times that of LSU's original SuperMike machine that was brought on-line in 2002. SuperMike-II provides enhanced support to the current science and engineering user-base for research ranging from numerical relativity to coastal modeling to molecular dynamics and protein folding. The SMP component will allow new work to be done in the area of graph theory, genome sequencing, and quantum mechanics. The GPU accelerators will be utilized for the design of new materials and new medicines using novel computational methods, and will be used to advance LSU's commitment to digital media research and production facilities.

Built by Dell, Inc., the $2.6 million SuperMike-II features a total of 440 compute nodes (servers), each of which has 2 Intel Sandy Bridge 8-core processors running at 2.6GHz. Thus the system provides a grand total of 7040 computational cores. The nodes are interconnected by a 40Gbps Mellanox InfiniBand network. While most of the nodes (382) have 32GB of memory, 8 are equipped with 256GB each and joined via ScaleMP software to give a single SMP machine with 128 processing cores and 2TB of memory. Fifty nodes are each equipped with 64GB of memory, and two NVIDIA Tesla M2090 GPUs.

SuperMike-II's services are provided to LSU scientists and engineers who are tackling the most complex problems and require the use of 1,000 or more computational cores at once. By providing large numbers of GPU accelerators, and a symmetric multiprocessor subsystem, entirely new classes of problems can be approached that were totally infeasible before. With the processing power of SuperMike-II, CCT will also encourage new economic development activities by supporting Louisiana's burgeoning digital media production services.

**CCT in the News:**

**LSU's Newest Supercomputer – SuperMike-II**

**Source:** LSU Center for Computation & Technology

**Please Note:**

- Registration is open for Finite Element Circus & Rodeo, March 8-9, 2013, at Louisiana State University. For more information and to register, visit http://www.cct.lsu.edu/events/finite-element-circus-rodeo.
- Registration is now open for SCALA 2013: Scientific Computing Around Louisiana. SCALA will be held at Tulane University in New Orleans, February 15-16, 2013. Tulane University's Center for Computational Science and the LSU CCT will co-sponsor, for the fourth time, a meeting to: (1) highlight cutting-edge topics in scientific computing, (2) showcase the research at Louisiana institutions and, (3) promote collaborations across the state of Louisiana. This meeting is open to any faculty, post-doctoral researcher or student from any college in and around Louisiana. For more information and to register, visit http://tulane.edu/sse/ccs/news/scala-2013.cfm.
- Executive Vice Chancellor & Provost Stuart Bell has issued the call for nominations for the *2013 Distinguished Faculty Awards*. LSU is proud of its world-class faculty, and we look forward to recognizing outstanding work among colleagues. Special thanks go to the LSU Alumni Association, the LSU Foundation, and the Tiger Athletic Foundation for their continued support. More information can be found here. Nomination packets are due through academic deans to Academic Affairs by **Feb. 1, 2013**.
- Prior approval is required for Special Meal Requests. Employees who make meal purchases without prior approvals may find that they must cover the cost of any monies spent for an unapproved event out of pocket. Dine-in restaurant meals are not allowed on LaCarte credit cards. Please contact Susie McGlone (susie@cct.lsu.edu) prior to any special meal with visitor(s) to file the appropriate request for approval. Prior approval could take up to two weeks, so please plan accordingly.
- Please remember to send your news concerning grants, awards, conferences, or other pertinent information to CCT Event Coordinator Jennifer Fontenot at jennifer@cct.lsu.edu
- Follow CCT with social media to access photos and see news, events or updated information. These pages are public; you do not need an account to view the information.
  - Facebook group : LSU Center for Computation & Technology
  - Twitter : LSUCCT
  - YouTube channel : LSUCCT

**Interest groups:**

- **MAG (Mobile App-Art-Action Group)**: Everyone interested in the potential for Mobile Apps is invited to come and add their vision for these revolutionary devices.
  - **Weekly MAG Lab Time**- Fridays, 9:00 AM-Noon: MAG collaborative work time- 16 Johnston Hall
    - Come, design, plot, scheme, dream, work on your mobile projects with people around to provide help, feedback, and encouragement.

- For more information visit: http://www.cct.lsu.edu/MAG
- Contact: Jesse Allison (jtallison@lsu.edu)

- **GPU**: meets weekly (Thursdays @ 12:30 pm in 338 Johnston) and encourages participation from anyone who would like to join in the discussions. Join the mailing list: lasigma-gpu@loni.org
  - Contact: Zhifeng Yun (zyun@cct.lsu.edu)

**Upcoming events:**

**February 15- 16, 2013:** Scientific Computing Around Louisiana Workshop

**February 21**: Apple At-Home Work Program for Students—Informational Meeting

**March 1:** REU- Computational Sciences Applications Due

**March 1:** REU- Materials/LA-SiGMA Applications Due

**March 8-9:** Finite Element Circus & Rodeo

**Apply for positions w/Apple (for Students): At-Home Advisor program**

**Publish Date:**
01-15-2013



Center for Computation & Technology
2003 Digital Media Center • Telephone: +1 225/578-5890 • Fax: +1 225/578-8957