



**October 7 – October 13, 2012**

### **Cyberinfrastructure--Essential to Louisiana's Research, Education, and Economic Development Activities**

"LSU and Louisiana's entire higher education system have adopted and are steadily implementing a strategic vision for cyberinfrastructure, assigning it a central role in research, education, and economic development," said Joel Tohline, director of the LSU Center for Computation & Technology (CCT) and professor of LSU Physics & Astronomy.

A great opportunity to facilitate implementation of this vision is the \$499,758 grant the National Science Foundation recently awarded LSU for CADIS, or more accurately put, a CC-NIE Network Infrastructure -- Cyberinfrastructure Advancing Data-Interactive Sciences (CADIS) project.

"CADIS will greatly expand the cyberinfrastructure for the state of Louisiana," said Tohline. "It will build upon LSU's recent purchase of a new 440-node GPU-enabled High Performance Computing (HPC) cluster and the state's construction of a 94,000 square foot building, the Louisiana Digital Media Center (LDMC), which by January 2013 will house both CCT and EA Sports. The creation of CADIS seeks to integrate tightly the LDMC with the Louisiana Optical Network Initiative (LONI), with LSU's new HPC cluster, SuperMike-II, and with Internet2 (I2)."

The goal of the project is to acquire and install an aggregation router, such as Cisco's ASR 9010, with an appropriate set of cards and adapters in order to do several things. First, to extend the current data transport capabilities of LONI and I2 to researcher desktops and to the LDMC's 4K theatre via dedicated 10 Gbps network connections. Second, to build a 40 Gbps data-transport pipe between LSU's new GPU enabled SuperMike-II cluster and the LDMC's primary visualization laboratory. Finally, to provide straightforward paths for upgrading laboratories and offices to higher bandwidth connectivity as the capabilities of LONI and I2 expand.

The LDMC will gather the University's primary base of HPC users under one roof where, via the activities of the CCT, a unified focus on interactive digital media and HPC is provided. Students, postdocs, research scientists, and faculty from diverse disciplinary backgrounds who seek to harness HPC resources to simulate and/or analyze complex phenomena will effectively collaborate with other researchers who have expertise in scientific computing, the development of HPC algorithms, visualization and image processing, and the manipulation and analysis of large datasets.

"CADIS will create many opportunities for LSU's diverse research community to more effectively interact with huge data sets that are generated on local (LSU), regional (LONI), and national (XSEDE) HPC resources, angling new scientific and engineering discoveries. And, through CCT's collaborative interactions with Louisiana's rapidly growing collection of digital media industries, the CADIS project is expected to positively impact key economic development activities across Louisiana," said Tohline.

The project team includes Honggao Liu, deputy director of CCT and site lead for LONI; James A. Lupo, assistant director of computational enablement at CCT; Lonnie Leger, director of networking at LONI; Brygg Ullmer, associate professor of computer science and CCT; Ric Simmons, deputy CIO and executive director of network infrastructure at LSU; and Sean G. Robbins, director of network engineering, LSU Information Technology Services.

**CCT Welcomes:**

Duk-Soon Oh joined Sue Brenner's research group as a Postdoctoral Researcher.

**CCT in the News:**

**LSU Researchers Win \$250,000 Grant to Probe Origins of the Universe**

Source: [LSU Office of Communications & University Relations](#)  
[LSU System](#)

**LSU gets \$250K grant to probe universe's origins**

Source: [WTOV9.com](#)  
[Washington Examiner](#)

**LSU researchers win \$250,000 grant to probe origins of the universe**

Source: [NBC 33 News](#)

**Louisiana State University: Faster Science, Greener System**

Source: [Intel](#)

**Lectures this Week:**

***THURSDAY --***

There will be a lecture on [“Pragma based GPU programming with OpenACC”](#) by Karen Tomko, Ohio Supercomputing Center. This lecture will take place on Thursday, October 11<sup>th</sup> at 12:30 PM in 338 Johnston Hall.

There will be a lecture on, [“Theory and Computation for Understanding the Li-air Battery”](#) by William A. Shelton, Pacific Northwest National Laboratory. This lecture will take place on Thursday, October 11<sup>th</sup> at 1:30 PM in 206 Tureaud Hall.

**Please Note:**

- **2012 LSU Foundation Staff Outstanding Service Award**  
Nominations are now being accepted for the 2012 LSU Foundation Staff Outstanding Service Awards. Staff members from LSU, the LSU AgCenter, and the LSU Law Center are eligible. The nomination form and instructions can be found online by [clicking here](#). The deadline for accepting nominations is Friday, Oct. 26, at 4 p.m., and should be turned in to Rachel Henry, LSU Office of the Chancellor, 156 Thomas Boyd Hall.
- Derek Ostrenko co-curated a show titled “social(dis)order ” that opened September 21<sup>st</sup> at the LSU School of Art Glassell Gallery. The show will run through October 7, 2012. For more information, visit <http://socialdisorder.us/>
- The next faculty meeting is scheduled for Tuesday, October 16<sup>th</sup> at 9:00 AM.
- FY 2012-2013 Holiday Schedule:
  - November 22- November 23: Thanksgiving
  - December 24 thru January 1: Christmas & New Year’s
  
  - Don’t forget to turn in your leave slips to Andy Cox if you are planning on taking extra vacation days.
- **SC12 Information:**
  - Target arrival date for items being shipped to SC is November 8<sup>th</sup>. Please arrange shipping through Brittany Juneau.
  
  - Please make your travel arrangements through Brittany Juneau.
- 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](mailto: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](mailto: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.
  - October 18<sup>th</sup>: Mobile Music Workshop: Pd on iOS (or Android)
    - Developers, interface and graphic designers, composers, performers, and musicians are all invited to learn how to make a mobile device into an instrument. The following day will be our second App-a-thon where teams will create an instrument in an afternoon. Musicians, composers and performers will then take these instruments and speed-compose music for a concert just before Fall break. If you like music and mobile devices, you should be here.
  - October 19<sup>th</sup>: Mobile Music App-a-thon! 338 Johnston Hall, Noon - 9:00 PM
  - October 24<sup>th</sup>: Mobile Music Concert: 3:30 PM at Highland Coffee
  - November 1<sup>st</sup> MAG Meet: topic to be announced, Johnston Hall 338, 4:30-6:00 PM
  - **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](mailto: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](mailto:lasigma-gpu@loni.org)
  - Contact: Zhifeng Yun ([zyun@cct.lsu.edu](mailto:zyun@cct.lsu.edu))

### Upcoming events:

**October 10:** [HPC Training: Subversion \(SVN\) Version Control](#)

**October 16- 17:** [OpenACC GPU Programming Workshop](#)

**October 18-19:** [Mobile Music Workshop & App-a-thon](#)

**October 19-20:** [ACM ICPC South Central USA Regional Programming Contest](#)

**October 24:** [HPC Training: Introduction to Perl](#)

**October 31:** [HPC Training: Introduction to Python](#)

**November 10-16:** [SC12- Supercomputing Conference](#)