March 21-27, 2010

LSU to Host NanoDays at Highland Road Park Observatory Saturday, March 27

LSU Department of Physics & Astronomy and CCT will host an afternoon of free, family friendly activities Saturday, March 27, as part of NanoDays, a national event of educational programs about nanoscale science and engineering coordinated through the Nanoscale Informal Science Education Network.

When reduced to the width of a human hair or smaller, ordinary materials often take on extraordinary properties. For example, the iridescent colors in butterfly wings are not created by pigments but instead by tiny patterns on the wings. Similarly, tinted glass in old cathedrals was made by mixing different sizes of gold particles to create a wide variety of colors. But it is just now that scientists have the tools and technology to understand these fascinating phenomena and their potential uses in every day life. Research in tiny scale systems and phenomena is called nanoscience, and it could lead to advanced information processing and storage, new medical treatments and much more.

This year, NanoDays events will take place at more than 200 science museums, research centers and universities across the country. In Baton Rouge, faculty, staff and students from LSU's physics department and CCT will host NanoDays at the Highland Road Park Observatory, or HRPO, 13800 Highland Road, on Saturday, March 27, from 2 p.m. to 6 p.m. NanoDays is free and open to the public.

HRPO is brought to the public by BREC, LSU's Department of Physics & Astronomy and the Baton Rouge Astronomical Society.

NanoDays will feature several hands-on activities for children of all ages. Visitors will be able to see how big they are compared to nanoscale objects, understand how a scanning probe microscope allows scientists to explore the nanoworld, experience the effect of reducing the size of regular objects by trying to pour water out of a nano-cup, and learn about nanomaterials used in the manufacture of stain-resistant clothes.

Children and adults will also have a chance to build models of nanoscale structures, play with liquid crystals, and make some fluids magically part in the middle by applying magnets to them.

In addition to the hands-on activities, NanoDays will also feature presentations from two prominent nanoscience researchers, who will provide an overview of the nanoscale world and the tools that allow researchers to "see" it.

At 3 p.m., Kristen Buchanan, assistant professor of physics at Colorado State University, will talk about "Nanomagnetism" and its application to hard drives. At 4 p.m. Jayne Garno, assistant professor of chemistry at LSU, will present "Nano Theater," showing images of nano-objects captured in her lab.

Buchanan is a lead investigator on projects funded by the National Science Foundation, the National Institute of Standards and Technology, and Seagate. She spent four years at Argonne Center for Nanoscale Materials in Chicago, one of five nanoscale science research centers sponsored by the U.S. Department of Energy.

Garno has won various awards as an emerging young investigator in chemistry, including the National Science Foundation's prestigious Early Career Award. Before getting her Ph.D. in chemistry, she worked the night shift as a bench chemist at General Motors for 10 years while attending classes during the day as a part-time student.

Juana Moreno, an LSU professor, is coordinating the Baton Rouge NanoDays event. For more information on this activity, please, contact her at moreno@lsu.edu, or visit http://www.cct.lsu.edu/LSUNanoday.

Pats on the Back:
- Congratulations to Stacey Simmons, who was been named Tech Leader of the Year at the Governor's Technology Awards ceremony March 19. She was recognized for her tireless efforts for technology-based economic development for the capital region.

- Two of Tevfik Kosar's graduate students, Esma Yildirim and Dengpan Yin, recently had papers accepted in IEEE Transactions on Parallel and Distributed Systems, which is the most prestigious journal in this area:

  E. Yildirim, D. Yin, and T. Kosar. Prediction of Optimal Parallelism Level in Wide Area Data Transfers. *To appear in IEEE Transactions on Parallel and Distributed Systems (TPDS), 2010.*

   D. Yin, E. Yildirim, and Tevfik Kosar. A Data Throughput Prediction and Optimization Service for Widely Distributed Many-Task Computing. *Accepted to the IEEE Transactions on Parallel and Distributed Systems (TPDS), 2010.*

- Tevfik Kosar is chairing an international workshop on "Data Intensive Distributed Computing (DIDC)" as part of the High Performance Distributed Computing (HPDC) Conference, which will take place June 20 -25 in Chicago.

- Congratulations to Tevfik Kosar, who has been invited to the Editorial Board of the ICST Transactions on Network Computing.

CCT Welcomes:
- Sivakumar Kulasekaran, who has started working as an IT Analyst-III with Tevfik Kosar on the Stork Project. Sivakumar received his Ph.D. in computer science from Mississippi State University in 2009.

CCT in the News:
La. Technology stars honored
Source: The Advocate

LONI Partners with SC10 to Provide High-Speed Network Resources for SCinet
Source: HPC Wire

Digital program to begin
Source: The Advocate

University to offer digital media minor in fall semester
Source: The Reveille

Lectures this Week:
- Daryl Holt will give the first lecture in the AVATAR lecture series on Thursday, March 25. His lecture, "From Concept To Reality: Making Past, Present, And Future Video Games For EA Sports" will be held from 3-4 p.m. in the Union's Atchafalaya Room. There will be a reception with refreshments following the lecture.

Please Note:

- The LSU Office of Purchasing has sent deadlines for equipment purchases:
  - April 12: deadline for items greater than $25,000 that are not on state contract.
  - May 19: deadline for items less than $25,000 that are not on state contract.
  - May 21: deadline for all state contract purchases

- Early bird registration and housing is now open for SIGGRAPH 2010, the premier conference on computer graphics and interactive technologies. The conference will take place in Los Angeles, July 25-29 at the Los Angeles Convention Center.

- On Friday, March 26, from 9:00 am until noon, there will be an Introduction to C++ tutorial for users by Texas Advanced Computing Center at the University of Texas, Austin (TACC). They have invited LSU to join them through Internet streaming connections. If you register for the tutorial, Kathryn Traxler will send you a URL on Thursday, March 25, so that you can join the tutorial. All you will need is an Internet connection and a computer. Please register at http://www.hpc.lsu.edu/training/tutorials/TACC_C++.php

- Applications for Student Volunteers for SC10 are now being accepted. The deadline to apply is Sunday, Aug. 27. Undergraduate and graduate students are encouraged to

apply as volunteers to help with the administration of the conference. In exchange, students will receive complimentary conference registration, housing (for out-of-town volunteers) and some meals. Volunteers will be expected to be available for a total of 4-5 hours of work per day during the week of the conference, which will take place Nov. 13-19 in New Orleans. Successful applicants will be notified of their acceptance by Sept. 30. If you have any questions please e-mail student-vols@info.supercomputing.org.

- There will be a training on Hybrid Programming with MPI and OpenMP on Thursday, March 25 from 1:30 pm to 3:30 pm in 307 Frey and on the Access Grid.

- CCT announces The CCT Distinguished Graduate Dissertation Fellowship program to support outstanding graduate students at the University as they complete their final year towards a terminal degree in their field.

  Eligible students:

  - •Must be working with a faculty member associated with CCT
  - •Minimum GPA of 3.50
  - •Must have already passed all of the required exams in their department
  - •Must have finished all required course work and be working on the final dissertation
  - •Must devote full time to the completion of the dissertation preparation
  - •Must be enrolled in dissertation credit for nine hours during Fall and Spring semesters
  - •Cannot have other employment! Students cannot hold another graduate fellowship or award

  Students in this program will receive a $22,000 stipend for the 2010-2011 academic year. The deadline to apply for the fellowship this year is March 25. To apply, interested students should submit a description of the work in progress, a list of their publications, presentations, honors and awards, a copy of their transcript, and a statement outlining the timetable for completing their dissertations within the year. The student also should arrange that three letters of recommendation be sent directly to the Fellowships Committee. The application packet and letters of recommendation (in pdf format) should be sent to: jobs@cct.lsu.edu.

o This summer, CCT will host its first Research Experience for Undergraduates (REU), a nine-week program that gives students an opportunity to join interdisciplinary research groups and use the advanced cyberinfrastructure available on campus to work collaboratively on computational science projects. CCT will accept eight students for the Summer 2010 REU. Each participating student will receive a stipend of $4,500, free housing in University dormitories, and up to $500 in travel expenses. Interested undergraduate students from any academic discipline are welcome to apply. Applications are due March 31, 2010, and students will be notified of whether they have been accepted by April 10. For more information or to see details on how

to apply, please visit: http://reu.cct.lsu.edu.

- LSU CCT and the Louisiana Biomedical Research Network (LBRN), will host the 3rd Workshop on Computational Biology March 26-27, 2010 at LSU. This workshop will bring together researchers using computational approaches in the biological sciences, HPC providers and cyberinfrastructure developers. For a full schedule and to register, visit: http://.lbrn.lsu.edu/urls/cw2010.

- LSU Day, a celebration of LSU's sesquicentennial anniversary, will take place on Saturday, April 24. The campus will host a large exhibition in the Quad and on the Parade Ground on this day to demonstrate work taking place in the different areas of campus for alumni, current or prospective students, and members of the Baton Rouge community. CCT's exhibit will take place in the visualization resources room in Middleton Library, and will feature the center's research videos and demonstrations of scientific visualization research. CCT will also provide a Best of the Fest reel from Red Stick International Animation Festival to show in Dodson Hall, which will be used to screen films from different areas of campus throughout the day. For more information about CCT's exhibit for LSU Day, please contact Kristen Sunde at ksunde@cct.lsu.edu.

- The next LONI HPC workshop will be hosted by UNO March 29 - 30 at UNO. For more information, visit http://www.hpc.lsu.edu/training. LSU's LONI HPC workshop has been rescheduled for April 26 - 28.

- Please remember to send your news concerning grants, awards, conferences, or other pertinent information to PR Manager Kristen Sunde at ksunde@cct.lsu.edu.

- Follow CCT with social media to access photos and see news, events or updated information. Both these pages are public; you do not need a Facebook or Twitter account to view the information.

  Facebook group: LSU Center for Computation & Technology
  Twitter @ LSUCCT

Upcoming Grant Deadlines:
- Integrative Graduate Education and Research Traineeship Program (IGERT)
  March 29 2010 10:15 am
  At Most $ 3,000,000.00 available

- Strategic Technologies for CyberInfrastructure (STCI)
  April 21 2010 10:15 am

- Future Internet Architectures (FIA)
  April 22 2010 10:15 am
  At Most $ 9,000,000.00 available

- [2010 NSF MRI](#)
  April 21, 2010 5 p.m.

  Note: Please see the [CCT deadline Web site](#), as many NSF deadlines are listed here.