# CCT Weekly Feb. 27- March 5, 2011

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# CCT Weekly, March 1, 2011

# LSU CCT Professor Thomas Sterling to Deliver Keynote Speech at ISC in Germany

Thomas Sterling, Seola Arnaud and Richard Vernon Edwards Jr. Professor in Computer Science and the LSU Center for Computation & Technology, will deliver a keynote address at the International SuperComputing Conference, which takes place June 19-23 in Hamburg, Germany

This conference serves as a worldwide forum for scientists, IT-decision makers, and technology leaders to discuss the newest technology for high performance computing, networking, and storage.

Sterling's keynote address, "HPC Achievement & Impact 2011," will give a retrospective review of the achievements and impact of the progress made during the preceding 12 months. It will examine the dramatic leaps in technologies, deployed systems, breakthrough computational accomplishments, and new methods and tools. It will also track the growth and trends in performance opportunity by taking an in-depth look at the new multicore chip architectures that are the building blocks of many of the prominent supercomputers worldwide.

Sterling, who is probably best known as the father of Beowulf clusters and his research on Petaflops computing architecture, will reflect on the past computational science accomplishments to look forward through the eyes of new initiatives building toward the extremes of performance, even to Exaflops.

"This year has seen dramatic changes in the field of HPC with increased emphasis on GPU acceleration and a new international player, China, assuming the number one spot of fastest computer in the world. This summer's ISC meeting in Hamburg, the second largest supercomputing conference in the world, will be extremely exciting and the place to be in June," said Sterling.

Recently titled a "Rock Star of HPC" by insideHPC and a "Mover & Shaker" by HPCwire, Sterling's current research focuses on associative template dataflow; Beowulf class PC/Linux cluster computing; continuum computer architecture; petaflops computing; hybrid technology multi-threaded architecture exploiting extremes in high capability and capacity device technologies; and advanced processor-in-memory architecture incorporating message-driven multi-threaded execution.

Sterling's address will complement presentations by three other prominent speakers, Henry Markram from EPFL, Switzerland; Philippe Vannier, Bull, France; and Dean Klein, Micron Technology, United States.

For more information on the International Supercomputing Conference, please visit <a href="http://www.supercomp.de/isc11/">http://www.supercomp.de/isc11/</a>.

# **CCT Spotlight: Isaac Traxler**

Isaac Traxler, Operations Manager for High Performance Computing at LSU, is a native Mississippian. He is married to fellow CCT employee, Kathy Traxler, and has two children and four grandchildren. Isaac started at LSU with the Systems Network Computer Center (SNCC) in 1991 as a VMS systems administrator.

For his HPC operations work, Issac is working on several projects, including integrating multiple Open Source tools into a unified management system. Isaac does infrastructure, security and storage for HPC @ LSU, including LSU and LONI systems.

Isaac believes in giving back by furthering education, one reason he has spent most of his professional career working at a university. Prior to joining the university crowd, he worked for Stennis Space Center. Some of the projects that are work and his personal hobbies include anything that will enhance a student's educational experience. Examples of student based activities:

- Being ACM South Central Regional Programming Contest co-Director, which brings students to LSU and four other sites to compete in a five hour contest in preliminaries to reach the ACM World Finals.
- LSU programming contest coach: coaches teams of students to compete in the ACM and Deloitte programming contests.
- SuperComputing Conference Student Cluster Competition, which encourages undergraduate students to learn about HPC from system administrator and research application viewpoints, <a href="https://sc11.supercomputing.org/?pg=studentcluster.html">http://sc11.supercomputing.org/?pg=studentcluster.html</a>. The SC10 team, Tails, was one of only two teams that actually broke the one teraflop (ten to the twelfth power) barrier. One of the only two teams to ever break the teraflop barrier with these power limitations.
- Little Fe, a home built mini-supercomputer, designed for educational use. Having one head node and a series of compute nodes and is portable enough to fit in a large suitcase, but versatile enough to teach all aspects of modern supercomputing.

The above are some of the ways that Isaac finds to, "pay it forward."

Isaac's personal hobbies are NASCAR, building computers, engines, woodworking and reading science fiction, especially by authors Isaac Asimov and George Alec Effinger. He also has been known to enjoy canoeing and tubing. He also enjoys playing Settlers of Catan.

To relax at home, Isaac plays with two of his three favorite gadgets: his Harmony all in one remote and his iPhone. Found on his iPhone are tunes from Harry Chapin, the Doors, Emerson, Lake and Palmer, Pink Floyd, Alan Parsons, Rick Wakeman, Bob Seger and Eric Clapton. Isaac wants to have an iPad, which is destined to become another favorite gadget.

Isaac's vision of vacation is a Frey's Electronics store, used bookstores, where he searches for Isaac Asimov and George Alec Effinger books, and family.

CCT in the News: Grid makes laptops sing

Source: international science grid this week

Digital Derby Source: <u>Site Selection</u>

Lectures this week: WEDNESDAY—

There will be a lecture on "Interactive Machine Learning in Music Composition and Performance" by Margaret Schedel, Stony Brook

University & Rebecca Fiebrink, Princeton University. The lecture will take place Wednesday, March 2 at 10:30 a.m. in 338 Johnston Hall.

#### THURSDAY-

There will be a Computational Biophysical faculty candidate lecture on "Computer Simulations of Proteins" by Ulrich H. E. Hansmann, Michigan Technological University Computational Biophysical faculty candidate. The lecture will take place Thursday, March 3 at 11:00 a.m. in 210 Choppin Hall.

# Please Note:

- The University will be closed Tuesday, March 8, 2011 for Mardi Gras holiday.
- The CCT REU program has extended the deadline for applications to March 15th. For more information or to see details on how to apply, please visit <a href="http://reu.cct.lsu.edu/">http://reu.cct.lsu.edu/</a>.
- CCT will present research, student, and partnership activities enabled through innovative computational science, advanced
  cyberinfrastructure, high-performance computing systems, high-speed networking, and economic development initiatives, as part of the
  first-ever LSU TechPAWLooza, March 3 (Noon-5:00 p.m.), LSU Student Union Royal Cotillion Ballroom. For more information, visit
  <a href="https://www.cct.lsu.edu/site.php?pagelD=63&newsID=1316">https://www.cct.lsu.edu/site.php?pagelD=63&newsID=1316</a>
- The 4th Annual LBRN Computational Biology Workshop will take place at LSU March 18-19, 2011. It will focus on High Throughput Simulations and Data Analytics. The objective of this workshop will be to create an awareness of the BBC core offerings at the state level. These offerings include: High Performance Computing, Data Mining and Statistical Consulting, and Data Visualization Initiatives. For more information and to register, visit http://lbrn.lsu.edu/urls/cw2011.
- 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, especially now that state funds are under a spending freeze. Please contact Susie Poskonka (<a href="mailto:susie@cct.lsu.edu">susie@cct.lsu.edu</a>) prior to any special meal with visitor(s) to file the appropriate request for approval. Prior approval could take up to one week, so please plan accordingly.
- Please remember to send your news concerning grants, awards, conferences, or other pertinent information to CCT Event Coordinator Jennifer Claudet 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.
- o Facebook group: LSU Center for Computation & Technology
- o Twitter: LSUCCT
- o YouTube channel: LSUCCT

### **Upcoming Grant Deadlines:**

Note: Please check the  $\underline{\mathsf{CCT}}$  deadline Web site, since it is updated daily.

High Performance Computing System Acquisition: Enhancing the Petascale Computing Environment for Science and Engineering March 07 2011 10:00 am

At Most \$ 30,000,000.00 available

Cyberinfrastructure Training, Education, Advancement, and Mentoring for Our 21st Century Workforce (CI-TEAM)

March 16 2011 10:00 am At Most \$ 1,000,000.00 available

Cyber-Physical Systems (CPS) March 21 2011 10:00 am At Most \$ 5,000,000.00 available

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