# CCT Weekly Feb. 6- Feb. 12, 2011

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## CCT Weekly, Feb. 8, 2011

## LSU Student Team Breaks Teraflop Barrier at SC10

LSU students Kenny Barron, Alex Chretien, Austin Howick, Jason Kincl, McKendon LaFleur, and Tung Le competed in the Student Cluster Competition at Supercomputing 2010 (SC10) in New Orleans November 15-17. The one computer engineering student and five computer science students comprised one of eight teams that were selected to compete from the 16 teams of world-wide applicants.

The Student Cluster Competition showcased the computational impact of clusters and open source software in problem solving. The teams had to design and build clusters to solve real-world applications without exceeding the dictated power limit. Teams were judged on scientific visualization output and interviews.

The LSU team broke the one Teraflop (Tflop) barrier at the SC10 competition, using 144 cores.

The team's coach, Unix Services Manager Isaac Traxler of LSU's High Performance Computing (HPC) and Center for Computation & Technology, solicited volunteers for the competition at the Association for Computing Machinery student chapter meetings. "The students volunteered to spend one night a week for six months in class as well as many nights on their own learning to apply concepts they had only read about in textbooks," said Traxler. "They learned the concepts of HPC research from the point of system administrator to the domain science perspective."

CCT Director Joel E. Tohline commended the students' dedication. "The students worked very hard to compete in the Student Cluster Competition, and they learned HPC skills that just can't be picked up in a normal classroom. The SC10 competition was an excellent experience for them, and Isaac Traxler is to be commended for his work in getting the team to SC."

IBM, HP, and NVidia have offered to partner with the LSU team for SC11's Student Cluster Challenge.

The eight competing teams for the SC10 Student Cluster Competition were:

- National Tsing Hua University (Hsinchu, Taiwan) & Acer Incorporated, Tatung Company, and National Center for High-Performance Computing (NCHC)
- Nizhni Novgorod State University (Nizhni Novgorod, Russia) & IBM, Microsoft, nVidia, and PGI
- Florida A&M University (Florida, USA) & Atlantic Computer, LLC (HP Partner for Higher Education)
- · Louisiana State University (Louisiana, USA) & HP and LATG, Mellanox, PGI, Adaptive Computing
- University of Colorado (Colorado, USA) & Dell, AMD, Mellanox, and FusionIO through the HPC Advisory Council
- The University of Texas at Austin (Texas, USA) & Dell
- Purdue University (Indiana, USA) & HP and AMD
- Stony Brook University (New York, USA) & Cray, Inc.

### CCT Spotlight: Jesse Allison

Jesse Allison is an Assistant Professor of Experimental Music & Digital Media for the AVATAR Initiative. He is originally from Warden, Washington.

In college, Jesse declared the Harmonica as his primary instrument for his undergraduate degree, until the music director explained to him that there was no harmonica instructor and that he would be taking piano and singing in choir instead. Jesse commented, "I'm still surprised they accepted me."

Jesse has always been intrigued with ways that can extend performance with computers, due to his background in acoustic music composition. "Through this extension, an artist can play with our expectations of how a concert, dance, musical performance, or installation object should be," said Jesse. "We can push boundaries by having a dance create its accompanying music, have the audience collaborate in making a musical performance, and have installations react to people, plants, traffic flow, whatever. In essence, you can use societal expectations, movement, and other forms of interaction . . as . . the art. I'm excited just writing about it!"

Currently, Jesse is researching getting collaborative performance to the masses, or creating cross platform distributed instruments using HTML5 and Rails, and creating a number of audience collaborative compositions for the system in development. He is also heading up the Media Interaction Library and Laboratory (MILL) to teach a class on Augmented Instrument Design. Jesse is the Co-Director of the Laptop Orchestra of Louisiana.

Jesse and his wife, Noelle, have four daughters, Gwenyth, Adelaide, Peregrine and Imogen. Jesse's other hobbies include singing madrigals and contemporary christian music in choir and with his wife. He also enjoys riding bikes with his family and having fun with his wife and daughters, the "Al Gals."

Jesse has two favorite gadgets, his android phone and his wine bottle opener. When asked to choose between LSU football and the Symphony, he responded, "Both! It's about time the halftime show had some Bartok, Beck, and Allison! Geaux Tigers!" His prescription for life is "love the people you are around."

CCT in the News:

People in Business for Jan. 30, 2011

Source: The Advocate

New Physical Review Journal Offers Online, Open Access Publishing

Source: American Physical Society

LSU Student Team Breaks Teraflop Barrier at SC10

Source: <u>HPCwire</u>

The Weekly Top Five: SC10's Student Cluster Competition Raises the Bar

Source: HPCwire

ISC'11 Keynotes to Explore the Leading Edge of HPC

Source: insideHPC

#### Please Note:

- Effective February 1, 2011, Mailing Services will require the use of Charge Slips with outgoing mail that we apply postage to. Charge slips include a bar code that allows Mailing Services to bill departmental budget codes in one easy step. This process will increase the efficiency and effectiveness of current and future mail operations. Please download the domestic and international forms at <a href="http://pas.lsu.edu/mailing-services/forms">http://pas.lsu.edu/mailing-services/forms</a>, and follow the instructions at the bottom of the forms. For any questions about this process, please contact Paul Ramirez (<a href="processing-particle-par
- This summer, CCT will host its second 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. 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 February 28, 2011, and students will be notified of whether they have been accepted by March 31. 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>.
- 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 (<u>susie@cct.lsu.edu</u>) 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 CCT deadline Web site, since it is updated daily.

Research Experiences for Teachers (RET) in Engineering and Computer Science Supplements and Sites February 28 2011 10:00 am
At Most \$ 500,000.00 available

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

\*\*\*NSF has revised proposal submission requirements - a quick review of the changes are noted in this announcement: <a href="http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg\_sigchanges.jsp">http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg\_sigchanges.jsp</a>

Check the NSF website for announcements - www.nsf.gov

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