June 10 – June 16, 2012

Einstein Toolkit Software Update Released

The LSU Center for Computation & Technology's (CCT) STE||AR Group is proud to announce the fifth formal release of the Einstein Toolkit, an open, community-developed software infrastructure for relativistic astrophysics. This release includes beginning support for OpenCL (disabled by default). In addition, bug fixes accumulated since the previous release in October 2011 have been included.

The Einstein Toolkit is a collection of software components and tools for simulating and analyzing general relativistic astrophysical systems that builds on numerous software efforts in the numerical relativity community including CactusEinstein, the Carpet AMR infrastructure, and the relativistic hydrodynamics code GRHydro (an updated and extended version of the public release of the Whisky code). The Cactus Framework is used as the underlying computational infrastructure providing large-scale parallelization, general computational components, and a model for collaborative, portable code development. The toolkit includes modules to build complete codes for simulating black hole spacetimes as well as systems governed by relativistic hydrodynamics. The most important design objective of HPX is to create a state-of-the-art parallel runtime system providing a solid foundation for UHPC-scalable applications while remaining as efficient, as portable, and as modular as possible.

The Einstein Toolkit uses a distributed software model, and its different modules are developed, distributed, and supported either by the core team of Einstein Toolkit Maintainers, or by individual groups. Where modules are provided by external groups, the Einstein Toolkit Maintainers provide quality control for modules for inclusion in the toolkit and help coordinate support. The Einstein Toolkit Maintainers currently involve postdocs and faculty from five different institutions and host weekly meetings that are open for anyone to join in.

Guiding principles for the design and implementation of the toolkit include: open, community-driven software development; well-thought-out and stable interfaces; separation of physics software from computational science infrastructure; provision of complete working production code; training and education for a new generation of researchers.

For more information about using or contributing to the Einstein Toolkit, or to join the Einstein Toolkit Consortium, please visit http://einsteintoolkit.org.

For more information about the CCT, visit: http://www.cct.lsu.edu.

Pats on the Back:

- Jorge Pullin has been appointed to the Advisory Board of the open access journal Papers in Physics, the only journal in physics to offer open peer review: http://www.papersinphysics.org/index.php/papersinphysics/about/editorialTeam

- Kathy Traxler received an award from the Board of Regents titled "LSU and LONI HPC Introduction to Parallel Programming Workshop, Users' Symposium and NWChem Workshop." The award is for $5,000 for five months.

CCT in the News:
Baton Rouge hosts 8th film festival
Source: LSU Reveille

Animation festival screens Pixar's "Brave"
Source: Red River Radio

Red Stick International Animation Festival offers variety of cutting-edge films
Source: The Advocate

Cartoon-a-Palooza is rainy-day fun
Source: The Advocate

Please Note:

- Reminder: The University is still in a spending freeze. State appropriated funds included in the University's FY 2011-12 Operating Budget identified with a zero "0" in the sixth digit of the account number are subject to the spending freeze. Start-up and cost sharing accounts are exempt. Please contact Theresa Markey (tmarkey@cct.lsu.edu) with any questions/concerns.

- Volunteers are needed to help with the Alice in Computation Land Summer Camp, June 18-22. Contact Kathy Traxler at ktraxler.cct.lsu.edu.

- The LSU Center for Computation & Technology will host the **LSU iOS App Boot Camp** for its second year, **July 30-August 10, 2012,** (10 day camp; not including weekends), on the LSU Campus. This educational experience will offer LSU undergraduate students the opportunity to gain knowledge while enhancing their entrepreneurial spirit. Participants will work in groups to create their own functional iOS app and have it loaded on their personal device by end of camp. Post-camp programs to expand and hone new skills will also be available. Registration and more information can be found at: https://www.cct.lsu.edu/ios-abc

- The Virtual School of Computational Science and Engineering (VSCSE) is excited to announce three Summer School courses for 2012. The VSCSE provides courses and learning resources to help computational science

students use emerging petascale computing resources to address real domain science problems. The summer courses for 2012 are:

- o **Programming Heterogeneous Parallel Computing Systems (July 10 - 13, 2012)--**located at LSU CCT**

- o **Science Cloud Summer School (July 30 - August 3, 2012)--**located at LSU CCT**

- o **Proven Algorithmic Techniques for Many-core Processors (August 13 - 17, 2012)**

These courses will be delivered to a number of sites nationwide using high definition video conferencing technologies, allowing students to travel to a number of convenient locations where they will be able to work with a cohort of fellow computational scientists, have access to local experts and interact virtually with course instructors. Registration fees for these courses are $100* and help the host sites offset their hospitality and facility costs.

Please visit http://www.vscse.org/summerschool/2012/ for more information and the full site list or http://hub.vscse.org to register today!

- The Louisiana Technology Park and LSU Center for Computation & Technology will host the iOS Application Workshop for Professionals (6 day camp, Monday thru Saturday), at the Louisiana Technology Park located at 7117 Florida Boulevard, Baton Rouge. This new educational experience offers professionals hands-on training in basic techniques to create and deploy mobile applications on iphones, ipods, and ipads. For more information and to register, visit: http://cct.lsu.edu/events/ios-app-workshop-professionals

- Student Volunteer applications opened April 1, 2012 and will be available at the SC12 Submissions site: http://submissions.supercomputing.org/. Applications close on July 31, 2012. International attendees who will require a travel visa are strongly encouraged to apply as early as possible. For more information on the Student Volunteer program and other student-related programs at SC12, visit: http://sc12.supercomputing.org/content/student-volunteers. Contact: student-vols@info.supercomputing.org

- 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. 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:
May 29- July 28: REU Computational Sciences
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June 15: HPC User Meeting
June 18-22: Alice in Computation Land Summer Camp
July 9-13: Beowulf Boot Camp for High School Teachers & Students
July 10-13: Programming Heterogeneous Parallel Computing Systems
July 23- 28: iOS App Workshop for Professionals
July 30-August 3: Science Cloud Summer School
July 30- August 10: LSU iOS App Boot Camp for Undergraduate Students