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Mardi Gras Conference 2014

Application Development for Exascale Computing

February 27 - March 1, 2014
**Louisiana State University -- Energy, Coast & Environment Building
Dalton Woods Auditorium**


The [LSU Center for Computation & Technology \(CCT\)](#) invites you to participate in the 19th Annual Mardi Gras Conference on Application Development for Exascale Computing. The meeting will start Thursday, February 27, 2014, at 9:00 a.m., and run through Saturday, March 1, 2014, approximately 12:30 p.m.

Scope & Audience: Application developers have been up against a barrier of scalability when trying to solve large complex problems. This year's conference is designed to introduce possible solutions to this scalability problem. A series of talks and workshops are planned where the creators of modern runtime systems are put into direct contact with application developers providing an avenue for application developers to hear about innovative, new approaches to computation. Likewise, runtime system groups will educate developers on their capabilities.

Hosted by both the [Materials Science Group](#) and [STE||AR Group](#) at the LSU Center for Computation & Technology, we invite scientists from academia and research labs, postdoctoral researchers, and graduate students working in the wide domain of application development. Join us as we promote the exchange of ideas, experiences and research results, and discuss current challenges in exascale computing.

Speakers:

- ▶ Pavan Balaji, Argonne National Laboratory
- ▶ Pedro Diniz, University of Southern California's Information Sciences Institute
- ▶ Timothy Germann, Los Alamos National Lab
- ▶ Emanuel Gull, University of Michigan
- ▶ Thomas Heller, Friedrich-Alexander Universität Erlangen-Nürnberg
- ▶ Douglas Kothe, Oak Ridge National Laboratory
- ▶ Karol Kowalski, Pacific Northwest National Laboratory
- ▶ Thomas Sterling, Indiana University, Center for Research in Extreme Scale Technologies
- ▶ Michael Wong, IBM

Tentative Schedule:

Thursday, FEBRUARY 27			
9:00-10:30 AM	Thomas Sterling <i>Keynote Speaker</i>	Indiana University	The Future of Application Development and Exascale Computing
11:00-12:30 PM	Karol Kowalski	Pacific Northwest National Laboratory	NWChem: quantum chemistry across spatial, energy, and time (to solution) scales
12:30-2:00 PM	Lunch		
2:00-3:30 PM	Michael Wong	OpenMP/IBM	OpenMP for Exascale Computing
4:00-5:30 PM	Timothy Germann	DOE ExMatEx Co-Design Center	Exploiting Asynchrony for Materials in Extreme Environments
Friday, FEBRUARY 28			
9:00-10:30 AM	Douglas Kothe <i>Keynote Speaker</i>	Oak Ridge National Laboratory	Toward Predictive Modeling of Nuclear Reactor Performance: Application Development Experiences, Challenges, and Plans in CASL
11:00-12:30 PM	Pavan Balaji	Argonne National Laboratory	MPI for Exascale Systems
12:30-2:00 PM	Lunch		
2:00-3:30 PM	Thomas Heller	Friedrich-Alexander-University	HPX -- The Futurization of Computing
4:00-5:30 PM	Pedro Diniz	University of Southern California	Managing Application Resilience: A Programming Language Approach
Saturday, March 1			
9:00-10:30 AM	Emanuel Gull	University of Michigan	ALPS -- the Applications and Libraries for Physics Simulations: Current state and future plans
11:00-12:30 PM	Panel	Hartmut Kaiser Karol Kowalski Bill Shelton Thomas Sterling	Future of Application Development in Exascale

Registration: Registration includes lunches and refreshments.

- ▶ Students - \$65.00
- ▶ Regular - \$80.00

[CLICK HERE TO REGISTER!](#)

Student Support: ICAM awards to support students coming from [ICAM branches](#) in the US and abroad are available. Please contact Juana Moreno (moreno@lsu.edu) for more information.

Lodging: Rooms have been reserved at a special conference price (\$93.00/night) at the Staybridge Suites-Baton Rouge University Area. Deadline to make reservations at this rate is February 2, 2014. After February 2, lodging and rates are based on availability.

Staybridge Suites - Baton Rouge University Area
4001 Nicholson Drive, Baton Rouge, LA 70808
Block Code = MGC (LSU CCT 19th Annual Mardi Gras Conference)
1-800-225-1237 or 1-225-456-5430
(Located on the LSU Bus Route--free to LSU visitors. View [TigerTrails](#) route for Tigerland "A" or "B".)
Find your bus: lsu.transloc.com/

Parking: Parking is available adjacent to the LSU Energy, Coast & Environment Building. Permits are required and can be purchased for \$10.00 when you register.

Directions: For directions to campus and/or the LSU Energy, Coast and Environment Building located on Nicholson Extension, Baton Rouge, [CLICK HERE](#).

Organizers:

Mark Jarrell (chair), LSU Department of Physics & Astronomy and CCT
Hartmut Kaiser (co-chair), LSU CCT and Computer Science
Juana Moreno, LSU Department of Physics & Astronomy and CCT
Adrian Serio, LSU CCT
William A. Shelton (co-chair), LSU Department of Chemical Engineering and CCT

Local Arrangements:

Karen Jones, LSU CCT
Jennifer Fontenot, LSU CCT
Susie McGlone, LSU CCT

For questions call or email: Karen Jones [225-578-0595; [kjones \(at\) cct.lsu.edu](mailto:kjones@cct.lsu.edu)] or Adrian Serio [[aserio \(at\) cct.lsu.edu](mailto:aserio@cct.lsu.edu)].

Sponsors:

We acknowledge the support of the U.S. National Science Foundation I2CAM International Materials Institute Award, Grant DMR-0844115, and the Department of Energy, SciDAC DE-FC02-06ER25792.



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