**WELCOME!**

It is our pleasure to welcome you to the 18th International Conference on Parallel Architectures and Compilation Techniques (PACT 2009) in beautiful Raleigh, North Carolina. PACT is a multi-disciplinary conference series that brings together researchers from the hardware and software areas to present ground-breaking research related to parallel systems. The technical program includes talks for 35 high quality papers, selected from 188 submissions, covering a wide area of topics. Additionally, the program includes two keynote presentations (see below), four workshops, two tutorials, a separate poster session, as well as an ACM student research competition.

We particularly thank ACM, IEEE, and IFIP for their continued sponsorship of PACT, NSF for providing student travel support, as well as the companies providing financial support for this year’s conference: Intel, IBM, Google and Reservoir Labs.

Social events include a Sunday night reception, a poster reception on Monday evening, a banquet on Tuesday evening, as well as plenty of time for socializing and discussing on-going research. In addition, the Raleigh area offers a diversity of tourist activities and attractions. We hope you find the technical program enlightening and enjoy your visit to PACT and the Raleigh area.

**KEYNOTE SPEAKERS**

**Pat Hanrahan** is the CANON Professor of Computer Science and Electrical Engineering at Stanford University, where he teaches computer graphics. His current research involves visualization, image synthesis, virtual worlds, and graphics systems and architectures. Before joining Stanford he was a faculty member at Princeton. Previously, he developed volume rendering software and was the chief architect of the RenderMan Interface at Pixar. Professor Hanrahan has received two Academy Awards for Science and Technology, the Spirit of America Creativity Award, the SIGGRAPH Computer Graphics Achievement Award, the SIGGRAPH Stephen A. Coons Award, and the IEEE Visualization Career Award. He was recently elected to the National Academy of Engineering, to the American Academy of Arts and Sciences, and is a Fellow of the ACM.

**Frederick H. Streitz** is Director of the Institute for Scientific Computing Research and Group Leader in the Modeling and Simulations Group at Lawrence Livermore National Laboratory. He joined LLNL’s Physical and Life Sciences Directorate as a computational physicist in 1999. He has been active as both an experimentalist and a computational physicist, with recent focus on developing supercomputer applications that push the limits of leadership-class computational capability to address forefront scientific problems. He has twice (2005 and 2007) led multi-institutional teams that were recognized with a Gordon Bell Prize for significant achievement in supercomputing.

RALEIGH, NORTH CAROLINA September 12-16, 2009

www.pactconf.org
Tuesday, September 15 (afternoon)

12:00-1:30  Lunch  Hobnob/Huddle

Tools and Testing  Clambake

1:30-3:00  Innovative Hardware  Four Sisters

3:30-5:00  Scheduling and Adaptation  Clambake

6:30-9:30  Novel Cache Systems  Four Sisters

Wednesday, September 16

7:30-8:30  Breakfast  Hobnob/Huddle

Modeling and Evaluation  Clambake

8:30-10:00  Hardware Transactional Memory  Four Sisters
- FASTM: A Log-based Hardware Transactional Memory with Fast Abort Recovery. Marc Lupon, Grigorios Magklis and Antonio Gonzalez.
- Improving Signatures by Locality Exploitation for Transactional Memory. Ricardo Quiñient, Esteban Gutiérrez and Oscar Pita.
- Mapping Out a Path from Hardware Transactional Memory to Speculative Multithreading. Leo Porter, Bumyong Choi and Dean Tullsen.

10:30-12:00  Compiler Optimizations  Clambake

1:30-5:00  Cache Management  Four Sisters
- S2S2: A Software-Oriented Distributed Shared Cache Management Approach for CMPs. Wei Li and Donald Yeung.

Saturday, September 12

7:30-8:30  Breakfast  Hobnob

8:30-12:00  Workshop: PACE  Clambake

12:00-1:30  Lunch  Hobnob

1:30-5:00  Tutorial: GPU  Four Sisters

Sunday, September 13

7:30-8:30  Breakfast  Hobnob

8:30-12:00  Workshop: WPABA  Clambake

12:00-1:30  Lunch  Hobnob

1:30-5:00  Tutorial: PGAS  Four Sisters