

Message from the Program Chairs

It is our pleasure to welcome you to the Fifteenth International Conference on Parallel Architectures and Compilation Techniques (PACT-2006). We greatly appreciate the opportunity to organize this year's conference program. It is a real privilege, because PACT is special in the way it brings together a wide range of researchers, spanning hardware, compilers, and applications in everything from PCs to "big iron" supercomputers. PACT therefore presents a special opportunity to have interdisciplinary conversations and perhaps to forge new collaborations. PACT is also a bit smaller than many other architecture and compiler conferences, affording more time for quality interactions and a better opportunity to get acquainted with a large fraction of the community.

This year's conference takes place in the beautiful and vibrant city of Seattle. The surrounding area offers a wealth of scenic beauty and natural attractions, and we encourage you to avail yourself of some of these when time permits. Seattle's natural wonders include beautiful Puget Sound, the Olympic Peninsula, the Cascade Mountains, and Mount Rainier. Seattle is also a tremendous cultural center, with world class dining, music, and the arts. Seattle is center of high-tech industry, and we will have an opportunity to see that industry first-hand, during our excursion to the Boeing wide-body assembly plant in Everett, Washington.

Our program this year offers two complete parallel tracks and four exciting keynote presentations. Jeffrey Dean, a Google Fellow, will lead us off on Monday with a discussion of Google's experiences with *MapReduce*, an abstraction for large-scale computation. Tuesday morning we will hear from Cray's CTO, Steve Scott, about challenges and opportunities in the post single-thread processor era; and after lunch, Ajay Royyuru from IBM will discuss challenges in computational biology. Wednesday, Nvidia's chief scientist, David Kirk, will discuss trends in graphics processors.

This year we received 117 submissions—a record—from which we selected 30 papers for this year's conference. Submissions were required to be anonymized. The review process followed the Guidelines for SIGARCH Sponsored Conferences (reprinted elsewhere in this proceedings). Program members were not allowed to be involved in the review or discussion of papers for which they had a conflict of interest, which was defined on recent co-authorship, sharing the same institution in the last five years, and so forth. Papers presenting conflicts for one of the program chairs were handled by the other program chair, and there were no papers that presented conflicts for both of us.

Despite a very short time for reviewing, most papers received a minimum of four reviews, three of which were from program committee members. Authors were then given a chance to enter a short response to clarify contentious issues or correct apparent errors in the reviews. After this, program committee members were asked to discuss *all* their assigned papers and try to reach consensus. Papers where consensus was difficult to reach, or where PC members felt that one or more additional reviews from topical experts would help, were assigned one or two additional reviews, in most cases an external reviewer selected by the program chairs. Authors on these papers were then given a short window of time to respond to these additional reviews. We then encouraged another round of discussion among program committee members, with dozens of inquiries from the program chairs to help guide these discussions.

The committee met on May 20 in Chicago. All but six members were present, and most of those not able to attend in person teleconferenced in, giving us almost perfect participation. We met from 8:30am—5:30pm, and every paper was given an opportunity for discussion. To avoid concerns about program size from influencing the decision process, we made clear to the program committee that we had room for parallel tracks and that we should accept all worthy papers. Discussion for each paper began with the most positive reviewer summarizing the paper and its strengths. Each paper was also assigned a "lead", who was responsible for summarizing and representing the viewpoints of the external reviews. Anyone with a conflict of interest was required to step out of the room. We feel that the program committee did a thorough and professional job in ensuring that every paper received quality reviews and we are thrilled about the excellent program that they have put together.

Many people contributed to make the PACT program possible and we would like to thank them here. First, we thank the authors for the many strong submissions, without which the program would not be possible. Second, we thank the program committee members who performed outstandingly, both by responding to a shortened review process and by delivering high quality review feedback. Their efforts allowed us to have substantive discussions of papers even before the PC meeting, and allowed us to give

authors an opportunity to see and respond to almost all written feedback. We also thank the numerous external reviewers, who also contributed excellent feedback and responded quickly in cases where additional reviews were required.

In addition to these groups, there are also individuals that we would like to acknowledge. Erik Altman, the General Chair, worked closely with us throughout the review process and was a source of numerous insights and improvements. Gabby Silberman, as chair of the Steering Committee, was helpful as the keeper of PACT institutional memory, and as a check for year-to-year consistency and general sanity overall. Albert Cohen and Sandhya Dwarkadas put together an outstanding weekend program of workshops and tutorials. Sudhanva Gurumurthi supervised production of the proceedings before you. Finally, we extend our special thanks to Jeremy Sheaffer, a Ph.D. student at University of Virginia, who put in extensive hours managing and customizing the conference review software, generating reports, corresponding with authors, and serving as our general go-to source prior to and during the program committee meeting.

Kevin Skadron and Ben Zorn
Program Co-chairs