

## Message from the PC Chairs

Now in its eleventh year, PACT has emerged as a unique multi-disciplinary conference that brings together researchers from the hardware and software areas to present ground-breaking research related to parallel systems ranging across instruction-level parallelism, thread-level parallelism, multiprocessor parallelism and distributed systems. The program committee is pleased to present this proceedings of the PACT 2003 conference, which includes 24 technical papers covering this wide range of exciting topics.

PACT 2003 received 144 high-quality submissions, a 20% increase over the previous year. This year's submissions came from 20 different countries, with 19 submissions from the Asia-Pacific region, 36 from Europe, 3 from the Middle East, 1 from South America, and the remaining 88 from North America. Of the 144 submissions, 21 of the primary authors were from industry.

The program committee met in Marina del Rey, California during June 13-14. We were only able to accept 24 of the 144 submissions this year, making this the most competitive PACT conference ever, with a 1 in 6 acceptance rate. On average, there were 4.6 reviews per submission, with a minimum of three and a maximum of six. The 144 submissions covered the following areas. With respect to software tools, there were 55 submissions describing compiler optimizations, and 20 submissions related to Java, parallel programming languages, and other tools. Among the submissions oriented towards parallel architectures, 44 described instruction-level parallelism techniques, 37 discussed multiprocessor architectures, and 26 were related to thread-level parallelism. There were a large number of submissions on parallel simulation, performance analysis and experimental studies, with 58 submissions, and memory systems, with 41 submissions. In addition, there were 39 submissions related to low power, configurable architectures and non-traditional systems; 35 submissions in the areas of parallel algorithms, computation models and application studies; and 21 submissions related to mobile computing, network architectures, i/o and operating systems.

In addition to the papers, the conference program includes three exciting keynote presentations to showcase the changing face of parallel computing. Guri Sohi from University of Wisconsin-Madison will describe how technology will drive the need to re-architect multiprocessor architectures. Monica Lam from Stanford University will discuss how program analysis originally developed for parallel computing is being used for debugging, security and program comprehension. Chris Johnson from University of Utah will describe the complexities associated with high-performance applications in biomedical computing and visualization.

We are grateful to a number of people for their contributions to this program. We appreciate all the hard work of the program committee members, who each reviewed roughly 18 papers and also managed external reviewers. We also thank the 226 external reviewers for providing their thoughtful comments that aided in our difficult decision process. We are deeply indebted to Lixin Zhang, the Web Submission Chair, for keeping the web site running smoothly and quickly responding to our numerous requests for assistance. The PACT Steering Committee and General Chairs David Kaeli and David Koppelman provided guidance and assistance through the entire process.

**Mary Hall and Vivek Sarkar**  
*PACT 2003 Program Chairs*