The Second International Symposium on Parallel Symbolic Computation (PASCO'97) presents original research on all aspects of high performance symbolic computation. High performance is meant as pertaining to the solution of large problems by means of parallel, distributed, multi-processor, or networked computers. Topics include: high performance parallel algebraic computation, high performance combinatorial and discrete methods, high preformance automatic theorem proving, design of high performance symbolic, functional, and constraint/logic languages and systems. PASCO'97 will be held under the sponsorship of ACM SIGSAM and SIGNUM at the Aston Wailea Resort, Maui, Hawaii, U.S.A. from July 20 – 22, 1997. PASCO'97 will be held in federation with ISSAC'97 the International Symposium on Symbolic and Algebraic Computation. (July 20–23 at the same location), and the exhibitions, systems demonstration area, and social program will be shared among the conferences. PASCO'97 registration permits participation in all ISSAC'97 activities

For more details about the conference and about registration, please consult the enclosed registration leaflet or the web page `http://www.csc.ncsu.edu/pasco97/`, or contact the local organizers.

Symposium Chair:

Hoon Hong
RISC-Linz Johannes Kepler University
A-4040 Linz, Austria
Phone: +43 (7236) 3231-48
Fax: +43 (7236) 3231-30
email: `Hoon.Hong@risc.uni-linz.ac.at`

Local Arrangements:

Stan Steinberg
University of New Mexico
email: `stanly@math.unm.edu`

Publicity:

Markus Hitz
North Carolina State University
email: `mahitz@eos.ncsu.edu`

Registrations:

Maria Paola Bonacina
University of Iowa
email: `bonacina@cs.uiowa.edu`

Treasurer:

Sam Dooley
IBM T. J. Watson Research
email: `dooley@watson.ibm.com`

Program Committee:

Gene Cooperman	Northeastern U.
Wayne Eberly	U. Calgary
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Kevin Hammond	U. of St. Andrews
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Stan Steinberg	U. New Mexico

Preliminary Program

Sunday, July 20

Session P, Track 1 (2:00pm–3:00pm)

PASCO '97 begins at 2pm.

Efficient Parallel Solution of Sparse Systems of Linear Diophantine Equations
Mark Giesbrecht, University of Manitoba

Fast Rectangular Matrix Multiplications and Improving Parallel Matrix Computations
Xiaohan Huang and Victor Y. Pan, City University of New York

Towards an efficient implementation of a fast algorithm for multipoint polynomial evaluation and its parallel processing
Hirokazu Murao, University of Tokyo and Tetsuro Fujise, Mitsubishi Research Institute

Session Q, Track 1 (3:30pm–4:10pm)

Fast parallel algebraic numbers computations
Thierry Gautier, ETH Zurich and Jean-Louis Roch, LMC-IMAG Grenoble

Processor-Efficient Parallel Matrix Inversion over Abstract Fields: Two Extensions
Wayne Eberly, University of Calgary

Monday, July 21

Session A, Track 2 (8am–9:30am)

An evaluation of Penny: a system for fine grain implicit parallelism
Johan Montelius and Seif Haridi, Swedish Institute of Computer Science

Evaluating Parallel Logic Programming Systems on Scalable Multiprocessors
Vítor Santos Costa, Universidade do Porto Ricardo Bianchini and Inès de Castro Dutra, Federal University of Rio de Janeiro

Extended Dynamic Dependent And-parallelism in ACE
Gopal Gupta and Enrico Pontelli, New Mexico State University

Distributed Partial Evaluation
Michael Sperber and Peter Thiemann, Universität Tübingen

Session B, Track 2 (9:45am–11:15am)

Experiments with subdivisions of search in distributed theorem proving
Maria Paola Bonacina, University of Iowa

Deriving Efficient Parallel Programs for Complex Recurrences
Wei-Ngan Chin, Y.M. Teo, and S.H. Tan, National University of Singapore

A Parallel Implementation of Cost-based Abductive Reasoning
Shohei Kato, Hirohisa Seki, and Hidenori Itoh, Nagoya Institute of Technology

Parallel Implementation through Object Graph Rewriting
John Glauert, University of East Anglia, Norwich

Session invited lecture, Track 1&2 (11:30am–12:30pm)

Title to be announced
Monica Lam, Stanford University

Session C, Track 2 (2pm–3pm)

Computation of replicable functions on Risa/Asir
Masayuki Noro, Fujitsu Laboratories Ltd. and John McKay, Concordia University, Montréal

The computational complexity of the Wu-Ritt type unmixed decomposition of radical ideals
Agnes Szanto, Cornell University

Mixed representation of polynomials oriented towards fast parallel shift
Eugene Zima, Moscow State University

Session D, Track 2 (4pm–5pm)

Improvement of Message Communication in Concurrent Logic Language
Kazuhiko Ohno, Masahiko Ikawa, Shin-ichiro Mori, Hiroshi Nakashima, and Shinji Tomita, Kyoto University

A Proposal for Syntactic Data Integration for Math Protocols
Olaf Bachmann and Hans Schönemann, Universität Kaiserslautern and Simon Gray, Kent State University

An Overview of the Design of Distributed Oz
Seif Haridi and Peter Van Roy, Swedish Institute of Computer Science and Gert Smolka, Universität des Saarlandes

Tuesday, July 22

Session E, Track 2 (8am–9:30am)

Tools for Parallel/Distributed Mathematical Computation
Paul S. Wang, Kent State University

CABAL: Polynomial and power series algebra on a parallel computer
Arthur Norman, Trinity College, Cambridge and John Fitch, University of Bath

CALYPSO: a Computer Algebra Library for Parallel Symbolic Computation
Giovanni Cesari, ETH Zurich and Università degli Studi di Trieste

Maple on a massively parallel, distributed memory machine
Laurent Bernardin, ETH Zurich

PASCO '97 ends.