ICMS 2010 program (Updated Sep 15)

Session Schedule

Monday, Sep 13		
Time	Z201	Z103
9:00-10:20	Sofware Turorials	
10:20-10:40	short break	
10:40-12:00	Sofware Turorials	
12:00-14:00	lunch break	
14:00-15:20	Sofware Turorials	
15:20-15:40	short break	
15:40-17:00	Sofware Turorials	

Tuesday, Sep 14		
Time	Z201	Z103
14:00-15:00	Plenary	
15:00-15:20	short break	
15:20-18:00	Special Func	Groebner A

Wednesday, Sep 15		
Time	Z201	Z103
9:00-10:00	Plenary	
10:00-10:20	short break	
10:20-12:20	Formal Proof A	Groebner B
12:20-14:00	lunch break	
14:00-16:00	Formal Proof B	Polyhedral A
16:00-16:20	short break	
16:20-18:20	Comp Group Th A	Polyhedral B

Thursday, Sep 16		
Time	Z201	Z103
10:20-12:20	Number Th (11:00-)	Comp Group Th B
12:20-14:00	lunch break	
14:00-16:00	Poster Session	
16:00-18:00	Comp Algebra	Visualization

Friday, Sep 17		
Time	Z201	Z103
9:00-10:00	Plenary	
10:00-10:20	short break	
10:20-12:20	Exact Numeric A	Reliable Comp A
12:20-14:00	lunch break	
14:00-16:00	Exact Numeric B	Reliable Comp B

Remark: A few lectures may be canceled. Once they are confirmed, these will be posted on our web page http://www.math.kobe-u.ac.jp/icms2010.

Monday, September 13

Software Turorials (Z201; 9:00-17:00)

9:00-9:40	Hamada, Tatsuyoshi: *ICMS-DVD*
9:40-10:20	Takayama, Nobuki: *Risa/Asir*
10:20-10:40	short break
10:40-11:20	Witty, Carl: *The Sage mathematics software system*
11:20-12:00	Tanaka, Satoru: *NZMATH — a practical number theoretic tool*
12:00-14:00	lunch break
14:00-14:40	van der Hoeven, Joris: *GNU T$_E$Xmacs*
14:40-15:20	Pilarczyk, Pawel: *CHomP - Computational Homology Project*
15:20-15:40	short break
15:40-16:20	Joswig, Michael: *Towards a Non-Hirsch-Polytope via polymake*
16:20-17:00	Verdoolaege, Sven: *iscc*

Tuesday, September 14

Plenary (Z201; 14:00-15:00)

14:00-15:00	Kojima, Masakazu: *Exploiting Structured Sparsity in Large Scale Semidefinite Programming Problems*
15:00-15:20	short break

Session: Computation of Special Functions (Z201; 15:20-18:20)

15:20-16:00	Cuyt, Annie; Backeljauw, Franky; Becuwe, Stefan; Van Deun, Joris: *Validated Special Functions Software*
16:00-16:40	Chevillard, Sylvain; Joldes, Mioara; Lauter, Christoph: *Sollya: an environment for the development of numerical code*
16:40-17:20	Zimmermann, Paul: *Reliable computing with GNU MPFR*
17:20-18:00	Salvy, Bruno; Benoit, Alexandre; Chyzak, Fréréric; Darrasse, Alexis; Gerhold, Stefan; Mezzarobba, Marc: *The Dynamic Dictionary of Mathematical Functions (DDMF)*

Session: Groebner Bases and Applications A (Z103; 15:20-18:20)

15:20-16:00 Ichim, Bogdan; Bruns, Winfried; Soeger, Christof:
             Introduction to Normaliz 2
16:00-16:40 Tec, Loredana; Regensburger, Georg; Rosenkranz, Markus;
             Buchberger, Bruno:
             An Automated Confluence Proof for an Infinite Rewrite System
             Parametrized over an Integro-Differential Algebra
16:40-17:20 Vejdemo-Johansson, Mikael; Dotsenko, Vladimir:
             Operadic Gröbner bases: an implementation
17:20-18:00 Noro, Masayuki:
             New algorithms for computing primary decomposition of polynomial ideals

Wednesday, September 15

Plenary (Z201; 9:00-10:00)

9:00-10:00   Hales, Thomas:
             Computational Discrete Geometry

10:00-10:20 short break

Session: Formal Proof A (Z201; 10:20-12:20)

10:20-11:00 Arthan, Rob:
             Building a Library of Mechanized Mathematical Proofs
11:00-11:40 Adams, Mark:
             Introducing HOL Zero
11:40-12:20 Alama, Jesse:
             Euler's polyhedron formula in MIZAR

Session: Groebner Bases and Applications B (Z103; 10:20-12:20)

10:20-11:00 Nishiyama, Kenta; Nakayama, Hiromasa:
             An algorithm of computing inhomogeneous differential equations for
             definite integrals
11:00-11:40 Blanco, Rocio:
             A new desingularization algorithm for binomial varieties in arbitrary
             characteristic
11:40-12:20 Markwig, Thomas:
             Computer algebra methods in tropical geometry

12:20-14:00 lunch break

Session: Formal Proof B (Z201; 14:00-16:00)

14:00-14:40 Hales, Thomas:
             Linear Programs for the Kepler Conjecture
14:40-15:20 Harrison, John:
             A formal proof of Pick's theorem
15:20-16:00 Urban, Josef; Hoder, Krystof; Voronkov, Andrei:
             Evaluation of Automated Theorem Proving on the Mizar Mathematical
             Library

Session: Software for Optimization and Polyhedral Computation A (Z103; 14:00-16:00)

14:00-14:40   Baes, Michel; Rostalski, Philipp; Adjiashvili, David:
Removing redundant quadratic constraints

14:40-15:20   Jensen, Anders:
Traversing Symmetric Polyhedral Fans

15:20-16:00   Schürmann, Achill; Rehn, Thomas:
C++ Tools for Exploiting Polyhedral Symmetries

16:00-16:20   short break

Session: Computational Group Theory A (Z201; 16:20-18:20)

16:20-17:00   Barakat, Mohamed; Görtzen, Simon:
Simplicial Cohomology of Smooth Orbifolds in GAP

17:00-17:40   Konovalov, Alexander; Neunhoeffer, Max; Luebeck, Frank; Linton, Steve; Behrends, Reimer:
Towards high-performance computational algebra with GAP

17:40-18:20   Schneider, Csaba; Murray, Scott; Ambrose, Sophie; Praeger, Cheryl:
Constructive membership testing in black-box classical groups

Session: Software for Optimization and Polyhedral Computation B (Z103; 16:20-18:20)

16:20-17:00   Verdoolaege, Sven:
isl: An Integer Set Library for the Polyhedral Model

17:00-17:40   Liberti, Leo; Cafieri, Sonia; Savourey, David:
The Reformulation-Optimization Software Engine

17:40-18:20   Lorenz, Benjamin; Haase, Christian; Paffenholz, Andreas:
Generating Smooth Lattice Polytopes

Banquet at the restaurant Sakura (19:00-)

Thursday, September 16

Session: Number Theoretical Software (Z201; 11:00-12:20)

11:00-11:40   Tanaka, Satoru; Ogura, Naoki; Nakamula, Ken; Matsui, Tetsushi; Uchiyama, Shigenori:
NZMATH 1

11:40-12:20   Fieker, Claus; Cannon, John; Donnelly, Steve; Watkins, Mark:
Magma - a tool for number theory

Session: Computational Group Theory B (Z103; 10:20-12:20)

10:20-11:00	Horn, Max; Eick, Bettina: *Computing polycyclic quotients of finitely (L-)presented groups via Groebner bases*
11:00-11:40	Pasechnik, Dmitrii; Kini, Keshav: *A GAP package for computation with coherent configurations*
11:40-12:20	Miyamoto, Izumi: *An Improvement of a Function Computing Normalizers for Permutation Groups*
12:20-14:00	lunch break

Poster Session (Z201; 14:00-16:00)

Session: Computer Algebra (Z201; 16:00-18:00)

16:00-16:40	Bigatti, Anna Maria; Abbott, John: *CoCoALib: A C++ Library for Computations in Commutative Algebra*
16:40-17:20	Dumas, Jean-Guillaume; Pernet, Clément; Gautier, Thierry; Saunders, B: *LinBox founding scope allocation, parallel building blocks, and separate compilation*
17:20-18:00	Faugère, Jean-Charles: *FGb: a library for computing Grobner base*

Session: Geometry and Visualization (Z103; 16:00-18:40)

16:00-16:40	Hoffmann, Tim: *On local deformations of planar quad-meshes*
16:40-17:20	von Gagern, Martin; Mercat, Christian: *A Library of OpenGL-based Mathematical Image Filters*
17:20-18:00	Mucherino, Antonio; Liberti, Leo; Lavor, Carlile: *MD-jeep: an Implementation of a Branch & Prune Algorithm for Distance Geometry Problems*
18:00-18:40	Reininghaus, Jan; Hege, Hans-Christian; Prohaska, Steffen; Hotz, Ingrid; Guenther, David: *TADD: A Computational Framework for Data Analysis using Discrete Morse Theory*

Friday, September 17

Plenary (Z201; 9:00-10:00)

9:00-10:00	Mehlhorn, Kurt: *Reliable and Efficient Geometric Computing*
10:00-10:20	short break

Session: Exact Numeric Computation for Algebraic and Geometric Computation A (Z201; 10:20-11:40)

10:20-11:00   Halperin, Dan:
Controlled Perturbation for Certified Geometric Computing

11:00-11:40   Karavelas, Menelaos:
Exact geometric and algebraic computations in CGAL

Session: Reliable Computation A (Z103; 10:20-12:20)

10:20-11:00   Rump, Siegfried M:
INTLAB - INTerval LABoratory

11:00-11:40   Neher, Markus:
Complex Inclusion Functions in the CoStLy C++ Class Library

11:40-12:20   Revol, Nathalie:
Standardized Interval Arithmetic and Interval Arithmetic used in Libraries

12:20-14:00   lunch break

Session: Exact Numeric Computation for Algebraic and Geometric Computation B (Z201; 14:00-16:00)

14:00-14:40   Rump, Siegfried M:
Accurate and Reliable Computing in Floating-Point Arithmetic

14:40-15:20   Mörig, Marc:
Deferring Dag Construction by Storing Sums of Floats Speeds-Up Exact Decision Computations Based on Expression Dags

15:20-16:00   Yap, Chee; Yu, Jihun; Du, Zilin; Pion, Sylvain; Brönnimman, Hervé:
The Design of Core 2: A Library for Exact Numeric Computation in Geometry and Algebra

Session: Reliable Computation B (Z103; 14:00-15:20)

14:00-14:20   Lecerf, Grégoire:
Mathemagix: towards large scale programming for symbolic and certified numeric computations

14:20-15:20   Li, Liyun; Moreno-Maza, Marc; Leiserson, Charles; Xie, Yuzhen:
Efficient Evaluation of Large Polynomials