Theoretical Effectivity and Practical Effectivity of Gröbner Bases

Rikkyo University
Ikebukuro Campus, Building 8, Room 8201
August 22 -- 26, 2005

Organizing Committee

Takayuki Hibi (Osaka University)
Toshinori Oaku (Tokyo Woman's Christian University)
Hidefumi Ohsugi (Rikkyo University, Chair)
Akimichi Takemura (University of Tokyo)
Kazuhiro Yokoyama (Rikkyo University)

http://www.rkmath.rikkyo.ac.jp/~ohsugi/conf/groebnerconf.html
Monday 22 August

9:00--10:00  Volker Weispfenning (Universität Passau)
Ordinary differential Gröbner bases

10:15--11:15  Shmuel Onn (Technion -- Israel Institute of Technology)
A few of my favorite universality theorems

11:30--12:15  Yosuke Sato (Tokyo University of Science)
Boolean Gröbner bases are always comprehensive

14:00--14:45  Nobuki Takayama (Kobe University)
Algorithms for local $D$-modules

15:00--15:45  Masayuki Noro (Kobe University)
Modular computation of Gröbner bases and its
application to Dynamic Evaluation

16:15--17:00  Hiroyuki Sawada (National Institute of Advanced
Industrial Science and Technology)
Automatic selection of term orderings for
efficient computation of Gröbner bases

17:15--18:00  Mitsushi Fujimoto (Fukuoka University of Education)
Masakazu Suzuki  (Kyushu University)
Kazuhiro Yokoyama (Rikkyo University)
On polynomial curves in the affine plane

Tuesday 23 August

9:00--10:00  Rekha Thomas (University of Washington)
Computing Gröbner Fans and Tropical Varieties

10:15--11:15  Jésus A. De Loera (University of California, Davis)
New algorithms & complexity results on the
computation of Gröbner bases of toric ideals

11:30--12:15  Diane Maclagan (Rutgers University)
Gröbner techniques in the McKay correspondence

14:00--14:45  Yasuko Matsui (Tokai University)
On the Gröbner walks

15:00--15:45  Akimichi Takemura (University of Tokyo)
Satoshi Aoki  (University of Tokyo)
Markov bases for sampling contingency tables with
fixed marginals
16:00--16:45  Shojiro Sakata (University of Electro-Communications)
Recent development of coding theory related to Gröbner basis

18:00--       Banquet

Wednesday 24 August

9:00--10:00  Uli Walther (Purdue University)
A connectedness result in positive characteristic

10:15--11:15  Mathias Schulze (Purdue University)
Computing the global Brieskorn lattice of tame polynomial functions

11:30--12:15  Yayoi Nakamura (Kinki University)
Invariants of semiquasihomogeneous isolated singularities

14:00--15:00  Anton Leykin (University of Illinois at Chicago)
Localization of holonomic $\mathcal{D}$-modules: several points of view

15:15--16:00  Shinichi Tajima (Niigata University)
An algorithm for computing Noetherian differential operators

16:30--18:30  Contributed Talks, Session A, Room 8201

Hiroshi Hirai (Kyoto University)
Greedy Fans: A geometric approach to dual greedy algorithms

Hiromasa Nakayama (Kobe University)
Algorithms of computing local $b$ function by using Gröbner basis and division in $\widehat{\mathcal{D}}[s]$

Katsuyoshi Ohara (Kanazawa University)
Nobuki Takayama (Kobe University)
Dimension formula of solution spaces of $(\mathcal{A})$-hypergeometric differential-difference systems
16:30--18:30 Contributed Talks, Session B, Room 8202

Takashi Wada (Rikkyo University)
Gröbner bases of Hilbert ideals

Satoshi Murai (Osaka University)
Algebraic shifting of finite graphs

Hirotachi Abo (Colorado State University)
An application of the Quillen--Suslin theorem to the construction of vector bundles

Thursday 25 August

9:00--10:00 Gerhard Pfister (Universität Kaiserslautern)
Algorithmic resolution of singularities

10:15--11:15 Raymond Hemmecke (Otto-von-Guericke Universität Magdeburg)
Effective computation of Gröbner bases and Markov bases of toric ideals

11:30--12:15 Mutsumi Saito (Hokkaido University)
Listing the $A$-equivalence classes

14:00--15:00 William N. Traves (U. S. Naval Academy)
Differential operators and invariant theory

15:15--16:00 Feyja Hreinsdóttir (University of Iceland)
Term orders for the ideal of commuting matrices

16:15--17:00 Toshio Sakata (Kyushu University)
Ryuichi Sawae (Okayama Science University)
Creation operators of three way contingency tables

Friday 26 August

9:00--10:00 Jürgen Herzog (Universität Duisburg--Essen)
Powers of ideals and Gröbner bases

10:15--11:15 Henry P. Wynn (London School of Economics)
Gröbner bases in algebraic statistics