

# Program

Friday, October 26

8:50-9:00	<b>Opening Remarks in the conference hall</b>	
9:00-10:00	<b>Plenary Talk in the conference hall</b>	
	<b>Erich Kaltofen</b> Symbolic Computation and Complexity Theory	
10:00-10:30	Tea Break at the conference hall	
	<b>Room 703</b>	<b>Conference Hall</b>
	Regular Session	Organized Session: Computational Geometry
10:30-11:00	<b>Yaohui Li</b> Signature-based Method of Deciding Program Termination	<b>Bernard Mourrain</b> Subdivision Methods in Geometric Modeling
11:00-11:30	<b>Xiaoming Zhang, Zhuojun Liu, Baofeng Wu and Qinfang Jin</b> Constructing Generalized Bent Functions from Trace Forms over Galois Rings	
11:30-12:00	<b>Hantao Zhang and Jian Zhang</b> Finding Conjugate Orthogonal Diagonal Latin Squares Using Finite Model Generators	<b>Elias Tsigaridas</b> Univariate Real Root Isolation in Extension Field and Applications to Topology of Curves
12:00-14:00	Lunch at Wuke Restaurant (fourth floor)	
	Regular Session	Organized Session: Computational Geometry
14:00-14:30	<b>Xiaoli Wu</b> A Note on the Almkvist–Zeilberger Algorithm	<b>Liyong Shen</b> Numerical Reparametrization of Rational Parametric Plane Curves
14:30-15:00	<b>Yijun Chen</b> A New Formula for the Values of Dirichlet Beta Function at Odd Positive Integers Based on the WZ Method	<b>Xiaoran Shi</b> Using $\mu$ -bases to Implicitize Rational Surfaces with a Pair of Orthogonal Directrices
15:00-15:20	Tea Break on the seventh floor	Tea Break at the conference hall
	Regular Session	Organized Session: Parametric Polynomial Computations
15:20-15:50	<b>Brice Boyer, Matthew Comer and Erich Kaltofen</b> Sparse Polynomial Interpolation by Variable Shift in the Presence of Noise and Outliers in the Evaluations	<b>Katsusuke Nabeshima and Shinichi Tajima</b> Algebraic Local Cohomology Classes Associated with Semi-quasihomogeneous Singularities
15:50-16:20	<b>Vincent Neiger, Muhammad F. I. Chowdhury, Claude-Pierre Jeannerod, Éric Schost and Gilles Villard</b> On the Complexity of Multivariate Interpolation with Multiplicities and of Simultaneous Polynomial Approximations	<b>Shutaro Inoue</b> Parametric Approaches to Combinatorial Problems
16:20-16:40	Tea Break on the seventh floor	Tea Break at the conference hall
	Regular Session	Organized Session: Parametric Polynomial Computations
16:40-17:10	<b>Liangyu Chen, Liyong Shen, Min Wu, Zhengfeng Yang and Zhenbing Zeng</b> Finding the Symbolic Solution of a Geometric Optimization Problem through Numeric Computations	<b>Dingkang Wang</b> Computation of Zero Divisors in Residue Class Rings of Parametric Polynomial Ideal
17:10-17:40	<b>Nam Pham and Mark Giesbrecht</b> A Symbolic Computation Approach to the Projection Method	<b>Yosuke Sato</b> Stability of Gröbner Bases in Terms of a Commutative von Neumann Regular Ring
17:40-19:30	Dinner at Wuke Restaurant (fourth floor)	

**Saturday, October 27**

9:00-10:00	<b>Plenary Talk in the conference hall</b>	
	<b>Markus Püschel</b> Automatic Discovery of Transform Algorithms	
10:00-10:30	Tea Break on the seventh floor	
	<b>Room 703</b>	<b>Room 712</b>
	Regular Session	Organized Session: Differential and Difference Algebra
10:30-11:00	<b>Na Lei, Xiaopeng Zheng and Yuxue Ren</b> The Vanishing Ideal of a Finite Set of Points with Multiplicity Structure	<b>Yongjae Cha and Mark van Hoeij</b> Rational Elements of the Tensor Product of Solutions of Difference Operators
11:00-11:30	<b>Yongwen Hou and Bo Yu</b> A Homotopy Method for Computing All Isolated Solvents of a Quadratic Matrix Equation $AX^2 + BX + C = 0$	<b>Mingbo Zhang</b> Factorization of Differential Operators with Ordinary Differential Polynomial Coefficients
11:30-12:00	<b>Fei Shen, Wenyuan Wu and Bican Xia</b> Real Root Isolation of Polynomial Equations Based on Hybrid Computation	<b>Maximilian Jaroschek</b> Improved Polynomial Remainder Sequences for Ore Polynomials
12:00-14:00	Lunch at Wuke Restaurant (fourth floor)	
	Regular Session	Organized Session: On The Latest Progress In Verified Computation
14:00-14:30	<b>Joris van der Hoeven</b> Overview of the Mathemagix type system	<b>Masaaki Kanno</b> Towards Guaranteed Accuracy Computations in Control
14:30-15:00	<b>Jing Yang, Dongming Wang and Hoon Hong</b> ImUp: A Maple Package for Uniformity-Improved Reparameterization of Plane Curves	<b>Zhengfeng Yang</b> Exact Safety Verification of Hybrid Systems Based on Hybrid Symbolic-Numeric Computation
15:00-15:30	<b>Michael Monagan and Roman Pearce</b> POLY : A New Polynomial Data Structure for Maple	<b>Zhengyu Wang</b> Computer-Assisted Proof of Existence of Nash Equilibrium
15:30-15:50	Tea Break on the seventh floor	Tea Break on the seventh floor
	Regular Session	Organized Session: Parametric Polynomial Computations
15:50-16:20	<b>Changbo Chen and Marc Moreno Maza</b> An Incremental Algorithm for Computing Cylindrical Algebraic Decompositions	<b>Hiroshi Sekigawa</b> Computing the Nearest Real Univariate Polynomial with a Real Multiple Zero and Its Application
16:20-16:50	<b>Jingjun Han</b> A Simple Quantifier-free Formula of Positive Semidefinite Cyclic Ternary Quartic Forms	<b>Mohab Safey El Din and Aurélien Greuet</b> Exact Polynomial Optimization: Algorithms, Complexity and Implementation
16:50-17:20	<b>Marc Moreno Maza and Rong Xiao</b> Degree and Dimension Estimates for Invariant Ideals of $P$ -solvable Recurrences	<b>Nan Li and Lihong Zhi</b> Verified Error Bounds for Isolated Singular Solutions of Polynomial Systems
17:20-17:30	Break	
17:30-18:00	<b>Industrial Partners Presentation in the conference hall</b>	
	<b>Junlin Xu</b> Symbolic Computation Techniques for Advanced Mathematical Modeling	
18:30-20:30	Banquet at Quanjude Restaurant (Building A, No.1 Zhongguancun East Road, Haidian District) (Local organizers will guide the participants to the restaurant from Siyuan Building around 18:00.)	

**Sunday, October 28**

9:00-10:00	<b>Plenary Talk in the conference hall</b>	
	<b>Josef Schicho</b> Factorization of Motions in 3D Space into Rotations/Translations	
10:00-10:30	Tea Break on the seventh floor	
	<b>Room 703</b>	<b>Room 712</b>
	Regular Session	Organized Session: On The Latest Progress In Verified Computation
10:30-11:00	<b>Jianqin Mei and Haiyan Wang</b> The Differential Invariant Algebra of an Integrable rmdKP Equations	<b>Wen Zhang, Sanzheng Qiao and Yimin Wei</b> The Diagonal Reduction Algorithm Using Fast Givens
11:00-11:30	<b>Hongqing Zhang and Shoufu Tian</b>  On the Model $AC = BD$ and Trigram Structures of the Soliton Theory	<b>Akitoshi Takayasu, Xuefeng Liu and Shin'ichi Oishi</b>  Verified Computations for Elliptic Boundary Value Problems on Arbitrary Polygonal Domains
11:30-12:00	<b>Zhi-Yong Zhang, Chun-Ming Yuan and Xiao-Shan Gao</b>  Matrix Formula of Differential Resultant for First Order Generic Ordinary Differential Polynomials	<b>Xuefeng Liu and Shin'ichi Oishi</b>  On High Precision Eigenvalue Estimation for Self-adjoint Elliptic Differential Operator and Its Application
12:00-14:00	Lunch at Wuke Restaurant (fourth floor)	