

MICA2016 Program

Saturday, July 16, 2016

(All talks are in DC 1302)

8:00—9:30	Breakfast, registration
	Mark Giesbrecht
9:30 – 10:20	Joachim von zur Gathen Algebraic complexity (survey)
10:20 – 10:45	Coffee break
	Arne Storjohann
10:45 – 11:10	Markus Hitz Integer division in residue number systems and log-space uniformity
11:10—11:35	George Labahn Fast of computation of Hermite forms for matrices of polynomials
11:35—12:00	Eunice Y. S. Chan and Rob M. Corless Narayana, Mandelbrot, and a new kind of companion matrix
12:00—12:25	Laureano Gonzelez-Vega Resultants and subresultants through evaluation: formulae and applications
12:25 – 14:00	Lunch break
	George Labahn
14:00 – 14:50	Gilles Villard Exact linear algebra (survey)
14:50 – 15:15	Coffee break
	Shaoshi Chen
15:15 – 15:40	Jean-Guillaume Dumas Efficient bootstrapping of sparse matrix-vector multiplication public verification
15:40—16:05	Manuel Kauers No news on matrix multiplication.
16:05—16:30	Christoph Koutschan Minimally rigid graphs
16:30—16:55	Coffee break
	Jean-Guillaume Dumas
16:55—17:20	David Saunders A brief history of matrix preconditioners in exact linear algebra
17:20—17:45	Wayne Eberly Black box linear algebra: extending Wiedemann's analysis of a sparse matrix preconditioner for computations over small fields
17:45—18:10	George Yuhasz Kaltofen's rank: computing matrix rank using Wiedemann methods

Sunday, July 17, 2016

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8:00—9:30	Breakfast, registration
	Mohab Safey El Din
9:30 – 10:20	Lihong Zhi Hybrid symbolic-numeric computation (survey)
10:20 – 10:45	Coffee break
	Lihong Zhi
10:45 – 11:10	Didier Henrion, Simone Naldi, and Mohab Safey El Din Symbolic computation, sums of squares and linear matrix inequalities
11:10—11:35	Kosaku Nagasaka Approximate GCD and its implementations
11:35—12:00	Daniel Lichtblau Computing approximate GCDs with approximate syzygies
12:00—12:25	Minjie Shen, Zhengfeng Yang, and Zhenbing Zeng Some applications of sparse interpolation via compressive sensing
12:25 – 14:00	Lunch break
	Jürgen Gerhard
14:00 – 14:50	Mark Giesbrecht and John May Polynomial factorization (survey)
14:50 – 15:15	Coffee break
	John May
15:15 – 15:40	Anand Kumar Narayanan Factoring polynomial over finite fields using Drinfeld modules with complex multiplication
15:40—16:05	Takafumi Shibuta and Shinichi Tajima An algorithm for computing the reduced standard bases of modules of finite colength
16:05—16:30	Thomas Kaltofen Biomechanical simulation of squint surgeries based on non-linear optimization
16:30 – 16:40	Coffee break
	Austin Lobo
16:40 – 17:05	Lakshman
17:05—18:05	Erich Kaltofen Remembrance of things past
18:05—18:30	Walk to the Delta Hotel
18:30—23:00	Banquet (Delta Waterloo) Remarks by: Keith Geddes Banquet speaker: Stephen Watt

Monday, July 18, 2016

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8:00—9:30	Breakfast, registration
	Daniel Roche
9:30 – 10:20	Wen-shin Lee Sparse interpolation (survey)
10:20 – 10:45	Coffee break
	Wen-shin Lee
10:45 – 11:10	Zhengfeng Yang Sparse multivariate function recovery from values with noise and outlier errors
11:10—11:35	Andrew Arnold Output-sensitive sparse polynomial multiplication, sparse interpolation, and early termination
11:35—12:00	Daniel Roche Sparse interpolation of integer polynomials: Theory and Practice
12:00—12:25	Dai Numahata and Hiroshi Sekigawa Degree estimate for black-box multivariate polynomials in symbolic-numeric sparse interpolation
12:25 – 14:00	Lunch break
	Andrew Arnold
14:00 – 14:25	Michael Monagan and Alan Wong Fast parallel multi-point evaluation of sparse polynomials
14:25 – 14:50	Clément Pernet Sparse interpolation and error correcting codes
14:50 – 15:15	Coffee break
15:15 – 16:30	Panel discussion Computer Algebra 1982 – 2016: reflection on the ways things have changed Moderator: Austin Lobo Panelists: Wen-shin Lee, Daniel Lichtblau, John May, Gilles Villard, Stephen M. Watt
16:30—16:55	Coffee break
	Manuel Kauers
16:55—17:20	Rui-Juan Jing, Chun-Ming Yuan, and Xiao-Shan Gao A polynomial-time algorithm to compute generalized Hermite normal forms of matrices over $\mathbb{Z}[x]$
17:20—17:45	Victor Pan Transformations of matrix structures and fast approximate computations with Cauchy matrices and polynomials
17:45—18:10	Saoshi Chen The sixth dwarf of symbolic computation
18:10—18:15	Closing remarks