COMPLEXITY OF SYMBOLIC AND NUMERICAL PROBLEMS

Monday, 8 June 2015

09.00–09.10   Opening

09.15–09.55   M-F Roy, *An elementary recursive bound for effective Positivstellensatz and Hilbert 17-th problem.*

10.05–10.45   V. Podolskii, *Tropical Effective Nullstellensatz.*

10.55–11.20   I. Ponomarenko, *Recognizing the Cartan association schemes in polynomial time.*

11.30–11.40   A. Weber, *Empiric investigations of some seemingly slowly growing complexity parameters of bio-chemical reaction networks.*

12.15   Lunch

14.15–14.55   F. Cucker, *A Theory of Complexity, Condition, and Roundoff.*

15.05–15.30   D. Amelunxen, *On a blindspot in probabilistic analysis of condition numbers.*

Tuesday, 9 June 2015

09.00–09.40   D. Grigoriev, *Subtraction-free computations and cluster algebras.*

09.50–10.20   A. O. Slissenko, *On Entropic Convergence of Algorithms.*

10.30–11.10   V. Spilrain, *Nature-based information security.*

11.20–11.40   J. Davenport, *Equational Constraints and Cylindrical Algebraic Decomposition.*

12.15   Lunch

14.15–14.45   P. Bürgisser, *Condition of intersecting a fixed projective variety with a given linear subspace.*

14.55–15.25   K. Meer, *An algebraic proof of the real number PCP theorem.*

16.30–18.00   Open problem session.

Wednesday, 10 June 2015

09.00–09.40   S. Basu, *On the isotypic decomposition of cohomology modules of symmetric semi-algebraic sets: polynomial bounds on multiplicities.*

09.50–10.30   D. Pasechnik, *Rational moment generating functions and polyhedra.*

10.40–11.20   E. Hirsch, *Optimal proving algorithms.*

12.15   Lunch, hike.

Thursday, 11 June 2015

09.00–09.40   P. Koiran, *On the intersection of a sparse curve and a low-degree curve: A polynomial version of the lost theorem.*

09.50–10.20   E. Schost, *Another subtraction-free algorithm for computing Schur functions.*

10.30–11.10   M. Safey El Din, *On nearly optimal algorithms for computing roadmaps of real algebraic sets.*

12.15   Lunch

14.15–14.45   E. Kaltofen, *Fast Multiplication of Polynomials over Arbitrary Rings.*

14.55–15.25   M. Lotz, *Conic integral geometry and applications.*

Friday, 12 June 2015

09.00–09.40   T. Theobald, *Sum of squares certificates for containment of H-polytopes in V-polytopes.*

09.50–10.30   N. Vorobjov, *Topological lower bounds for computation trees and arithmetic networks.*

12.15   Lunch