

Programme on
“Algorithmic and Enumerative Combinatorics”

October 16 – November 24, 2017

organized by

Mireille Bousquet-Mélou (CNRS, U de Bordeaux), Michael Drmota (TU Vienna),
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Workshop 2 on “Computer Algebra in Combinatorics”

November 13 – 17, 2017

• Monday, November 13, 2017

09:00 – 09:30 **Registration**

09:30 – 11:00 **Alin Bostan** (INRIA, Saclay, France)

Introductory Talk: Computer algebra for lattice path combinatorics, I

11:00 – 11:30 *Coffee / Tea Break*

11:30 – 12:30 **Robin Pemantle** (University of Pennsylvania, Philadelphia, USA)

Introductory Talk: Automatic computation of multivariate asymptotics

12:30 – 14:30 *Lunch Break*

14:30 – 16:00 **Alin Bostan** (INRIA, Saclay, France)

Introductory Talk: Computer algebra for lattice path combinatorics, II

16:30 – 18:30 *Reception*

• Tuesday, November 14, 2017

09:00 – 10:00 **Stephen Melczer** (University of Pennsylvania, Philadelphia, USA)

Multivariate singularity analysis and hyperplane arrangements

10:00 – 10:30 *Coffee / Tea Break*

10:30 – 11:10 **Mark Wilson** (University of Auckland, New Zealand)

TBA

11:20 – 12:00 **Bruno Salvy** (INRIA and École Normale et Supérieure Lyon, France)

Algorithmic tools for the asymptotics of diagonals

12:00 – 14:00 *Lunch Break*

14:00 – 14:40 **Dan Romik** (University of California at Davis, USA)

The Taylor expansion of the Jacobi theta function at $x = 1$

14:50 – 15:30 **Armin Straub** (University of South Alabama, USA)

Properties of Laurent coefficients of multivariate rational functions

15:30 – 16:10 *Break*

16:10 – 16:50 **Frédéric Chyzak** (INRIA Saclay, France)
Computing solutions of linear Mahler equations

• **Wednesday, November 15, 2017**

09:00 – 10:00 **Tom Roby** (University of Connecticut, USA)
A path formula for birational rowmotion on a product of two chains

10:00 – 10:30 *Coffee / Tea Break*

10:30 – 11:10 **Moulay Barkatou** (CNRS, Université de Limoges, France)
Algorithms for removing apparent singularities of linear differential systems

11:20 – 12:00 **Maximilian Jaroschek** (Technische Universität Wien, Austria)
How not to define desingularization

12:10 – 12:50 **Georg Regensburger** (Johannes Kepler Universität Linz, Austria)
Consequences of the fundamental theorem of calculus in differential rings

12:50 – *Free afternoon*

• **Thursday, November 16, 2017**

09:00 – 10:00 **Philippe Di Francesco** (University of Illinois at Urbana-Champaign, USA)
Arctic curves in path models from the tangent method

10:00 – 10:30 *Coffee / Tea Break*

10:30 – 11:10 **George Labahn** (University of Waterloo, Canada)
Matrix Normal Forms and Ore Domains

11:20 – 12:00 **Guoce Xin** (Capital Normal University, Beijing, China)
Some progress on the sweep maps

12:00 – 14:00 *Lunch Break*

14:00 – 14:40 **Sergei Abramov** (Russian Academy of Sciences, Moscow, Russia)
On the arithmetic and shift complexities of inversion of difference operator matrices

14:50 – 15:30 **Marc Mezzarobba** (Université Pierre et Marie Curie, Paris, France)
Numerical evaluation of D -finite functions in SageMath with applications

15:30 – 16:10 *Break*

16:10 – 16:50 **Marko Petkovsek** (Univerza v Ljubljani, Slovenia)
Convolutions as solutions of linear recurrences

19:00 *Heurigenabend* (~ Conference Dinner)

• **Friday, November 17, 2017**

09:00 – 10:00 **Tanguy Rivoal** (CNRS, Université Grenoble Alpes, France)
Algorithmic determination of exceptional algebraic values of E -functions

10:00 – 10:30 *Coffee / Tea Break*

10:30 – 11:10 **David Broadhurst** (Open University, Milton Keynes, United Kingdom)
Applications of integer relation algorithms

11:20 – 12:00 **Mark Giesbrecht** (University of Waterloo, Canada)
TBA

All talks take place at ESI, Boltzmann Lecture Hall!