



SAGA

ShApes Geometry Algebra

SAGA Winter School
Auron, 15-19 March 2010
Program

Scientific Committee:

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Organizing Committee:

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Monday 15 March

- 13:30-14:10 Heidi Dahl, Vilnius Univ. (Lithuania)
Rolling ball blends between natural quadrics
- 14:15-14:55 Adrien Poteaux, Johannes Kepler Univ, Linz (Austria)
Computing distance between objects by using supported functions
- 15:00-15:40 Rimvydas Krasauskas, Vilnius Univ. (Lithuania)
Geometric Design of the Plaited Road Interchange

***** 15:40 Coffee break *****

- 16:15-17:15 Jayasimha Bagalkote, MISSLER Software (France)
Demonstration of Topsolid Software for design and machining of parts
- 17:30-18:30 Joris van Der Hoeven, CNRS-Ecole Polytechnique (France)
Mathemagix

***** 18:30 Cocktail *****

***** 19:00 Dinner *****

- 20:30 Jérémy Berthomieu, Ecole Polytechnique (France)
Installation and first steps with Mathemagix
- Bernard Mourrain, INRIA - Galaad (France)
How to make your own mmx package.

Tuesday 16 March

- 13:30-14:10 Joab Winkler, Sheffield Univ. (UK)
The calculation of the degree of an approximate common divisor of two polynomials
- 14:15-14:55 Olivier Ruatta, Univ. of Limoges (France)
From extended companion matrices to approximate GCD
- 15:00-15:40 Wen-shin Lee, Univ. of Antwerp (Belgium)
A Symbolic-Numeric Approach toward Polynomial Algebra

***** 15:40 Coffee break *****

- 16:15-16:55 Thang Luu Ba, INRIA - Galaad (France)
Matrix representation of rational space curves and the intersection problem by means of matrix representation

17:00-17:40 Tatjana Kalinka, National Kapodistrian Univ. of Athens (Greece)
Implicitization of parametric Curves and Surfaces using Resultant Polytopes

17:45-18:25 Oliver J. D. Barrowclough, SINTEF (Norway)
Approximate Implicitization of Triangular Bézier Surfaces

***** 19:00 Dinner *****

20:30 Grégoire Lecerf, CNRS, Univ. of Versailles (France)
Fast arithmetic for polynomials and matrices in Mathemagix

Wednesday 17 March

13:30-14:30 Wenping Wang, Univ. of Hong Kong (Hong-Kong)
Optimal Delaunay Triangulation

14:45-15:25 Madalina Hodorog, RICAM (Austria)
The Genus Computation Problem: Symbolic-Numeric Solutions and Beyond

15:30-16:10 Pierre-Vincent Koseleff, UPMC Paris 6 and INRIA - Salsa (France)
Polynomial Knot Diagrams

***** 16:10 Coffee break *****

16:30-17:10 Oliver Labs, Univ. of Saarland (Germany)
Challenges in Visualisation of algebraic curves and surfaces

17:15-17:55 Daouda Niang Diatta, Univ. of Limoges (France)
On the Isotopic Meshing of an Implicit Algebraic Surface

18:00-18:40 Tor Dokken, SINTEF (Norway)
Gotools

***** 19:00 Dinner *****

20:30 Angelos Mantzaflaris, INRIA - Galaad (France)
Geometric Modeling with Axel

Thursday 18 March

- 13:30-14:10 Alessandra Bernardi, Centro Int. Ricerca Matematica – Fondazione B. Kessler (Italy)
From Waring problem to tensor rank through secant varieties
- 14:15-14:55 Jérôme Brachat, INRIA - Galaad (France)
Effective representation of Hilbert scheme
- 15:00-15:40 Karoline Moe, Institute of Mathematics, Univ. of Oslo (Norway)
Rational cuspidal plane curves
- 15:45-16:25 Nikolay Qviller, Institute of Mathematics, Univ. of Oslo (Norway)
Counting singular curves on surfaces

***** 16:25 Coffee break *****

- 16:45-17:45 Tae-Wan Kim, Seoul National University (Korea)
 G^1 Bézier surface generation given boundary curve network with T-junctions
- 17h50-18:30 Thien N'guyen, Johannes Kepler Univ., Linz (Austria)
Parameterization of computational domain and B-spline fitting using approximate implicitization

***** 19:00 Dinner *****

- 20:30 Gang Xu, INRIA - Galaad (France)
Isogeometric analysis with Axel

Friday 19 March

- 9:00-10:00 Elias Tsigaridas, University of Athens (Greece)
Real Solving
- 10h05-10:45 Maria Laura Torrente, Univ. of Genova (Italy)
Stable border bases for ideals of points
- 11:00-11:40 Philippe Trébuchet, LIP6 (France)
Linear algebra and polynomials system solving
- 11:45-12:25 Ibrahim Adamou, Univ. of Cantabria (Spain) – Univ. of A. Moumuni (Niger)
Zero distribution algorithms for matrix polynomials