

WORKSHOP PROGRAM

Geometric Combinatorics and Optimization

May 23–25, 2005, FIM, ETH Zurich, Switzerland

May 23 (Monday)

09:05–09:15 **Opening**

Session 1–1 NW B 83 [G. Kalai]

09:15–10:15 Imre Bárány

The randomised integer convex hull

10:45–11:45 Jesús de Loera

Generating function algorithms and software for integer optimization

Session 1–2 NW B 83 [H.-J. Lüthi]

13:30–14:30 Pablo Parrilo

Having fun with polynomials: semialgebraic games and SOS/SDP

14:45–15:45 Tamás Terlaky

How good are interior point methods? Klee-Minty cubes tighten iteration-complexity bounds

Session 1–3 HG E 41 [K. Fukuda]

16:30–18:00 Alexander Schrijver

New code bounds with algebra and semidefinite programming

18:05 **Apero**

FIM

May 24 (Tuesday)

Session 2–1 HG D 16.2 [E. Welzl]

09:15–10:15 Jürgen Richter-Gebert

Incidence theorems on manifolds

10:45–11:45 Jiri Matousek

Voronoi diagrams with neutral zones

Session 2–2 HG D 16.2 [A. Barvinok]

13:30–14:30 Dmitry Feichtner-Kozlov

Equivariant obstructions to graph colorings

14:45–15:45 Gyula Károlyi

Structure theorems for set addition: the power of the combinatorial Nullstellensatz

Session 2–3 HG D 16.2 [R. Thomas]

16:00–17:00 Gil Kalai

Topological Helly type theorems

19:00 **Banquet**

Fischstube Zürichhorn (<http://www.fischstube.ch>)

May 25 (Wednesday)

Session 3–1 HG G HWZ [E. Feichtner]

09:15–10:15 Alexander Barvinok

Problems and results in lattice point counting

10:30–12:00 Bernd Sturmfels

Parametric inference via polytope algebra

Session 3–2 HG D 16.2 [P. Parrilo]

13:30–14:30 Rekha Thomas

The ideal of circuits of a matrix

14:45–15:45 Michele Vergne

Volume of polytopes and arrangements of hyperplanes

Session 3–3 HG D 16.2 [D. Feichtner-Kozlov]

16:00–17:00 Alek Vainshtein

Networks on surfaces and cells in Grassmannians

(Version May 13, 2005)

Orientation:

Building HG = the main building of ETH Zurich

Building NW = Clausiusstr. 25 (5 min walk from HG toward IFW)

A map of ETH Zentrum campus can be found in

http://www.ika.ethz.ch/services/eth_plaene/zentrum.pdf .

Sponsor:

FIM (Institute for Mathematical Research), ETH Zurich

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Theory of Combinatorial Algorithm Group, ETHZ

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