



Discrete, Computational and Algebraic Topology

November 10–14, 2014, U Copenhagen, Denmark

Schedule

Monday, November 10

(Auditorium 4):

- | | |
|-------------|---|
| 08:45–09:15 | Registration |
| 09:15–09:30 | Welcome |
| 09:30–10:10 | Gunnar Carlsson (Stanford U, USA)
<i>The algebraic geometry of persistence barcodes</i> |
| 10:20–11:00 | Francisco Santos (U Cantabria, Spain)
<i>Many triangulated odd-dimensional spheres</i> |
| 11:00–11:50 | Coffee break |
| 11:50–12:30 | Paul Bendich (Duke U, USA)
<i>Multi-scale Looping, Bending, and Branching Analysis of Brain Artery Trees</i> |
| 12:30–14:00 | Lunch break |
| 14:00–14:40 | Peter Bubenik (Cleveland State U, USA)
<i>Statistical Topological Data Analysis</i> |
| 14:40–15:10 | Coffee break |
| 15:10–15:50 | Robert Adler (Electrical Engineering, Technion – Israel Institute of Technology)
<i>Pondering Persistence and Extolling Euler</i> |
| 16:00–16:40 | Nathalie Wahl (U Copenhagen, Denmark)
<i>Combinatorial problems arising in Topology</i> |
| 16:50–18:30 | Poster session |
| 18:30– | Reception |

Tuesday, November 11

(Auditorium 4):

- 09:00–09:40 **Anders Björner** (KTH Stockholm, Sweden)
Some thoughts on topological methods for complexity
- 09:50–10:30 **Pavle V. M. Blagojević** (U Bonn/FU Berlin, Germany; SANU Belgrade, Serbia)
Topology of the Grünbaum hyperplane mass partition problem
- 10:30–11:00 Coffee break
- 11:00–11:40 **Michael Farber** (Queen Mary, U London, UK)
Large random spaces and groups
- 11:50–12:30 **Matthew Kahle** (Ohio State U, USA)
The length of the longest bar in random persistent homology
- 12:30–14:00 Lunch break
- 14:00–14:40 **Uli Wagner** (IST Austria, Austria)
Eliminating Multiple Intersections and Tverberg Points
- 14:40–15:15 Coffee break
- 15:15–16:15 Colloquium (Auditorium 1): **Günter M. Ziegler** (FU Berlin, Germany)
The story of $3N$ points in a plane

Wednesday, November 12

(Auditorium 1):

- 09:30–10:10 **Marian Mrozek** (Jagiellonian U, Poland)
Morse–Forman–Conley theory for combinatorial multivector fields
- 10:20–11:00 **Vidit Nanda** (U Penn, USA)
Discrete Morse Theory for Local Systems
- 11:00–11:30 Coffee break
- 11:30–12:10 **Michael Joswig** (TU Berlin, Germany)
Heuristics for Sphere Recognition
- 12:10–14:30 Lunch break
- 14:30–15:30 Boat cruise
- 18:00– Workshop dinner



Thursday, November 13

(Auditorium 1):

- 09:30–10:10 **John M. Sullivan** (TU Berlin, Germany)
The Ribbonlength of Knot Diagrams
- 10:20–11:00 **Alexander Gaifullin** (Steklov Mathematical Institute, Russia)
Volumes of polyhedra and collapses of simplicial complexes
- 11:00–11:30 Coffee break
- 11:30–12:10 **Karim Adiprasito** (Einstein Institute for Mathematics, Hebrew U, Israel)
Some combinatorial and geometric aspects of simplicial convex polytopes
- 12:10–13:30 Lunch break
- 13:30–14:10 **Claudia Landi** (UniMORE, Italy)
A stable combinatorial distance for Reeb graphs of surfaces
- 14:10–14:40 Coffee break
- 14:40–15:20 **Primož Škraba** (Jožef Stefan Institute, Slovenia)
Persistence of Different Shapes
- 15:30–16:10 **Jesper M. Møller** (U Copenhagen, Denmark)
Chromatic numbers of manifolds

Friday, November 14

(Auditorium 1):

- 09:30–10:10 **Roman Karasev** (MIPT, Russia)
Covering dimension using toric varieties
- 10:20–11:00 **Neža Mramor Kosta** (U Ljubljana, Slovenia)
Discrete Morse functions on infinite complexes
- 11:00–11:30 Coffee break
- 11:30–12:10 **Martin Raussen** (Aalborg U, Denmark)
Combinatorial and topological models for spaces of schedules