

Forschungsinstitut für Mathematik, ETH Zürich

“Topology and Robotics, 2006“

Workshop

July 10 - 14, 2006

Monday, July 10, 2006

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|-------------|----------|---|
| 10.00 | | Coffee |
| 10.45-11.45 | HG D16.2 | M. Kapovich, UC Davis
<i>“On topology of the shuttle arm motion”</i> |
| | | Lunch |
| 14:15-15:15 | HG D16.2 | M. Erdmann, Carnegie Mellon University
<i>“Protein structure comparison from line weavings”</i> |
| | | Coffee Break |
| 15:45-16:45 | HG D16.2 | A. Murillo, University of Malaga
<i>“Complexity of topological complexity, from a rational point of view”</i> |
| 17.00-18.00 | HG D16.2 | E. Rimon, Technion, Haifa
<i>“Competitive disconnection detection in on-line mobile robot navigation”</i> |
| 18.15 | | Apéro |

Tuesday, July 11, 2006

09.15-10.15 HG D16.2

R. Ghrist, University of Illinois at Urbana-Champaign
"Homology and sensor networks"

Coffee - Break

10.45-11.45 HG D16.2

D. Schuetz, University of Durham
"Homology of planar polygon spaces"

Lunch

14.15-15.15 HG D16.2

E. Rodriguez, University of Geneva
"The snake charmer's algorithm"

Coffee - Break

15.45-16.45 HG D16.2

Y. Baryshnikov, Bell Labs
"tba"

19.00

Dinner

Wednesday, July 12, 2006

09:15-10:15 HG D16.2

J.-Cl. Hausmann, University of Geneva
"Two decades of Polygon spaces"

Coffee - Break

10.45-11.45 HG D16.2

N. Sochen, Tel Aviv University
"Geometric flows on implicit manifolds and their applications in computer vision"

Lunch

14.15-15.15 HG D16.2

L. Sabalka, University of Illinois at Urbana-Champaign
"Braid group on trees"

Coffee - Break

15.45-16.45 HG D16.2

D. Farley, Max-Planck Institute, Bonn
"On the cohomology rings of tree braid groups"

17.00-18.00 HG D16.2

A. Ames, University of Berkeley
"Hybrid model structures"

Thursday, July 13, 2006

08:30-09:30 HG D16.2

D. Kodischek, University of Pennsylvania
"tba"

Coffee Break

10:00-11:00 HG D16.2

M. Grant, University of Durham
"Symmetric motion planning"

11:30-12:30 HG D16.2

T. Kahl, University of Minho
"Topological complexity and Sullivan Models"

15.00-21.00

Boat trip to Rapperswil

Friday, July 14, 2006

09:15-10:15 HG D16.2

M. Mason, Carnegie-Mellon University
"Very fast and very slow motions of mobile robots"

Coffee Break

10:45-11:45 HG D16.2

S. Yuzvinsky, University of Oregon, Eugene
"Topological complexity of motion planning: new examples"

Lunch

14.15-15.15 HG D16.2

A. Jadbabaie, University of Pennsylvania
"Distributed coordination protocols: from flocking and synchronization to routing in adhoc networks"

Coffe Break

15.45-16.45 HG D16.2

Problem session

1. H. Glover, Ohio State University
"Graph configurations and graph embedding"
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