

Topology and Computers 2009

Date : August 31 – September 2, 2009

Location : Tokyo Institute of Technology (Ookayama Campus)

Venue: West Building 8E, room number 1001 (10th floor)

HP: http://www.is.titech.ac.jp/~kin/topcomp_e

This workshop is supported by Grant-in-Aid Scientific Research (A) No. 19204007 (Mikiya Masuda) and Global COE, Computationism as a Foundation for the Sciences (CompView), Tokyo Institute of Technology (Project leader: Osamu Watanabe).

Organizer : Eiko Kin (Tokyo Institute of Technology)

August 31

(9:30 – 10:00 Coffee)

10:00 – 10:30 Kazuhiro Ichihara (Nara University of Education) and
Yuichi Kabaya (Osaka City University Advanced Mathematical Institute)
JSJ decompositions of toroidal 3-manifolds obtained by
Dehn surgeries on pretzel knots

10:45 – 11:45 Jason Behrstock (Lehman College, CUNY)
(Talk 1) Quasi-isometric classification of 3-manifold groups

12:00 – 12:30 Kenichi Kawagoe (Kanazawa University)
On limits of HOMFLY polynomials of knots and links

14:00 – 15:00 Hiroyuki Inou (Kyoto University)
Complex dynamics and computer

15:15 – 16:15 Juan González-Meneses (University of Seville)
(Talk 1) The conjugacy problem in braid groups

16:15 – 16:45 Coffee break

16:45 – 17:45 Panel discussion
Chairs: Yuya Koda and Mitsuhiro Takasawa (Tokyo Tech)
Panelists: Kazushi Ahara (Meiji University),
Sadayoshi Kojima (Tokyo Tech),
Yasushi Yamashita (Nara Women's University) and
Osamu Watanabe (Tokyo Tech)

September 1

- (9:30 – 10:00 Coffee)
- 10:00 – 10:30 Yasushi Yamashita (Nara Women's University)
On Fellows' conjecture
- 10:45 – 11:45 Hiroshi Matsuda (Hiroshima University)
Transversely non-simple knot types – calculating HFK by computer
- 12:00 – 12:30 Kenneth Shackleton (IPMU)
On the synthetic geometry of the pants complex
- 14:00 – 15:00 Masaaki Suzuki (Akita University)
Epimorphisms between the groups of 2-bridge knots with up to 12 crossings
- 15:15 – 15:45 Takuya Sakasai (Tokyo Institute of Technology)
Factorization formulas of higher-order Alexander invariants for homological fibered knots
- 15:45 – 16:15 Coffee break
- 16:15 – 17:15 Jason Behrstock (Lehman College, CUNY)
(Talk 2) Geometry of graph manifold groups
- 17:30 – 18:00 Alex Bene (IPMU)
Factoring Mapping Classes Via Fatgraph Nielsen Reduction
- (18:30 – 20:30 Banquet)

September 2

- (9:30 – 10:00 Coffee)
- 10:00 – 10:30 Hiroshi Kokubu (Kyoto University)
A method for constructing databases of global dynamics of multi-parameter systems
- 10:45 – 11:45 Zin Arai (Creative Research Institution "Sousei", Hokkaido University / JST PRESTO)
Hyperbolicity, Stability and Monodromy of Dynamical Systems
- 12:00 – 12:30 Hiroki Takahasi (Kyoto University)
Toward a rigorous measure estimate of the stochastic parameter set for the quadratic family
- 14:00 – 14:30 Tetsuya Ito (University of Tokyo)
Computation of finite-Thurston type orderings of braid groups
- 14:45 – 15:45 Juan González-Meneses (University of Seville)
(Talk 2) Nielsen-Thurston theory and braids