

RIMS Workshop

Discrete Geometric Analysis

DATE: August 27-31, 2012

Venue: Room 420, RIMS, Kyoto University

Organizers:

Takashi Kumagai (Kyoto University) Chair

Satoru Iwata (Kyoto University)

Tsuyoshi Kato (Kyoto University)

27 (Mon)

9:40-10:30 Toshikazu Sunada (Meiji University)

Coincidence symmetry groups

10:50-11:40 Mihyun Kang (TU-Graz)

Phase transition in random discrete structures

13:20-14:10 Eyal Lubetzky (Microsoft, Seattle)

The shape of $(2+1)$ -dimensional SOS

14:20-14:50 Daisuke Shiraishi (Kyoto University)

Non-intersecting random walks in low dimensions

15:20-15:50 Ryokichi Tanaka (Tohoku University)

A local ergodic theorem for an infinite tower of coverings

16:00-16:50 Yasunari Higuchi (Kobe University)

2D Ising percolation at high temperatures

28 (Tue)

9:40-10:30 Tom Britton (Stockholm University)

Random networks and epidemics

10:50-11:40 Naoki Masuda (University of Tokyo)

Laplacian-based centrality in directed graphs

13:20-14:10 Jean Bertoin (Universität Zürich)

The cut-tree of large Galton-Watson trees and the Brownian CRT

14:20-14:50 David Croydon (University of Warwick)

Simple random walks on random graphs in critical regimes

15:20-15:50 Takefumi Kondo (Tohoku University)

Nonlinear spectral gap and fixed point property

16:00-16:50 Motoko Kotani (Tohoku University)

A Mathematical challenge to materials science

29 (Wed)

9:40-10:30 Koji Fujiwara (Kyoto University)

Group actions on quasi-trees

10:50-11:40 Tibor Jordán (Eötvös University)

Globally rigid graphs and frameworks

11:50-12:20 Frank H. Lutz (TU-Berlin)

Random discrete Morse theory and the complicatedness of triangulations

18:30- Reception

30 (Thurs)

9:40-10:30 Kazuo Murota (University of Tokyo)

Introduction to discrete convex analysis

10:50-11:40 Pablo A. Parrilo (MIT)

Representations of convex sets and conic matrix factorizations

13:20-14:10 Frank Vallentin (TU Delft)

Upper bounds for packings of spheres of several radii

14:20-14:50 Shin-ichi Tanigawa (Kyoto University)

Matroids of group-labeled graphs in applied discrete geometry

15:20-15:50 Hiroshi Hirai (University of Tokyo)

Discrete convexity and polynomial solvability in minimum
0-extension problems

16:00-16:50 Vadim Kaimanovich (University of Ottawa)

Invariance and unimodularity

31 (Fri)

9:40-10:30 Bruce Kleiner (Courant Institute)

Geometric group theory, large scale geometry, and discrete
analysis

10:50-11:40 Laurent Saloff-Coste (Cornell University)

Random walks on groups driven by low moment measures

13:20-13:50 Jeremie Brieussel (Kyoto University)

Amenability of directed groups

14:10-15:00 Geoffrey Grimmett (University of Cambridge)

Coarse random geometry

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A 24244004 (HI*: M. Kotani),
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B 22340017 (HI*: T. Kumagai). HI*: Head Investigator