CREST Kotani Team Workshop

Random Media II

Supported by JST CREST, collaborated with "Interdisciplinary Mathematics toward SMART Innovation" and WPI-AIMR, Tohoku University

Date | 3^{rd} Sep -7th Sep. 2012

7th Satellite Workshop "Network Spectra and Related Topics"

Place | Seminar room (2nd floor), WPI-AIMR, Main Building, Tohoku University

2-1-1 Katahira Aoba-ku , Sendai 980-8577, Japan

http://www.wpi-aimr.tohoku.ac.jp/en/modules/wraps/index.php/outline/access.html Organizing Committee | Motoko KOTANI, Nobuaki OBATA, Nobuo YOSHIDA

Program |

3 rd September (Mon)		
10:00 -10:50	Geoffrey Grimmett (University of Cambridge, UK)	
	Universality and isoradiality	
11:00 -11:50	Tadahisa Funaki (University of Tokyo, Japan)	
	Invariant measure for stochastic PDE related to the KPZ equation	
	-Lunch-	
14:00 -14:50	Firas Rassoul-Agha (University of Utah, USA)	
	Variational formulas for directed random polymers	
15:00 -15:50	Ryokichi Tanaka (Tohoku Univ, Japan)	
	A local ergodic theorem and its application to crystal lattices	
	-Tea-	
16:20 -17:10	Tomohiro Sasamoto (Chiba University, Japan)	
	Fluctuations of the 1D directed polymer models	
4 th September (Tue)		
10:00 -10:50	Takashi Kumagai (RIMS, Japan)	
	Quenched invariance principle for random walks and random	
	divergence forms in random media on cones	
11:00 -11:50	Toshihiro Kawakatsu (Tohoku University, Japan)	
	Dynamics of complex domains in polymer-surfactant systems	

-Lunch-

14:00 -14:50	Takehisa Hasegawa (Tohoku University, Japan)
	Phase transition of bond percolation on nonamenable graphs and
	complex
	networks: a Monte-Carlo study
15:00 -15:50	Ken Nakajima (Tohoku University, Japan)
	Viscoelastic heterogeneity seen in polymer glasses
	-Tea-
16:20 -17:10	James Norris (University of Cambridge, UK)
	On derivation of the Boltzmann equation from a mean-field random
	model
	-Party-

5 th September (Wed)		
10:00 -10:50	Carlos J. Garcia-Cervera (UCSB, USA)	
	Multigrid Methods in Multiscale Modeling of Atomistic Solids	
11:00 -11:50	Nobuo Yoshida (Kyoto University, Japan)	
	Brownian directed polymers in random environment:complete	
	localization and phase diagram	
	-Lunch-	
14:00 -14:50	Hiroyuki Shima (University of Yamanashi, Japan)	
	Physics in 2D Curved surfaces - from Quantum and Statistical	
	viewpoints	
15:00 -15:50	David Croydon (University of Warwick, UK)	
	Biased random walk on critical Galton-Watson trees conditioned to	
	survive	
	-Tea-	
16:20 -17:10	Xu Yang (UCSB, USA)	
	Homogenized Maxwell equations in crystal	

6th September (Thu)

10:00 -10:50	Jean Bertoin (University of Zurich, Switzerland)
	Percolation on large random recursive trees
11:00 -11:50	MW Chen (AIMR, Tohoku University, Japan)
	Structure of Metallic Glasses: from short-range order to long-range
	disorder
	-Lunch-

14:00 -14:50	Jason Miller (MIT, USA)
	Imaginary Geometry and the Gaussian Free Field
15:00 -15:50	Tomoaki Nogawa (Tohoku University, Japan)
	Diffusion and sliding dynamics of elastic and plastic manifolds in
	random media
	-Tea-
16:20 -17:10	Xiangdong Li (AMSS, Chinese Academy of Sciences, China)

Generalized Dyson Brownian motion and fluctuation of eigenvalues of random matrices

$7^{\rm th}$ September	(Fri) Satellite Session : Network Spectra and Related Topics
9:30 -10:15	Francesc Comellas (Polytechnic University of Catalonia, Spain)
	Lecture 1: Mean first passage time for several infinite families of trees
10:20 -11:05	Dimitri Volchenkov (Bielefeld University, Germany)
	Lecture 1: Introduction to networks and databases: from electric
	networks to urban spatial networks
11:10 -12:00	Mamoru Tanaka (Kyoto University, Japan)
	Expander graphs and higher eigenvalues of the Laplacians on graphs
12:00 -12:50	Nobuaki Obata (Tohoku University, Japan)
	Random walks, quantum walks and free Meixner laws
	-Lunch-
14:00 -14:50	Vadim Kaimanovich (University of Ottawa, Canada)
	Invariance and unimodularity in the theory of random graphs
15:10 -15:55	Francesc Comellas (Universitat Politècnica de Catalunya, Spain)
	Lecture 2: Spectral reconstruction of complex networks
16:00 -16:45	Dimitri Volchenkov (Universität Bielefeld, Germany)
	Lecture 2: Markov chain methods in Language evolution and musical
	dice games