

Workshop on Stochastic Analysis and Related Topics

Supported by the Academy of Mathematics and Systems Science , CAS

Time: November 5--November 9, 2012

Place: Monday, Wednesday--Friday: Room 110, Morningside Center, CAS

Tuesday: Room 712, Siyuan Building, AMSS, CAS

Organizing Committee: Zhi-Ming Ma, Fu-Zhou Gong, Xiang-Dong Li

Program

November 5, Monday

- 9:00-9:20 Welcome Speech by Zhi-Ming Ma
- 9:20-10:05 Shige Peng (Shandong University)
On pathwise nonlinear PDE
- 10:05-10:50 Xiangdong Ye (University of Science and Technology of China)
On multiple ergodic average
- 10:50-11:10 Tea time
- 11:10-11:55 Xiangqun Yang (Hunan Normal University)
Markov inversion approach to identify Q-matrix of Markov chain
for model of ion channel
- 11:55-14:00 Lunch
- 14:00-14:45 Zhonggen Su (Zhejiang University)
On fluctuations for deformed random Wigner matrices
- 14:45-15:15 Zhenxin Liu (Jilin University)
Recurrent motions in stochastic differential equations
- 15:15-15:45 Jing Wu (Zhongshan University)
Multivalued stochastic differential equations driven by semimartingales
- 15:45-16:00 Tea time
- 16:00-16:45 Kainan Xiang (Nankai University)
Random walk and percolation under a quasi-isometry viewpoint
- 18:00-20:00 Reception

November 6, Tuesday

- 9:00-9:45 Weinan E (Princeton University and Peking University)
Stochastic Ginzburg-Landau equation in 3D with white noise forcing.
- 9:45-10:30 Ka-Sing Lau (Chinese University of Hong Kong)
Martin boundaries and harmonic structure on fractals
- 10:30-10:50 Tea time
- 10:50-11:35 Zenghu Li (Beijing Normal University)
Stochastic equations and self-similar processes
- 11:35-14:00 Lunch
- 14:00-14:45 Xicheng Zhang (Wuhan University)
Density and derivative formula for SDEs driven by α -stable processes
- 14:45-15:15 Wei Liu (Jiangsu Normal University and Bielefeld University)
Well-posedness and regularity estimate of SPDE with Lyapunov condition
- 15:15-15:45 Ran Wang (University of Science and Technology of China)
Uniqueness of Fokker-Planck equations for spin lattice systems
- 15:45-16:00 Tea time
- 16:00-16:45 Jiazu Zhou (Southwestern University)
Introduction to integral geometry and geometric probability

November 7, Wednesday

- 9:00-9:45 Terry Lyons (Oxford University)
TBA
- 9:45-10:30 Ben Andrews (Tsinghua University and Australia National University)
Log-concavity and the fundamental gap
- 10:30-10:50 Tea time
- 10:50-11:35 Fengyu Wang (Beijing Normal University)
Generalized curvature condition for subelliptic diffusion processes
- 11:35-14:00 Lunch
- 14:00-14:45 Lixin Zhang (Zhejiang University)
Response-adaptive designs: from intuitive model to the asymptotically best one
- 14:45-15:15 Shunxiang Ouyang (Bielefeld University)
Heat kernel estimates with singular drift and isoperimetric inequalities
- 15:15-15:45 J. Tsai (University of Hong Kong)
Conformal invariance of the exploration path in 2-d critical bond percolation in the square lattice (joint work with S.C.P. Yam and Zhou Wang).

- 15:45-16:00 Tea time
- 16:00-16:45 Mingyu Xu (Academy of Mathematics and Systems Science, CAS)
Skorohod Equation and Reflected Backward SDE
- 18:00-20:00 Banquet

November 8, Thursday

- 9:00-9:45 Elton Hsu (Northwestern University)
Maximal coupling of Brownian motion and mass transportation
- 9:45-10:30 Dayue Chen (Peking University)
The motion of a tagged particle in the simple exclusion process
- 10:30-10:50 Tea time
- 10:50-11:35 Motoko Kotani (Tohoku University)
A mathematical challenge to materials science
- 11:35-14:00 Lunch
- 14:00-18:00 Free afternoon

November 9, Friday

- 9:00-9:45 Kazuhiro Kuwae (Kumamoto University)
Analytic characterizations of gaugeability for generalized Feynman-Kac functionals
- 9:45-10:30 Fuqing Gao (Wuhan University)
Berry-Esseen bounds for additive functionals of the simple exclusion process
- 10:30-10:50 Tea time
- 10:50-11:35 Litan Yan (Donghua University)
TBA
- 11:35-14:00 Lunch
- 14:00-14:30 Jieming Wang (Beijing Institute of Technology)
Martingale Problems for Switched Processes
- 14:30-15:00 Jinping Zhang (North China Electricity Power University)
Set-valued stochastic integrals with respect to Poisson processes in a Banach space
- 15:00-15:45 Zhao Dong (Academy of Mathematics and Systems Science, CAS)
Malliavin matrix of degenerate PDE and gradient estimates
- 15:45-16:00 Closing Speech by Fu-Zhou Gong