Workshop on Asymptotics for Stochastic Dynamical Systems

The Workshop is Supporedt by London Mathematical Society and College of Science of Swansea University

Department of Mathematics
Swansea University
29–31 August 2017

Tuesday, August 29

09:00-09:10	*Opening*
09:10-09:45	Michael Röckner (Bielefeld) *Quasi-linear (stochastic) partial differential equations with time-fractional derivatives*
09:45-10:20	Jinghai Shao (Tianjin) *Stability and recurrence of regime-switching diffusion processes*

Tea break

10:50-11:25	Tomas Caraballo (Seville) *Random versus stochastic modeling in epidemiology*
11:25-12:00	James Thompson (Luxembourg) *Derivative and divergence formulae for diffusion semigroups*
12:00-12:35	Chunrong Feng (Loughborough) *Random periodic solutions of SDEs*

Lunch

14:20-14:55	Xue-Mei Li (Warwick) *Generalised, semi-classical and classical Brownian bridges*
14::55-15:30	Martin Grothaus (Kaiserslautern) *Weak Poincaré inequalities for convergence rate of degenerate diffusion processes*
15:30-16:05	Dan Crisan (Imperial College) *Large time asymptotics for diffusion semigroups gradient bounds*

Tea break

16:30-17:05	Huaizhong Zhao (Loughborough) *Ergodicity of periodic measures*
17:05-17:40	Thomas Cass (Imperial College) *A Stratonovich-to-Skorohod conversion formula for integrals with respect to Gaussian rough paths*
17:40-18:00	Yongmei Cai (Strathclyde) *Stochastic modelling of nutrient dynamics in the sea loch*

Dinner

Wednesday, August 30

9:00-9:35	David Elworthy (Warwick) *Formulae and asymptotics for higher derivatives of heat semi-groups: some examples and theory*
9:35-10:10	Bo Wu (Fudan) *Stochastic heat equations taking values in a Riemannian manifold*
10:10-10:30	Siyang Cai (Strathclyde) *The application of stochastic differential equation in epidemic models*

Tea break

10:50-11:25	Des Higham (Strathclyde) *Computational efficiency of continuous-time Markov chain simulations*
11:25-12:00	Kai Liu (Liverpool) *Sensitivity to small delays of pathwise stability for stochastic retarded evolution equations*
12:00-12:35	Sotirios Sabanis (Edinburgh) *Numerics for nonlinear SDEs, recursive estimators and MCMC algorithms*

Lunch

14:20-14:55	Bernt Øksendal (Oslo) *Stochastic control of memory mean-field processes*
14:55-15:30	Agnes Sulem (Paris, INRIA) *Optimal stopping games with nonlinear expectations*
15:30-16:05	Eugene Lytvynov (Swansea) *Determinantal point processes as particle density of quasi-free representations of the CAR*

Tea break

16:30-17:05	Zhongmin Qian (Oxford) *BSDE method and semi-linear parabolic equations on fractals*
17:05-17:40	Yonghua Mao (Beijing, BNU) *Dirichlet principle for asymmetric Markov chains*
17:40-18:00	Guangyu Xi (Oxford) *Aronson type estimate for diffusion processes with singular divergence-free drift*

Dinner

Thursday, August 31

9:00-9:35	Xianping Guo (Sun Yat-Sen) *A probability criterion for zero-sum stochastic games*
9:35-10:10	Dmitri Finkelshtein (Swansea) *n-fold convolutions of densities with regular heavy tails*
10:10-10:30	Panpan Ren (Swansea) *Matrix-valued SDEs for foreign exchange markets*

Tea break

10:50-11:25	Hiroyuki Matsumoto (Tokyo, Aoyama Gakuin) *Quasiconformal mappings and two-dimensional diffusion processes*
11:25-12:00	Jianhai Bao (Swansea) *Asymptotic (log-)Harnack inequality and ergodicity for path-dependent SDEs with infinite memory*