13th Berlin-Oxford Young Researchers Meeting on Applied Stochastic Analysis

– Schedule –

June 8 – 10, 2020

All times in BST = CET -1

Monday, June 8th

8:45–9:00	**Introductory Remarks**	
Chair:	Avi Mayorcas	
9:00–9:25	Francesco Cosentino (Oxford)	*Acceleration of Descent-based Optimization Algorithms via Caratheodory's Theorem*
9:25–9:50	Patrick Kidger (Oxford)	*Neural Controlled Differential Equations*
9:50–10:15	Csaba Toth / Patric Bonnier (Oxford)	*Seq2Tens: An efficient representation of sequences by low-rank tensors*
10:15–10:55	**Coffee break**	
Chair:	Nikolas Tapia	
10:55–11:20	James Foster (Oxford)	*High order numerical simulation of the underdamped Langevin diffusion*
11:20–11:45	Yue Wu (Oxford)	*Numerical aspects for RODEs with unbounded drift*
11:45–12:10	Alexandre Pannier (Imperial)	*Large and moderate deviations for stochastic Volterra systems*
12:10–13:20	**Lunch**	
Chair:	Máté Gerencsér	
13:20–13:45	Tobias Hurth (Neuchâtel)	*The uniqueness problem for global stationary solutions to the semidiscrete stochastic heat equation*
13:45–14:10	Vahagn Nersesyan (Versailles)	*Ergodicity via controllability*
14:10–14:35	Cecilia F. Mondaini (Drexel)	*Mixing for Hamiltonian Monte Carlo in infinite dimensions*
14:35–15:15	**Coffee break**	
Chair:	Ana Djurdjevac	
15:15–15:40	Benjamin Fehrman (Oxford)	*Large-scale regularity in stochastic homogenization*
15:40–16:05	Florian Bechtold (Sorbonne)	*A monotone operator approach to SDEs with additive noise in the Young regime*
16:05–16:30	Benjamin Seeger (Dauphine)	*Interpolation results for pathwise Hamilton-Jacobi equations*

Tuesday, June 9th

Chair:	Tom Klose	
9:00–9:25	Rongchan Zhu (Beijing)	*Large n limit of the $O(N)$ linear sigma model via stochastic quantization*
9:25–9:50	Antoine Mouzard (Rennes)	*The Anderson Hamiltonian on a two-dimensional manifold*
9:50–10:15	Pavlos Tsatsoulis (MPI, Leipzig)	*Synchronisation by noise for the stochastic quantisation equation in dimensions 2 and 3*
10:15–10:55	**Coffee break**	
Chair:	Patric Bonnier	
10:55–11:20	Sebastian Riedel (WIAS)	*Optimal stopping: a signature approach*
11:20–11:45	Chong Liu (Oxford)	*Adapted topologies and higher rank signatures*
11:45–12:10	Paul Hager (TU Berlin)	*Unified cumulant signature and Magnus expansion*
12:10–13:20	**Lunch**	
Chair:	Alexander Shaposhnikov	
13:20–13:45	Rosa Preiß (TU Berlin)	*Rotation Invariants of Paths Through Iterated Integral Signatures*
13:45–14:10	Lucio Galeati (Bonn)	*Noiseless regularisation by noise*
14:10–14:35	Avi Mayorcas (Oxford)	*Pathwise regularisation of McKean-Vlasov Equations*
14:35–15:15	**Coffee break**	
Chair:	Sebastian Riedel	
15:15–15:40	Andreas Sojmark (Imperial)	*Fragility of the supercooled Stefan problem with noise*
15:40–16:05	Florian Nie (TU Berlin)	*The stochastic FKPP equation with dormancy and duality to on/off branching coalescing Brownian motion*
16:05–16:30	Oana Lang (Imperial)	*Well-posedness for Nonlinear Stochastic Transport PDEs Coming from Fluid Dynamics*
16:30–16:55	Pavel Zorin-Kranich (Bonn)	*Variational estimates for martingale transforms*

Wednesday, June 10th

9:00–9:25	Carlo Bellingeri (TU Berlin)	*Singular rough paths*
9:25–9:50	Emanuela Gussetti (Bielefeld)	*A rough path approach to the stochastic Landau-Lifshitz-Gilbert equation*
9:50–10:15	Erland Grong (Bergen)	*Rough paths on Hilbert spaces*
10:15–10:55	**Coffee break**	

10:55–11:20	Nikolas Tapia (TUB/WIAS)	*Robustness of Residual Networks via Rough Paths techniques*
11:20–11:45	Antoine Hocquet (TU Berlin)	*A Stroock-Varadhan rough martingale problem*
11:45–12:10	Vlad Margarint (NYU Shanghai)	*Quasi-Sure Stochastic Analysis through Aggregation and SLE*
12:10–13:20	**Lunch**	

13:20–13:45	Trishen Gunaratnam (Bath / Imperial)	*Towards a low temperature expansion for Φ_3^4*
13:45–14:10	Nimit Rana (Bielefeld)	*1D geometric wave equation perturbed by fractional Brownian sheet*
14:10–14:35	Tom Klose (TU Berlin)	*A stochastic Taylor-like expansion for the generalised Parabolic Anderson Model*
14:35–15:15	**Coffee break**	

15:15–15:40	James-Michael Leahy (Imperial)	*Variational principles for fluid dynamics on rough paths*
15:40–16:05	Hong-Bin Chen (NYU)	*Rare exit events near a repelling equilibrium*
16:05–16:30	Tal Orenshtein (TU Berlin)	*Aging for stationary KPZ equation*
16:30–16:45	**Closing Remarks**	