# One World Stochastic Numerics and Inverse Problems

## Previous Seminars 2020-21

**Annika Lang,** Chalmers University
*Connecting random fields on manifolds and stochastic partial differential equations in simulations*
This seminar was NOT recorded

**Erika Hausenblas**, Montanuniversitaet Leoben
*Stochastic Activator-Inhibitor models and its Numerical Modelling*

**Monika Eisenmann**, Lund University
*Sub-linear convergence of stochastic optimization methods in Hilbert spac*e

**Konstantinos Dareiotis**, University of Leeds
*Approximation of stochastic equations with irregular drifts*
This seminar was NOT recorded

**Andrew Stuart**, Caltech
*Inverse Problems Without Adjoints*

**Svetlana Dubinkina,** Vrije Universiteit Amsterdam
*Shadowing approach to data assimilation*

**Denis Talay**, Inria and Ecole Polytechnique
*Probability distributions of first hitting times of solutions to PDEs w.r.t. the Hurst parameter of the driving fractional Brownian noise: A sensitivity analysis*

**Evelyn Buckwar**, Johannes Kepler University
*A couple of ideas on splitting methods for SDEs*

**Andreas Prohl**, Tübingen
*Numerical methods for stochastic Navier-Stokes equations*

**Mireille Bossy**, INRIA - *SDEs with boundaries, modelling particle dynamics in turbulent flow*

**Raphael Kruse**, Halle-Wittenberg
*On the BDF2-Maruyama method for stochastic evolution equations*

**Adrien Laurent**, University of Geneva
*Order conditions for sampling the invariant measure of ergodicstochastic differential equations in R^d and on manifolds*

**Chuchu Chen**, Chinese Academy of Sciences
*Probabilistic superiority of stochastic symplectic methods via large deviations principle*
- This seminar was NOT recorded

**Kostas Zygalakis**, University of Edinburgh
*Explicit stabilised Runge-Kutta methods and their application to Bayesian inverse problems*

**Xuerong Mao**, University of Strathclyde
*The Truncated Euler-Maruyama Method for Stochastic Differential Delay Equations*

**Charles-Edouard Bréhier**, Claude Bernard Lyon
*Analysis of splitting schemes for the stochastic Allen-Cahn equation*

**Connall Kelly,** University College Cork
*A hybrid, adaptive numerical method for the Cox-Ingersoll-Ross model*

**Ray Kawai**, University of Tokyo
*Stochastic approximation in adaptive Monte Carlo variance reduction* -This seminar was NOT recorded

**Kody Law**, University of Manchester
*Bayesian Static Parameter Estimation using Multilevel and multi-indexMonte Carlo*

**Akash Sharma & Michael Tretyakov**, University of Nottingham
*Computing ergodic limits of reflecteddiffusions and sampling from distributions with compact support*

**Georg Gottwald**, The University of Sydney
*Simulation of non-Lipschitz stochastic differential equationsdriven by α-stable noise: a method based on deterministic homogenisation*

**Marta Sanz-Sole**, Barcelona
*Global existence for stochastic waves with super-linear coefficients*

**Sonja Cox**, University of Amsterdam
*Efficient simulation of generalized Whittle-Mat'ern fields*