

Data-Driven Modelling of Complex Systems

Turing Institute, May 8-10, 2018

May 8	
11:30-13:00	Registration (Lunch from 12)
13:00-13:10	Opening
13:10-13:50	Marie-Thérèse Wolfram: Parameter identification for nonlinear partial differential equations in crowd modelling
13:50-14:30	Christian Maes: Pattern formation in nonequilibrium media
14:30-15:00	Refreshments (Poster setup)
15:00-15:40	José Carrillo: Consensus based models and applications to global optimization
15:50-17:10	lightning talks (Poster Presenters ~20 x 3min)
17:10-18:50	Poster session & reception

May 9	
10:20-11:00	Eric Vanden-Eijnden: Neural networks as interacting particle systems: asymptotic convexity of the loss landscape and universal scaling of the approximation error
11:00-11:40	Assyr Abdulle: Probabilistic numerical methods and Bayesian multiscale inverse problems
11:40-12:10	refreshments
12:10-12:50	Jane Hillston: Moment analysis, model reduction and the London Bike Sharing Scheme
12:50-14:00	Lunch
14:00-14:40	Tony Lelièvre: Coarse-graining of stochastic dynamics: Markov state models and effective reduced dynamics
14:40-15:20	Pierre Degond: From micro to macro in collective dynamics
15:20-16:00	refreshments
16:00-16:40	Martin Hairer: Universality classes for 1+1 dimensional systems
16:40-17:20	Jonathan Mattingly: Discovering the geopolitical structure of the United States through Markov Chain Monte Carlo sampling

May 10	
10:05-10:20	Sir Adrian Smith: Next Steps for the Alan Turing Institute
10:20-11:00	Jonathan Weare: Stratification for Markov Chain Monte Carlo and cosmological parameter estimation
11:00-11:40	Vincent Danos: Stability and inference for position-dependent Langevin diffusions

11:40-12:10	refreshments
12:10-12:50	Greg Pavliotis: Phase transitions for mean field limits of noisy interacting agents
12:50-14:00	Lunch
14:00-14:40	Heinz Koepl: Biomolecular reaction networks in random environments
14:40-15:20	Bruce Turkington: Statistical-dynamical models that minimize the rate of information loss
15:20-16:00	refreshments
16:00-16:40	Sebastian Reich: Learning models by making them interact
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