

EPSRC Symposium Workshop on Models from Statistical Mechanics in Applied Sciences

9-13 September 2013

Organisers: *S. Grosskinsky, O. Hryniv, F. Theil*

PROGRAMME

All lectures will be held in Room B3:03, Mathematics Institute, University of Warwick

Monday 9th September

08:30 - 09:45 Registration in Room B1:37; Coffee in the Mathematics Institute Common Room

09:45 - 10:25 **Victor Yakovenko** (Maryland) *Statistical mechanics of money, income, debt, and energy consumption*

10:30 - 11:00 Coffee in the Mathematics Institute Common Room

11:00 - 11:40 **Alan McKane** (Manchester) *Are there species smaller than 1 mm?*

11:45 - 12:25 **Richard Blythe** (Edinburgh) *Spatiotemporally complete condensation in a non-Poissonian exclusion process*

12:30 - 14:00 Lunch in the Mathematics Institute Common Room

14:00 - 14:40 **Mauro Mobilia** (Leeds) *Coexistence and metastability in evolutionary games*

14:45 - 15:25 **Julien Tailleur** (Paris 7) *Revisiting the flocking transition using Active Spins*

15:30 - 16:00 Tea in the Mathematics Institute Common Room

16:00 - 16:40 **David Mukamel** (Weizmann) *Long-range correlations in driven, non-equilibrium systems*

16:45 - 17:25 **Freddy Bouchet** (Lyon) *Phase transitions and large deviations in geophysical fluid dynamics*

18:00 Welcome drinks and Dinner in the Mathematics Institute Common Room

Tuesday 10th September

09:45 - 10:25 **Marco Sarich** (Berlin) *The rebinding effect and reduced models for ligand binding processes*

10:30 - 11:00 Coffee in the Mathematics Institute Common Room

11:00 - 11:40 **Eric Vanden-Eijnden** (NYU) *A tour on the computational side of large deviation theory*

11:45 - 12:25 **Gunter M. Schütz** (Jülich) *Diffusion in a slowly varying potential*

12:30 - 14:00 Lunch in the Mathematics Institute Common Room

14:00 - 14:40 **Tobias Galla** (Manchester) *Stochastic processes with distributed delays: chemical Langevin equation and linear-noise approximation*

14:45 - 15:25 **Andreas Schadschneider** (Cologne) *Exclusive queueing process: The dynamics of waiting in line and other jamming phenomena in pedestrian dynamics*

15:30 - 16:00 Tea in the Mathematics Institute Common Room

16:00 - 16:40 **Cécile Appert-Rolland** (Orsay) *Exclusion processes and pedestrians*

16:45 - 17:25 **Satya Majumdar** (Orsay) *Number of Distinct and Common sites visited by N random walkers*



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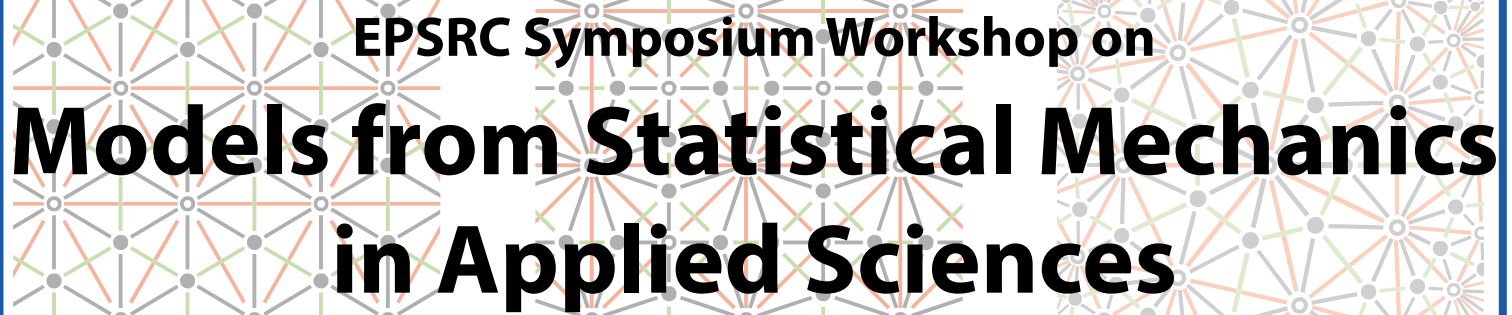
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For further information on events at the Mathematics Institute, see: go.warwick.ac.uk/mathsevents

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PROGRAMME (cont.)

Wednesday 11th September

- 09:45 - 10:25 **Charo del Genio** (Warwick) *Epidemic spreading is always possible on regular networks*
10:30 - 11:00 Coffee in the Mathematics Institute Common Room
11:00 - 11:40 **Baruch Barzel** (Boston) *Universality in network dynamics*
11:45 - 12:25 **Ginestra Bianconi** (QM London) *Dynamics, entropy and information in temporal social networks*
12:30 - 14:00 Lunch in the Mathematics Institute Common Room
14:00 - Excursion to Stratford; Dinner at Dirty Duck at 17:00; RSC: Hamlet at 19:00; Transport back to campus at 22:30

Thursday 12th September

- 09:45 - 10:25 **Tibor Antal** (Edinburgh) *Modeling cancer as a stochastic process*
10:30 - 11:00 Coffee in the Mathematics Institute Common Room
11:00 - 11:40 **Alexander Gorban** (Leicester) *Hierarchy of dominant paths in multiscale networks*
11:45 - 12:25 **Didier Sornette** (Zurich) *Reverse-engineering of financial markets by agent-based models: regime shifts and breakdown of market efficiency*
12:30 - 14:00 Lunch in the Mathematics Institute Common Room
14:00 - 14:40 **Tiziana di Matteo** (King's College) *New tools in statistical mechanics to detect information in financial datasets*
14:45 - 15:25 **Tobias Kuna** (Reading) *Typical behaviour of extremes of chaotic dynamical systems for general observables*
15:30 - 16:00 Tea in the Mathematics Institute Common Room
16:00 - 17:00 Colloquium: **Didier Sornette** (Zurich) *Black swans, dragons and predictions: diagnostics and forecasts for the world financial crisis*
17:00 Wine and cheese buffet in the Mathematics Institute Common Room

Friday 13th September

- 09:45 - 10:25 **Malte Henkel** (Nancy) *Physical ageing in systems without detailed balance*
10:30 - 11:00 Coffee in the Mathematics Institute Common Room
11:00 - 11:40 **Vassili Kolokoltsov** (Warwick) *Bose-Einstein condensation in number theory and economics*
11:45 - 12:25 **Martin Evans** (Edinburgh) *Speed selection in coupled Fisher waves*
12:30 - 14:00 Lunch in the Mathematics Institute Common Room and Departure



For further information on events at the Mathematics Institute, see: go.warwick.ac.uk/mathsevents
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