MAX-PLANCK-GESELLSCHAFT

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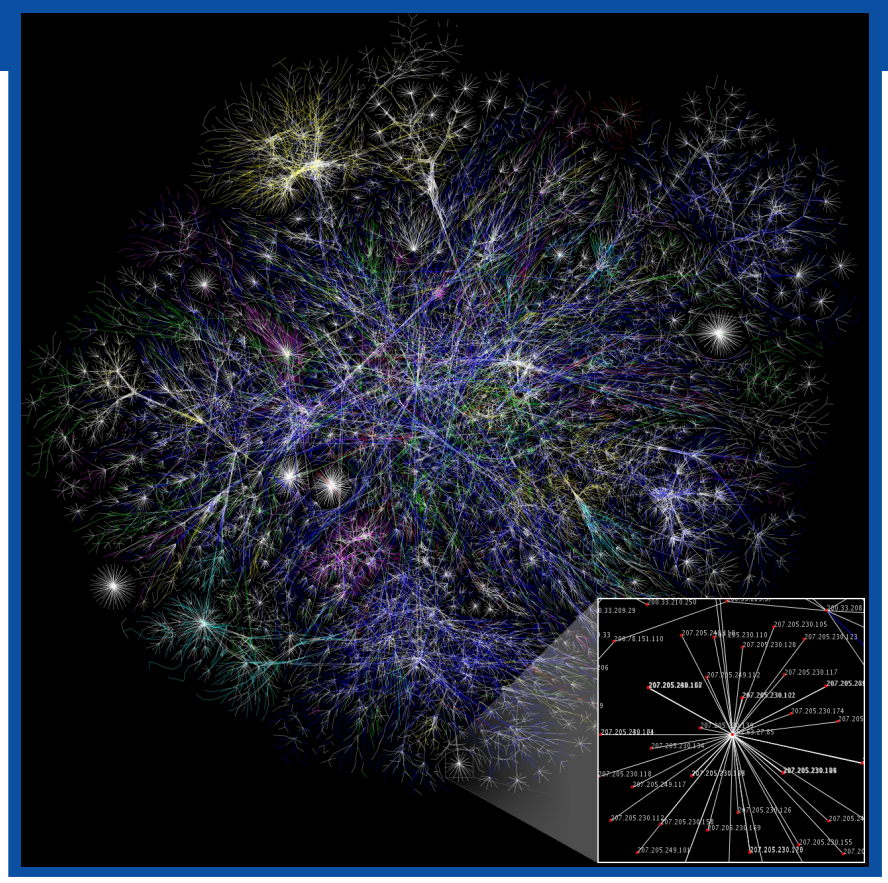
Stochastic dynamics on large networks: prediction and inference

Max Planck Institute for the Physics of Complex Systems

International Seminar & Workshop 8 - 26 October 2018

(Workshop week: 15 - 19 October 2018)

This international seminar & workshop will bring together researchers from statistical physics, statistics, numerical mathematics, machine learning and their applications in order to discuss challenges arising from dynamical data. The event will focus on how recent techniques can be used to model and learn from dynamic data, providing a forum for exploring synergies between solutions to inference tasks in different communities.



By The Opte Project - Originally from the English Wikipedia

Topics

- state and parameter estimation in stochastic differential equations
- inference in spatio–temporal models (e.g. reaction diffusion)
- inferring networks from dynamical data
- path integral approaches
- Monte Carlo methods, particle filter based inference
- inference and stochastic control, rare event simulations
- approximate inference
- agent systems and traffic models
- stochastic reaction networks
- population and network models
- neural dynamics and learning

Invited speakers

*to be confirmed

Nick Barton (AT)
Jose Bento (US)
Luca Bortolussi (IT)
Alfredo Braunstein (IT)
Luca Dall'Asta (IT)
Radek Erban (UK)
Tobias Galla (UK)
Ramon Grima (UK)
Carsten Hartmann (DE)
Dagmar Iber (CH)
Bert Kappen (NL)
Markos Katsoulakis (US)
Heinz Köppl (DE)
Reimer Kühn (UK)
Ben Leimkuhler (UK)
Ron Meir (IL)
Sebastian Reich (DE)
Gareth Roberts (UK)
Tim Rogers (UK)
David Saad (UK)
Maneesh Sahani (UK)
Simo Särkkä (FI)
Reinhold Schneider (DE)
Chris Sherlock (UK)
Sara A. Solla (US)
Vladimir Spokoiny (DE)*
Eric Vanden-Eijnden (US)
Verena Wolf (DE)

Scientific coordinators

Manfred Opper
Berlin, DE

Guido Sanguinetti
Edinburgh, UK

Peter Sollich
Göttingen, DE & London, UK

Organisation

Maria Voigt
MPIPKS Dresden

Applications received before 1 July 2018 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international seminar and workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

For further information please contact:
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We also offer individual fellowships (phd, postdoc, sabbatical). Applications are accepted continuously. For details, please check www.pks.mpg.de/visitors

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