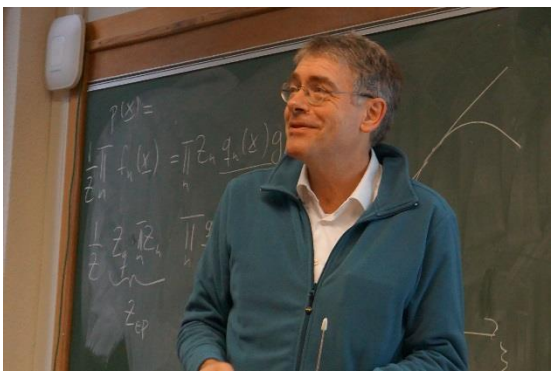
TECHNISCHE UNIVERSITÄT CHEMNITZ

Institut für Physik

Physikalisches Kolloquium



Mittwoch, 05.07.2017, um **16:00 Uhr**

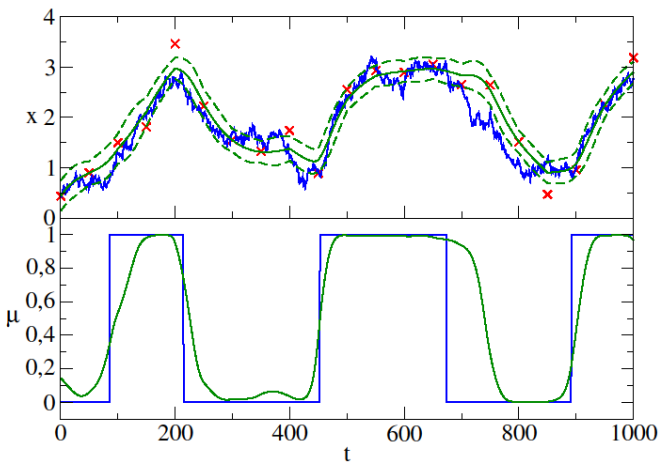
Ort: Reichenhainer Str. 90;
Zentrales Hörsaal- und Seminargebäude,
Raum 2/N013

Prof. Dr. Manfred Opper
Artificial Intelligence Group, TU Berlin

Approximate probabilistic inference for stochastic processes

The inference of unobserved variables or unknown model parameters from observed data using probabilistic, Bayesian methods is an important problem in data analysis. This problem becomes nontrivial for stochastic processes where the dimensionality of variables is very large or even infinite.

In this talk I will discuss approximation methods for efficient probabilistic inference which have become highly important in the field of machine learning but have their origin in statistical physics. They are based on approximating intractable probability measures by simpler ones, minimizing the relative entropy between the two distributions.



I will show that this method can be applied to stochastic processes. I will give applications to systems of stochastic differential equations and to a Markov jump process as a model for non-stationary neuronal spike data.

Alle Zuhörer sind ab 15:45 zu Kaffee und Tee vor dem Hörsaal eingeladen.

Informationen zum Vortrag erteilt:
Prof. Dr. Günter Radons, Tel.: 0371 531-21870