Susanne Ditlevsen

Monday, January 19, 15:40, Lecture hall K1

Partially observed stochastic models in neuroscience

When constructing a mathematical model for a given system under study, decisions about characteristics and levels of detail of the model have to be taken. Which choices are appropriate depend on the questions, one wants to answer. It should also depend on available data, such that the model can exploit the information that can be extracted and not suffer too much by what cannot. I will present some examples where a simple model extracted from more biophysical based models can answer specific questions of interest, as long as the simple model is interpreted and used in a suitable way.

About the speaker

Professor Susanne Ditlevsen is the Section Leader of Statistics and Probability Theory and Head of the Dynamical Systems Interdisciplinary Network at Department of Mathematical Sciences, University of Copenhagen, Denmark. Her research focuses on statistical inference for stochastic processes, mathematical modeling of physiological systems, nonlinear dynamics, biostatitics, neuronal modeling and the tubuloglomerular mechanicsm in nephrons. Her connections to Czech science are well rooted due to a long lasting cooperation with Petr Lánský (Institute of Physiology, Academy of Sciences of the Czech Republic)

Colloquium lecture

The colloquium lecture is organized as a joint seminar of Department of Probability and Mathematical Statistics and Nečas Center for Mathematical Modeling.