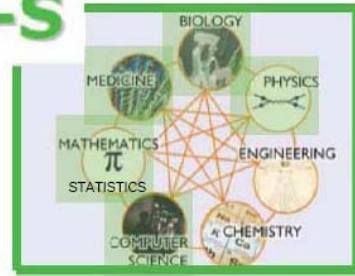


Ludwig Fahrmeir (LMU Statistics)
Erwin Frey (LMU Physics)
Ulrich Mansmann (LMU Medicine)
Eduardo Mendoza (LMU Physics & UPD Mathematics)
Wolfgang Stephan (LMU Biology)
Ralf Zimmer (LMU Bioinformatics)

BioMed-S



BioMed-S Seminar on “Stochastic Modelling for Systems Biology”

Seminarraum N110, Altbau der Physik

Tuesdays, 17.30 – 19.00

The goal of this seminar is to introduce graduate students and researchers in different disciplines to current stochastic modelling approaches for biological systems, and in particular, biological networks. A short tutorial and an overview of the BioMed-S* researcher’s current work will introduce each approach. Case studies then illustrate in detail the group’s research. Although the seminar will have a computational focus, it also hopes to attract interested experimentalists, especially biologists and biochemists.

The tentative schedule of lectures is as follows:

April 17: Erwin Frey: Stochastic Processes: Tutorial 1

April 24: Erwin Frey: Stochastic Processes: Tutorial 2

May 3 Guest Lecture: Eberhard Voit (Georgia Tech): Stochastic Applications of Canonical Modeling

May 8: Jan-Timm Kuhr: Gene Expression as a Stochastic Process: From Gene Number Distributions to Protein Statistics and Back

May 15: Ludwig Fahrmeir: Concepts of Bayesian inference and applications to imaging

May 22: Rainer Opgen-Rhein: From Correlation to Causation Networks

May 31: Christiane Dargatz: Statistical inference for stochastic differential equations

June 5: Ulrich Mansmann: Statistics and Graphs: Testing hypotheses on structure

June 12: Markus Ruschhaupt: Simulation of positive definite matrices with constraints by using moralised graphs

June 19: Manuela Hummel: Gene set testing on the Gene Ontology graph

June 26: Wolfgang Stephan: Stochastic Models in Population Genetics: An Overview

July 3: Joachim Hermisson: Title to be announced

July 10: Peter Pfaffelhuber: On the rate of Muller's ratchet: facts, heuristics, asymptotics

July 17: Eduardo Mendoza: Stochastic Process Algebras and Systems Biology

* *BioMed-S* (short for “Analysis and Modelling of Complex Systems in Biology and Medicine”) is a program funded by the *LMUinnovativ* initiative. Principal investigators include the seminar organizers on the computational side and Jürgen Haas (Medicine), Kirsten Jung (Biology) and Joachim Rädler (Physics) on the experimental side. The program will also recruit new faculty to strengthen the research in the program’s 3 clusters: *Quantitative Biology and Biostatistics*, *Complex Systems in Molecular Medicine* and *Structure and Dynamics of Functional Modules in Biological Model Organisms*.