

PhD seminar series
Probabilistics in Engineering:

Bayesian networks and Bayesian hierarchical analysis in engineering

Wednesdays 16:45 – 18:00, HIL E 6, ETH Hönggerberg

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PhD seminar series: Probabilistics in Engineering

- Bayesian Probabilistic Networks, 2004/2005 WS
- Excursion of Random Fields, 2005/2006 WS
- The Finite Element Method and the Analysis of Systems with Uncertain Properties, 2006/2007 WS
- The Probabilistic Analysis of Systems in Engineering, 2007 HS
- Probabilistic Approach to Natural Hazards Assessment, 2008 HS

Mode of the seminar

Presentations by participants

- One topic each week
- Introduction
- Exercise example
- Discussions follows

+ group exercise

→ Those who want credit points need to make presentation or participate in a group exercise.

Agenda

Week	Date	Speaker	Topic
1	30.09		Introduction
2	07.10		BN1: model building
3	14.10		BN2: decision making
4	21.10		Variability within multi-component system
5	28.10		Spatial GLM networks and hierarchies
6	04.11		Spatial discrete hazards using HBM
7	11.11		→ shift to 16.12(?): two courses in 16.12
8	18.11		Spatial variability: classical vs Bayesian kriging
9	25.11		Hazard modeling using BN and HBM
10	02.12		HBM for noisy/dirty data in integrity and lifetime extension assessment
11	09.12		HBM for environmental problems
12	16.12		HBM for extremes (group exercise presentation)

Administration

- Communication is made by e-mails
- Materials are uploaded or distributed by e-mails
- Register yourself on “myStudies”

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