# Ph.D. in Statistics

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Jens Lund

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From December 1996 to December 1999 I have done my Ph.D. studies at the Department of Mathematics and Physics, The Royal Veterinary and Agricultural University (KVL), Denmark. As I was using statistics in forestry and was located at Dina KVL I have some connection with the Danish Informatics Network in the Agricultural Sciences.

Note, since then the department and KVL has been merged into University of Copenhagen. The current links that come clossest are Faculty of Science with the Department of Mathematical Sciences and the Forest and Landscape College as well as Department of Geosciences and Natural Resource Management–Forest, Nature and Biomass.

The work is described in the following thesis:

**Statistical inference**
**and perfect simulation**
**for point processes observed with noise**
Jens Lund
December 1999

Online summary of ph.d. thesis.

(An older report *Spatial models related to trees* for a ph.d. midterm seminar also describes the ph.d. project. An online version of the report with some quirks is also present.)

The defence was on Friday 25th February, 2000.

The thesis can be downloaded as the following papers:

- Jens Lund, *Statistical inference and perfect simulation for point processes observed with noise* (pdf), Ph.D. thesis, Department of Mathematics and physics, The Royal Veterinary and Agricultural University, December 1999.
- Jens Lund, Mats Rudemo, *Models for point processes observed with noise*, November 4, 1998, Report 10, Department of Mathematics and Physics, The Royal Veterinary and Agricultural University, accepted for publication in Biometrika, revised version September 8, 1999, revised version November 1, 1999 (pdf). The November 1, 1999, version is present in the thesis.
- Jens Lund, Antti Penttinen, Mats Rudemo, *Bayesian analysis of spatial point patterns from noisy observations* (pdf), October 27, 1999, Department of Mathematics and Physics, The Royal Veterinary and Agricultural University, submitted.

- Jens Lund, Elke Thönnes, *Perfect simulation of point patterns from noisy observations* (pdf), December 10, 1999, Department of Mathematics and Physics, The Royal Veterinary and Agricultural University, manuscript. Find an updated version here.
- Jens Lund, *Survival of the Fattest? Self-thinning among Trees* (pdf), April 29, 1998, Report 3, Department of Mathematics and Physics, The Royal Veterinary and Agricultural University, course report from a PhD course in forest biometrics.
- Jens Lund, Elke Thönnes, *Perfect adaptive Metropolis-Hastings Simulation for Point Processes*, December 13, 1999, Department of Mathematics and Physics, The Royal Veterinary and Agricultural University, preliminary manuscript. Update January 2000: The idea presented here has turned out not to work. It produces samples from the wrong distribution. Please read Section 3.4 in the introductory part of the thesis to get an idea of what goes wrong. If you still want a copy, please contact me.

You can get a printed version of the thesis by contacting me.

Please, also have a look at my list of publications, where updated versions of the papers in the thesis will be available.