

~~Meddelelser v/  
Marc Andersen (MAN, Biometrics)  
Genmab A/S  
Toldbodgade 59B, 1253 København K~~

BREV  
Ukonvolueret



# MEDDELELSER

Dansk Selskab for Teoretisk Statistik

## Generalforsamling i DSTS

Tirsdag den 27. februar 2007, kl. 17.00  
Auditorium 18.01.11, Center for Sundhed og Samfund, KU\*

Dagsorden og beretning inde i bladet.

Efter generalforsamlingen kl. ca. 17.15 er der:

### Foredrag i selskabet

**Likelihood inference for fractional processes**  
Søren Johansen, University of Copenhagen

Efter foredraget vil der være middag på "en restaurant i nærheden". Tilmelding til kassereren ([richard@math.ku.dk](mailto:richard@math.ku.dk)), senest tirsdag den 21. februar 2007.

\*: Øster Farimagsgade 5, 1014 København K (det gamle Kommunehospital, se [http://www.pubhealth.ku.dk/ifsv/omos/oversigtskort\\_KH/?print=1](http://www.pubhealth.ku.dk/ifsv/omos/oversigtskort_KH/?print=1))

### Inde i bladet:

Omtale af seneste publikation af Anders Hald: A history of parametric statistical inference from Bernoulli to Fisher, 1713 - 1935, Springer Verlag, 2006

Forskerskole kurser

Seminarer

Stillingsopslag

Returneres ved varig adresseændring

Næste nummer af "MEDDELELSER" udkommer 5. marts 2007.  
Bidrag skal være redaktøren i hænde senest

**Den 23. februar kl. 12.00.**

Bidrag bedes sendt til:

Meddelelser, v/ Marc Andersen  
Genmab A/S  
Toldbodgade 59B  
1253 København K  
eller med e-mail til: [red@dsts.dk](mailto:red@dsts.dk)

Indmeldelse og adresseændring i DSTS gøres via <http://www.dsts.dk/da/index.html>

Bidrag i elektronisk form ønskes helst i et af nedenstående formater: Word, PDF, HTML eller ASCII.

Annoncering af stillinger er kr. 500 pr. side. Indstik, der ønskes sendt i konvolut sammen med Meddelelser, kr. 1500 pr. standard A4 side.

## Selskabets bestyrelse:

<b>Formand:</b> Per Bruun Brockhoff IMM, DTU Building 321, room 032 Richard Petersens Plads, 2800 Lyngby	Tlf: 4525 3365 Fax: 4588 2673 e-mail: <a href="mailto:pbb@imm.dtu.dk">pbb@imm.dtu.dk</a> <a href="mailto:find@dsts.dk">find@dsts.dk</a>
<b>Kasserer:</b> Niels Richard Hansen Afd. for Anvendt Matematik og Statistik Universitetsparken 5 2100 København Ø	Tlf: 3532 0783 Fax: 3532 0772 e-mail: <a href="mailto:richard@math.ku.dk">richard@math.ku.dk</a>
<b>Redaktør:</b> Marc Andersen Genmab A/S Toldbodgade 59B 1253 København K	Tlf: 3377 9615 Fax: 7020 2749 e-mail: <a href="mailto:red@dsts.dk">red@dsts.dk</a>
<b>Sekretær:</b> Erik Parner Institute of Public Health University of Aarhus Vennelyst Boulevard 6, 8000 Århus C	Tlf: 8942 6136 Fax: 8942 6140 e-mail: <a href="mailto:sekr@dsts.dk">sekr@dsts.dk</a>
<b>Næstformand:</b> Jørgen Holm Petersen Biostatistisk afd. Københavns Universitet Blegdamsvej 3 2200 København N	Tlf: 35 32 79 05 Fax: 35 32 79 07 e-mail: <a href="mailto:jhp@biostat.ku.dk">jhp@biostat.ku.dk</a>
<b>Webmaster:</b> Kim Emil Andersen Vestas Asia Pacific Alsvej 21 8900 Randers	Tlf: 4117 7869 Fax: 9730 5001 e-mail: <a href="mailto:web@dsts.dk">web@dsts.dk</a>

Selskabets www-adresse: <http://www.dsts.dk>

Generiske e-mail-adresser i selskabet:

**Formand:** find, formand, chair, chairman **Kasserer:** kass, kasserer, treas, treasurer

**Redaktør:** red, redaktør, edit, editor **Sekretær:** sekr, sekretaer, secr, secretary

**Webmaster:** web, webmaster, www

**Meddelelser:** medd, meddelelser, newsl, newsletter

**Bestyrelsen:** best, bestyr, bestyrelse, board

Medinfo er nedlagt!

<http://www.dsts.dk/da/> skal benyttes til indmeldelse og adresseændring i DSTS.

## Generalforsamling i DSTS

Tirsdag den 27. februar 2007, kl. 17.00

Auditorium 18.01.11, Kommunehospitalet, Øster Farimagsgade 5

### DAGSORDEN:

1. Valg af dirigent.
2. Bestyrelsens beretning for 2006 fremlægges til godkendelse.
3. Regnskabet for 2006 fremlægges til godkendelse.
4. Valg af medlemmer til bestyrelsen  
*På valg er: Erik Parner. Per Bruun Brockhoff, Kim Emil Andersen har siddet i to perioder og kan ikke genvælges. Bestyrelsen foreslår, at Erik Parner genvælges og at Charlotte Hindsberger og Malene Højbjerg nyvælges.*
5. Valg af revisor  
*Bestyrelsen foreslår, at Jens Lund genvælges.*
6. ISI Glossary of Statistical Terms.  
*Peter Linde giver en status.*
7. Behandling af fremsendte forslag.
8. Behandling af forslag om optagelse af Søren Johansen som æresmedlem.  
*Indstilling ved Niels Keiding.*
9. Fastsættelse af næste års kontingent.  
*Bestyrelsen foreslår at kontingentet fastholdes på 200 kr. (100 kr. for studerende og pensionister).*
10. Eventuelt

Forslag til punkterne 4, 5 og 7 fremsendes til formanden Per Bruun Brockhoff, Informatik og Matematisk Modellering, Richard Petersens Plads, DTU Bygn. 321, DK-2800 Kgs. Lyngby så han har dem i hænde senest den 13. februar 2007.

Bestyrelsens beretning findes på de følgende sider.

## Bestyrelsens beretning for 2006

Marc Andersen og Niels Richard Hansen blev valgt til bestyrelsen på den ordinære general-forsamling den 28. februar 2006. Jørgen Holm Petersen blev genvalgt. Helle Sørensen takkedes for sit arbejde som kasserer og Judith Jacobsen for sit arbejde som Redaktør. Jens Lund blev genvalgt som revisor. Bestyrelsen konstituerede sig siden hen med Per Bruun Brockhoff som formand, Jørgen Holm Petersen som næstformand, Niels Richard Hansen som kasserer, Marc Andersen som redaktør af Meddelelser, Erik Parner som sekretær og Kim Emil Andersen som web-ansvarlig. Peter Thejll og Torben Schmith, Danmarks Meteorologiske Institut, holdt ved general-forsamlingen foredraget: Økonometriske metoder anvendt på problemer indenfor geofysikken.

Der har været følgende aktiviteter i løbet af 2005:

1. Fire bestyrelsesmøder, tre i København, et i Rebild.
2. Meddelelser er udkommet med 9 numre.
3. Et aftensmøde.
4. Et todagesmøde.
5. Nordisk Møde i Statistik i Rebild 11.-15. juni.
6. Drøftelser med nordiske og baltiske kontakter vedr. fremtiden for Nordstatkonferencerne.

### Ad 3:

Gorm Gabrielsen: Varierende variationer (12/12).

### Ad 4:

Årets todagesmøde blev afholdt på **Københavns Universitet**, 3-4/5 2005 med følgende foredrag: (75 deltagere)

- **Yuri Goegebeur:** Goodness-of-fit testing and Pareto-tail estimation
- **Susanne Ditlevsen:** Stochastic differential equation models in physiology
- **Jeff Steif:** An overview of a part of Wendelin Werner's work
- **Anders Stockmarr:** Age-dependent windows for cohort culling BSE herds
- **Jakob G. Rasmussen:** Multivariate point processes observed at sparsely distributed times

- **Murat Kulahci:** Using Statistics in Quality Engineering Applications
- **Martin Jacobsen:** The time to ruin for processes with jumps: Exact results and numerical calculations
- **Vanessa Didelez:** Causal inference with Mendelian randomisation
- 

I forbindelse med mødet afholdt Forskerskolen i Biostatistik et formøde for Ph.d.studerende og kandidatstuderende.

### Ad 5:

Bestyrelsen har fungeret som arrangementskomite for den 21. Nordiske Konference i Matematisk Statistik 11.-15. juni 2006 i Rebild. Der var 125 deltagere og følgende specielt inviterede foredrag blev afholdt:

- **Terry Speed:** Statistical issues in determining cis-regulatory modules of transcription factors
- **Jesper Møller and Rasmus Waagepetersen:** Modern Statistics for Spatial Point Processes

Følgende inviterede foredrag blev afholdt:

- **David Spiegelhalter:** Monitoring performance in the UK health-care system: the role of statistical methods
- **Tobias Rydén:** Hidden Markov and state space models - from likelihood theory to computational statistics
- **Olle Häggström:** Problem solving is often a matter of cooking up an appropriate Markov chain
- **Fred Espen Benth:** Mathematical finance for energy markets: stochastic models and pricing of derivatives
- **Anders Skrondal:** Some recent developments in latent variable modelling
- **Rasmus Nielsen:** Statistical Inference in Population Genetics
- **Yudi Pawitan:** Multidimensional local false discovery rate

Følgende sessioner blev afholdt (chairman i parentes):

- Time Series Data in Finance and Economics (**Anders Rahbek**)
- Infectious Epidemiology (**Niels Keiding**)
- E-learning and Statistics (**Helle Rootzén, Bent Jørgensen**)
- Modelling using SDEs (**Henrik Madsen**)
- Graphical Models (**Svend Kreiner**)
- Statistics and Scientific responsibility (**Inge Henningsen**)
- Spatial and spatio-temporal modelling (**Eva B. Vedel Jensen**)
- Biostatistics (**Erik Parner**)
- Statistics in Information Engineering (**Jouko Lampinen**)
- Spatial and spatio-temporal modelling (**Rasmus Waagepetersen**)
- Time Series Data in Finance and Economics (**Anders Rahbek**)
- Chemometrics (**Rolf Sundberg**)
- Spatial and Spatio-temporal Modelling (**Henning Omre**)
- Simulation-based Inference and Computational Statistics (**Kim Emil Andersen**)
- Statistical Analysis of Complex Event History Data (**Odd O. Aalen, Ørnulf Borgan**)
- Bioinformatics and Statistical Genetics (**Mats Rudemo**)

Book of Abstracts kan stadig downloades via hjemmesiden  
[www.dsts.dk/nordstat2006](http://www.dsts.dk/nordstat2006).

Et pre-conference kursus om *Inference and Simulation for Spatial Point Processes* blev arrangeret og afholdt 10. juni på Ålborg Universitet med Rasmus Waagepetersen og Jesper Møller som undervisere.

#### Ad 6:

Drøftelser initieret efter Nordstat 2004 afsluttedes med et møde mellem repræsentanter for de fire nordiske statistiske foreninger i Rebild 12. juni 2006 og en fælles beslutning om at indlemme de baltiske lande i cyklussen for og samarbejdet omkring Nordstat konferencerne. Konkret vil Nordstat 2008 konferencen blive afholdt i Litauen, hvorefter forventningen er en fuld nordisk cyklus med de følgende fire konferencer.

Per Bruun Brockhoff, Jørgen Holm Petersen, Marc Andersen, Kim Emil Andersen, Niels Richard Hansen, Erik Parner.

### Indstilling af Søren Johansen til æresmedlemskab af Dansk Selskab for Teoretisk Statistik

Søren Johansen (f. 6/11 1939) blev cand.stat. 1964, modtog Københavns Universitets guldmedalje 1967, dr.phil. 1974. Ansat ved Københavns Universitets Institut for Matematisk Statistik fra 1964, professor fra 1989-2006. Under orlov ansat ved European University Institute, Department of Economics 1996-2001. Omfattende videnskabelig produktion i sandsynlighedsregning, konveksitetsteori, biostatistiske anvendelser af regressionsanalyse og økonometri.

Søren er både en af de mest fremragende danske matematiske statistikere og en hovedskikkelse i matematisk økonometri i de sidste 25 år, hvilket i sig selv kunne begrunde et forslag om at udnævne ham til æresmedlem. Selskabet har imidlertid derudover tre mere specifikke grunde til at ære Søren her ved hans afsked fra hans mangeårige virke ved Københavns Universitets Institut for Matematisk Statistik:

- Søren var selskabets anden formand, 1975-79
- Søren var i mange år dansk redaktør af Scandinavian Journal of Statistics og overtog hovedredaktionen fra 1986-90 efter den legendariske grundlæggende redaktør Bengt Rosén
- Måske allervigtigst: Sørens karismatiske undervisning i statistik fra han allerede som student begyndte at holde forelæsningerne i Matematik 5 forår 1964 og op gennem 1960'erne og 70'erne tiltrak en stor del af de fremragende studenter ved det københavnske institut til faget, som er en vigtig del af grundlaget for danske statistikeres stærke stilling, også internationalt.

Bestyrelsen anbefaler derfor generalforsamlingen i februar 2007 at udnævne Søren Johansen til æresmedlem.

Efter generalforsamlingen kl. ca. 17.15 er der:

Foredrag i selskabet

Tirsdag den 27. februar 2007, kl. 17.15

Auditorium 18.01.11, Kommunehospitalet, Øster Farimagsgade 5

Likelihood inference for fractional processes  
Søren Johansen, University of Copenhagen

Cointegration is often studied in the framework of the vector autoregressive model for nonstationary variables. The purpose of this investigation is to analyse a vector autoregressive model for fractional processes, which allows for linear combinations to be fractional of lower order. The model is given by the equations

$$\Delta^d X_t = \alpha \Delta^{d-b} L_b \beta' X_t + \sum_{i=1}^k \Phi_i \Delta^d L_b^i X_t + \varepsilon_t, \quad L_b = 1 - \Delta^b.$$

The lecture will discuss some joint work with Morten Nielsen (Cornell). In order to develop the necessary tools and learn about such processes we focus on the univariate model

$$\Delta^d X_t = \pi \Delta^d L_d X_t + \sum_{i=1}^k \phi_i \Delta^d L_d^i X_t + \varepsilon_t.$$

Likelihood base inference is based on Gaussian i.i.d. errors, but the asymptotic results are valid under i.i.d. errors with a suitable moment condition.

We show that the normalized likelihood and its derivatives converge in distribution as processes considered as function of the parameters. This is applied to discuss the existence, consistency and asymptotic distribution of the likelihood estimator, as well as the asymptotic distribution of the test that  $\pi = 0$ , the fractional unit root test.

## Links

Nedenstående links er aktive i den elektroniske udgave af meddelelser.

Send gerne yderligere links af interesser for DSTS medlemmer til [red@dsts.dk](mailto:red@dsts.dk)

Afdeling for Anvendt Matematik og Statistik, Københavns Universitet  
<http://www.math.ku.dk/ams>

Afdeling for Biostatistik, Institut for Folkesundhed, Aarhus Universitet  
<http://www.folkesundhed.au.dk/biostat/enhed/praesent>

Biostatistisk Afdeling, Københavns Universitet  
<http://pubhealth.ku.dk/bs>

BiRC - Bioinformatics Research Center  
<http://birc.au.dk>

Center for Statistik, Copenhagen Business School  
[http://www.cbs.dk/forskning/viden/fakulteter\\_instituttercentre/institutter/statistics](http://www.cbs.dk/forskning/viden/fakulteter_instituttercentre/institutter/statistics)

Dansk Selskab for Teoretisk Statistik  
<http://www.dst.dk>

Department of Statistics, Syddansk Universitet  
<http://www.stat.sdu.dk>

Forsknerskolen i Biostatistik  
<http://phdbiostat.dk/biostatistik>

Institut for Matematiske Fag, Aalborg Universitet  
<http://www.math.aau.dk>



KØBENHAVNS UNIVERSITET  
AFDELING FOR ANVENDT MATEMATIK OG STATISTIK

Sources and Studies  
in the History of Mathematics and  
Physical Sciences

ANDERS HALD

A HISTORY OF  
PARAMETRIC  
STATISTICAL  
INFERENCE FROM  
BERNOULLI TO  
FISHER, 1713–1935

Det er os en stor glæde at kunne henlede selskabets medlemmer på den seneste publikation af Anders Hald:

A history of parametric statistical inference from Bernoulli to Fisher, 1713 - 1935, Springer Verlag, 2006, se vedlagte kopi af for- og bagside.

På Afdeling for Anvendt Matematik og Statistiks vegne

Søren Johansen

## Second Baltic-Nordic Conference on Survey Sampling

2–7 June 2007, Kuusamo, Finland

### CALL FOR PAPERS

This is a history of parametric statistical inference, written by one of the most important historians of statistics of the 20th century, Anders Hald. This book can be viewed as a follow-up to his two most recent books, although this current text is much more streamlined and contains new analysis of many ideas and developments. And unlike his other books, which were encyclopedic by nature, this book can be used for a course on the topic, the only prerequisites being a basic course in probability and statistics.

The book is divided into five main sections:

- Binomial statistical inference;
- Statistical inference by inverse probability;
- The central limit theorem and linear minimum variance estimation by Laplace and Gauss;
- Error theory, skew distributions, correlation, sampling distributions;
- The Fisherian Revolution, 1912–1935.

Throughout each of the chapters, the author provides lively biographical sketches of many of the main characters, including Laplace, Gauss, Edgeworth, Fisher, and Karl Pearson. He also examines the roles played by DeMoivre, James Bernoulli, and Lagrange, and he provides an accessible exposition of the work of R.A. Fisher. This book will be of interest to statisticians, mathematicians, undergraduate and graduate students, and historians of science.

ISBN 0-387-46408-5



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springer.com

This international conference will be held in an exotic area in east-north Finland, Kuusamo, close to the Russian border. The programme will cover survey sampling in a wide sense.

Keynote speakers include **Harvey Goldstein** (UK), **Jean-Claude Deville** (France) and **Carl-Erik Särndal** (Canada/Sweden).

**Participants are encouraged to submit contributed papers or posters.** If you wish to present a paper or poster, please submit a one-page abstract by e-mail to [banocoss-info@helsinki.fi](mailto:banocoss-info@helsinki.fi) before 16 April, 2007.

Topics of contributed papers or posters include:

- Business survey methodology
- Calibration techniques
- Combining data from surveys and registers
- Design and analysis of complex surveys
- Design and estimation strategies using auxiliary data
- Edit and imputation techniques
- Estimation for domains and small areas
- Estimation in the presence of nonresponse
- Internet and web surveys
- Longitudinal and panel surveys
- Measurement errors in surveys
- Methods for international comparison
- Multilevel and hierarchical modelling
- Non-parametric methods in survey analysis
- Questionnaire development and testing
- Sample surveys in special fields
- Software for survey sampling and analysis
- Statistical disclosure control
- Survey data mining
- Variance estimation
- Weighting strategies

Announcement of paper acceptance will be given by 30 April 2007. The conference language is English. An option to submit conference papers to Special Issue of Statistics in Transition Journal will be available.

#### Additional information

**Short Course:** A two-day course on **multilevel modelling in social, behavioral and economic research** will be given by Prof. Harvey Goldstein on 31 May – 1 June, 2007 at the University of Helsinki (the Kumpula Campus).

**Organizers:** University of Helsinki, Baltic-Nordic Network in Survey Sampling, Statistics Finland, the Finnish Statistical Society

**Sponsors:** Baltic-Nordic Network in Survey Sampling, University of Helsinki, Statistics Finland, The Academy of Finland, International Association of Survey Statisticians (IASS)

**More information:**  
<http://www.mathstat.helsinki.fi/msm/banocoss/>

**Contact:** [banocoss-info@helsinki.fi](mailto:banocoss-info@helsinki.fi)

**Group sequential and adaptive designs for clinical trials.**  
**Course No.: 2007-Nyhed-3**

**Purpose and contents:** It has become standard practice to incorporate formal data monitoring procedures into the design and conduct of long-term clinical trials – especially so with the increasing use of Data Monitoring Committees (e.g. FDA Guidances E6, E9). A unified formulation allows easy implementation with many types of design and a great variety of endpoints. We will survey the main ideas of group sequential procedures. The course will cover: one-sided, two-sided and equivalence designs; normal, binary, survival, regression, and longitudinal endpoints; estimation; error spending, nuisance parameters, stochastic curtailment. More recently, methods have been proposed whereby the design of a trial can be modified in mid-course without affecting the Type I error. This may be in response to external factors, or it could be a reaction to unblinded data observed in the study itself. Such modifications may include increasing the sample size to increase the statistical power, changing the study population, modifying the treatment, changing the goal from superiority to non-inferiority or vice versa, or reducing the number of treatment arms. Some methods require these “adaptations” to be rigid, with rules pre-specified in the protocol; others may be flexible, permitting unplanned changes at unplanned interim analyses. We will describe these procedures in detail and discuss the benefits and drawbacks of using the adaptive approach. Throughout, statistical software (EaSt) will be used for illustrative examples.

**Participants:** Ph.D.-students and other interested scientists. Max. 40 participants.

**Form:** 2 full days of lectures.

**Language:** English

**Course material:** Group Sequential Methods with Applications to Clinical Trials, by C. Jennison and B.W. Turnbull. Chapman & Hall.

**ECTS-points:** 2.

**Course director:** Professor Niels Keiding.

**Teachers:** Chris Jennison (University of Bath, UK), Bruce Turnbull (Cornell University, USA)

**Time:** 7-8 May 2007 from 9-17.

**Place:** Kommunehospitalet.

**Total Course Fee:** DKK 1,900 of which the operating costs amount to DKK 300.

**Course secretary:** Susanne Kragsskov Laupstad, Department of Biostatistics, University of Copenhagen. Tel. 35 32 79 01.

**Registration:** Before 1 April 2007. No admission after deadline. Admission for PhD students will be allocated on a first-come, first-served basis. Applications from external participants will be considered after the closing date. The application must be sent to: PhD Administration, Blegdamsvej 3B, DK-2200 Copenhagen N.

**Biostatistics**

**Analysis of Multivariate Categorical Data**  
**Course no.: 2007-3-2**

**Aim and Content:** The course will introduce loglinear and graphical models for multidimensional contingency tables, analysis of repeated nominal and ordinal data and analysis by loglinear models with unobservable latent variables.

**Participants:** PhD students and researchers within medicine, public health, epidemiology, sociology and psychology. A basic knowledge in statistics in general and logistic regression and stratified Mantel-Haenszel methods for analysis of odd-ratios is required. It will be an advantage if participants have some experience with gamma coefficients for ordinal data. If necessary, this will be introduced at the beginning of the course.

**Form:** The course is a mixture of lectures, discussions and computer labs. We will use two different programs during the exercises. DIGRAM for analysis by high-dimensional graphical loglinear models and LEM for analysis by loglinear models with latent classes. Both programs can be downloaded from the homepage of the course. Transfer of data from standard programs like SPSS and SAS will be illustrated.

**Language:** Danish or English.

**ECTS-credits:** 5

**Course director:** Associate professor Svend Kreiner; Tel: (+45) 3532 7597,  
E-mail: [S.Kreiner@biostat.ku.dk](mailto:S.Kreiner@biostat.ku.dk),

**Teachers:** Associate professor Svend Kreiner plus external teachers.

**Time:** 16, 23 February, 2, 9, 16 March 2007 from 9-16

**Place:** Kommunehospitalet, Østre Farimagsgade 5, 1014 Copenhagen C.

**Total course fee:** DKK 4,300 of which the operating costs amount to DKK 700.

**Course secretary:** Susanne Kragsskov Laupstad, Department of Biostatistics, University of Copenhagen. Tel: (+45) 3532 7901, E-mail: [S.Kragsskov@biostat.ku.dk](mailto:S.Kragsskov@biostat.ku.dk)

**Registration:** Before 15 January 2007. No admission after deadline. Admission for PhD students will be allocated on a first-come, first-served basis. Applications from external participants will be considered after the closing date. The application must be sent to: PhD Administration, Blegdamsvej 3B, DK-2200 Copenhagen N.



## Biostatistics

### Statistical Analysis of Survival Data for Biostatistical/Statistical PhD students Course no.: 2007-3-9

**Aim and content:** The course will describe classical methods for survival data. The first 3 days will give an introduction to central concepts like censoring, truncation, competing risks and multistate models, the Kaplan-Meier estimator, the log-rank test, stratified analysis, Poisson regression, and parametric models. The last 3 days will focus on regression models for survival data, including Cox's regression model and alternative models like the additive intensity model. Goodness-of-fit for these models will be discussed. Finally we will describe regression methods for multivariate survival data. The course consists of lectures and computer sessions (using R) illustrating how the various models can be applied with focus on the practical implementation and interpretation of the methods. The course will be passed via satisfactorily responding to a take-home exam.

**Participants:** Biostatistical or statistical PhD students. Max. 20 participants.

**Form:** 2 blocks of 3 full days.

**Language:** English.

**ECTS-credits:** 9

**Course director:** Assistant professor Thomas Scheike; Tel: (+45) 3532 7928,  
E-mail: [T.Scheike@biostat.ku.dk](mailto:T.Scheike@biostat.ku.dk)

**Teachers:** Thomas Scheike and Torben Martinussen, KVL.

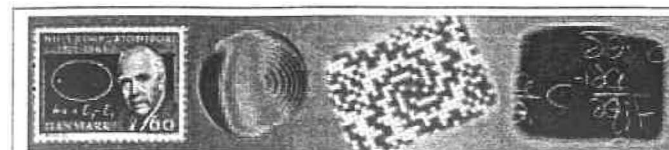
**Date:** 17-19 September and 8-10 October 2007

**Place:** CSS, "Kommunehospitalet", Øster Farimagsgade 5, 1014 Copenhagen K.

**Total course fee:** DKK 4,900 of which the operating costs amount to DKK 820.

**Course secretary:** Susanne Kragsskov, Department of Biostatistics, University of Copenhagen.  
Tel. (+45) 3532 7901, E-mail: [S.Kragsskov@biostat.ku.dk](mailto:S.Kragsskov@biostat.ku.dk)

**Registration:** Before 1 August 2007. No admission after deadline. Admission for PhD students will be allocated on a first-come, first-served basis. Applications from external participants will be considered after the closing date. The application must be sent to: PhD Administration, Blegdamsvej 3B, DK-2200 Copenhagen N.



## Workshop on Association Mapping and Linkage Analysis

**When:** Thursday March 22, 2007 – 11:00 – 17:00

**Where:** Department of Mathematical Sciences - Auditorium G1

**Hosts:** Bioinformatics Research Center (BiRC) and Centre for Theory in Natural Science (CTN)

Registration is free, but required for planning purposes: [enette@birc.au.dk](mailto:enette@birc.au.dk)

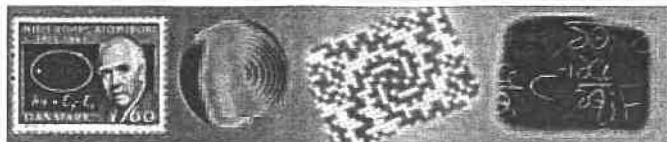
Today many large-scale studies focus on searching for genetic/molecular markers associated with diseases and traits. Traditionally, methods for detecting association have been very simplistic, essentially testing only one or a few markers at a time. The underlying idea is that for most diseases/traits one gene or maybe a few genes are the main determinants of disease/trait status. This approach is naive and imposes severe constraints on how we conceive the phenotype and how the phenotype is related to the genotype.

**The workshop aims at discussing:**

- Recent methodological advances in correlating disease/trait status with genetic information
- Modelling of complex phenotypes and genetic interactions
- The relationship between phenotypes and genotypes
- Molecular phenotypes *vs.* morphological, pathological and behavioural phenotypes

### Schedule

- 11:00-11:10 *Welcome and Introduction*  
Carsten Wiuf, BiRC, University of Aarhus
- 11:10-11:50 *Genetic heterogeneity - the curse of linkage and association analyses*  
Claus Ekstrøm, Department of Natural Sciences, University of Copenhagen
- 11:50-12:30 *Association Method: Allowing for Higher-order Interactions*  
Anders Albrechtsen, Department of Biostatistics, University of Copenhagen
- 12:30-13:20 LUNCH
- 13:20-14:00 *Title to be announced*  
Aksel Bertelsen, Centre for Basic Psychiatric Research, Aarhus University Hospital
- 14:00-14:40 *Title and speaker to be announced*  
Speaker from Institute of Human Genetics, University of Aarhus
- 14:40-14:55 SHORT COFFEE BREAK
- 14:55-15:35 *Genetic architecture of obesity in mice*  
Peter Sørensen, Research Centre Foulum, University of Aarhus *Bayesian Multi-loci*
- 15:35-16:15 *Genetic influence and extensive phenotypes*  
Jacob Hjelmborg, Institute of Public Health, University of Southern Denmark
- 16:15-16:55 *Mapping by Local Genealogies*  
Thomas Mailund, BiRC, University of Aarhus
- 16:55-17:00 *Closing Remarks*  
Carsten Wiuf



## Mathematical and Computational Approaches to Study the Evolution and Epidemiology of Viruses

When: Tuesday, 20 February 14:00 – 16:00  
Where: Department of Mathematical Sciences - Auditorium D4

Hosts: Bioinformatics Research Center (BiRC) and  
The Centre for Theory in Natural Science (CTN)

### Lecturers:

Professor Allen Rodrigo, University of Auckland, NZ

### *Stepping Stones to Reality: Computational and Mathematical Challenges to the Evolutionary Analysis of Rapidly Evolving Pathogens, and some Recent Solutions*

**Abstract** -- Rapidly evolving pathogens challenge standard methods of analysis, because the assumptions of stationary evolutionary processes that we typically employ do not hold. Fortunately, with rapidly evolving pathogens, the ability to detect changes in population dynamics and evolutionary processes over time is facilitated by the ability to sample sequences longitudinally, but now the challenge shifts to the development of new methods that can correctly account for such sampling strategies. Over the last few years, our research has focused on the development of methods to analyse serial sequence samples, and to make inferences about evolutionary changes over time. In this talk, I will discuss how such analyses may be applied in studies of viral responses to drug therapy, to immune-mediated selection, and to the compartmentalisation of virus populations within a host. I will also discuss where our research is heading

Associate Professor Viggo Andreasen, University of Roskilde

### *Mathematical Models of the Epidemiology and Evolution of Drifting Influenza A*

**Abstract** -- While most viral pathogens depend on host demographic turn-over to produce new susceptible hosts, influenza A virus utilize genetic changes in the virus to circumvent immune protection of its human host thereby allowing the virus to recolonize the same hosts every few years. In this process known as virus drift, high point-mutation rates especially in the gene coding for the hemagglutinin surface protein, cause significant changes in the antigenically active parts of the influenza A surface. Molecular studies show that mutations accumulate at a constant rate and that influenza is reintroduced to populations in the temperate zones in each flu-season.

The antigenic variation confers selective advantage to new viral strains allowing them to partially escape host immunity acquired from previous infections. Thus the dynamics of influenza A include two distinct phenomena: Co-circulation of cross-immunizing strains and mutation driven drift.

Since strain-interactions are determined by host immune surveillance at the population level, the system is naturally described by extensions of SIR-type epidemic models that account for the immune structure of the entire host population. I will discuss recent approaches to the modelling of virus drift and in particular models based on annual epidemics utilizing that annual reintroduction of the virus.



Mathematical Genetics of  
Selection & Adaptation  
University of Aarhus  
April 16<sup>th</sup>-17<sup>th</sup> 2007



## PROGRAMME

### Monday, April 16

#### Session 1 - Genetics of Adaptation: Models and Empirical Tests of the Theory

- 14:00 – 14:15 Introduction  
Thomas Bataillon (BiRC) • Carsten Wiuf (BiRC)
- 14:15 – 15:00 Fitness Landscape and the Genetic Basis of Adaptation  
Thomas Lenormand • CNRS • Montpellier
- 15:00 – 15:45 The Role of the Generalized Pareto Distribution in Testing the  
Mutational Landscape Model for Experimental Evolution  
Paul Joyce • Department of Mathematics & Department of Statistics •  
University of Idaho
- 15:45 – 16:30 The Ecological Genetics of New Mutations  
Rees Kassen • Department of Biology • University of Ottawa

### Tuesday, April 17

#### Session 1 - Genetics of Adaptation: Models and Empirical Tests of the Theory

- 09:00 – 09:45 Spatial Structure and Adaptation  
Steve Krone • Department of Mathematics • University of Idaho
- 09:45 – 10:30 Environmental Stress and Adaptation using *Drosophila* as a Model  
Volker Loeschcke • Institute of Biology • University of Aarhus
- 10:30 – 11:00 COFFEE BREAK

#### Session 2 - Applications of the Coalescent: Searching for Footprints of Selection in Genomic Data

- 11:00 – 11:45 Population Genetics of Adaptation  
Wolfgang Stephan • Department of Biology • University of Munich
- 11:45 – 12:30 Modelling Selective Sweeps  
Graham Coop • Department of Human Genetics • University of Chicago
- 12:30 – 13:30 LUNCH BREAK
- 13:30 – 14:15 The Structure of Linkage Disequilibrium around a Selective Sweep  
Gil McVean • Department of Statistics • University of Oxford
- 14:15 – 15:00 Detecting Selection in the Human Genome using SNPs and DNA  
Sequence Data  
Rasmus Nielsen • Bioinformatics Center • University of Copenhagen

## SEMINAR I ANVENDT STATISTIK

Seminaret afholdes kl. 15.15 på det gamle Kommunehospital, Øster Farimagsgade 5, opgang B. Der serveres te i Biostatistisk Afdelings bibliotek (opgang B, 2. sal) en halv time før.

**Mandag d. 26. februar 2007. lokale 5.0.22.**

### Structural equation models for multivariate longitudinal data

Esben Budtz-Jørgensen  
Biostatistisk Afdeling  
Københavns Universitet

Abstraktet foreligger endnu ikke, men vil blive lagt på Biostatistisk Afdelings hjemmeside snarest muligt. Adressen er: <http://pubhealth.ku.dk/bs/seminarer/>

Per Kragh Andersen



### // Cyncron søger Bio-statistikere

Cyncron Biometrics A/S søger en Bio-statistiker og en Leder af statistik-afdelingen til vores kontor i Birkerød.

Er du indstillet på et engageret, serviceminded arbejde i et firma, hvor team, selvstændighed og indflydelse på jobbet er kendetegnende? Har du erfaring som Bio-statistiker indenfor kliniske afprøvninger?

I så fald kan vi tilbyde dig et spændende job i en ambitiøs konsulent-virksomhed fokuseret på kliniske afprøvninger af lægemidler.

Cyncron Biometrics arbejder indenfor Data Management og Statistik. Vi har erfarne folk indenfor begge områder. Cyncron Biometrics er en del af Cyncron koncernen, som i alt tæller ca. 70 ansatte og dækker hele spektret fra den kliniske fase I til fase IV og til safety surveillance. Cyncron Biometrics består af 17 medarbejdere, heraf 5 statistikere og 4 programmører i statistik-afdelingen.

Cyncron Biometrics tilbyder højt kvalificeret og effektiv assistance til medicinalvirksomheder og bioteknologiske virksomheder. Nogle gange skal det derfor gå særlig stærkt, og alligevel skal kvaliteten stadig være i top. Det skal du, som del af et team på tværs af faggrænser, være indstillet på. Vi kan til gengæld tilbyde et afvekslende job, hvor du får set mange forskellige typer opgaver fra forskellige firmaer.

Som person skal du være seriøs, men med god humoristisk sans. Dagligdagens omgangstone er uhøjtidelig, og der skal være plads til en joke! Du vil komme i kontakt med mange forskellige slags kunder, som vi forventer du servicerer på bedste vis. En god biostatistiker er i vores øjne en faglig velfunderet biostatistiker, der også formår at "tale statistik" med ikke-statistik kyndige.

Hvis ovennævnte har vakt din interesse, kan du kontakte VP Biometrics Bjarne Nielsen på telefon 45672279, eller e-mail to [BN@cyncron.com](mailto:BN@cyncron.com). Ansøgning mærket Bio-statistiker stiles til: Bjarne Nielsen, Cyncron Biometrics A/S, Datavej 24, 3460 Birkerød.

*Cyncron (tidligere Medicon) har siden 1985 samarbejdet med lægemiddelfirmaer om udvikling af nye lægemidler, og tilbyder i dag alle elementer i afviklingen af en klinisk afprøvning i fase 1-4. Cyncron har oprettet en forskningsklinik med 60 senge sengepladser på Østerbro i København. Cyncron Biometrics tilbyder højt kvalificeret Data Management og Statistik. Læs evt. mere på vor hjemmeside [www.cyncron.com](http://www.cyncron.com). Tlf. 70202058.*

## ALK-Abelló søger Senior Statistiker

## Stillingsområde

ALK-Abelló A/S er verdensførende indenfor allergivaccination. Vi gennemfører internationale kliniske aktiviteter for at udvikle nye lægemidler. Således vil mange flere personer med allergi i fremtiden kunne opnå en bedre livskvalitet.

Statistik et vigtigt led i lægemiddeludviklingen. Statistik hører i ALK-Abelló organisatorisk sammen med Data Management og Medical Writing i afdelingen Biometrics Medical Writing (BMW), der er en del af Group Clinical Development. Afdelingen tæller lige nu 3 statistikere og med denne stilling vil der være om en udvidelse til i alt 4 statistikere. Vores Data Managere, 4 i alt, arbejder både som almindelige Data Managere, men også som SAS programmører.

## Arbejdsgaver

- ansvarlig for at analysere data fra vores nye, kliniske afprøvninger indenfor allergi
- sætte standard for statistiske analyser indenfor området
- udarbejde statistiske analyseplaner og dele til den integrerede kliniske studierapport
- præsentere resultater og de statistiske metoder til interne og eksterne samarbejdspartnere
- input til abstracts og publikationer til konferencer og tidsskrifter
- samarbejde med Data Managers og validering af deres arbejde (SAS programmer)
- statistisk input til kliniske udviklingsplaner, protokoller, CRF'er/diaries og valideringstjek
- deltage i multidisciplinære studieteam og projektteam

## Vi forestiller os, at du

- har en universitetsgrad med speciale i statistik (MSc, PhD)
- er dygtig til at programmere i SAS
- gerne har erfaring fra den farmaceutiske industri og kendskab til ICH-GCP
- er velformuleret i engelsk og dansk og god til at formidle statistik til ikke-statistikere
- kan arbejde selvstændigt, men også indgå som teamspiller og bidrage til et dynamisk samarbejde med kolleger fra mange forskellige funktionsområder
- er omhyggelig, god til at planlægge dit arbejde og er resultatorienteret
- er positiv og god til at finde løsninger.

## Vi tilbyder

- et spændende job i en dynamisk, international virksomhed i rivende udvikling
- høj grad af indflydelse på dit eget arbejde og initiativer bliver hilst velkommen
- at du indgår i en nøgleposition, hvor dit bidrag gør en forskel for virksomhedens fremdrift
- mulighed for personlig og faglig udvikling
- et ungt team, hvor alle bidrager til at nå fælles mål
- en uformel og konstruktiv samarbejdsform kombineret med en god portion humor
- en afdeling med gode og dygtige kolleger.

## Kontakt

Ønsker du yderligere oplysninger om stillingen, er du velkommen til at kontakte Director for Biometrics Medical Writing Lisbet Groes, 4574 7996 eller Senior Statistiker Christian Ljørring, 4574 8102.

Send ansøgning via [www.alk-abello.com](http://www.alk-abello.com), jobs

## Kalender 2007

(arrangementer annonceret i MEDDELELSER)

Dato	No.	Aktivitet
27/2 2007	9/06	Generalforsamling, DSTS, København
27/2 2007	9/06	Foredrag DSTS, København Søren Johansen: <i>Likelihood inference for fractional processes</i>
16.23/02 2.9.16/03 2007	1/07	Forskerskolen i Biostatistik, København: <i>Analysis of Multivariate Categorical Data</i>
20/2-2007	1/07	Bioinformatics Research Center (BiRC) and The Centre for Theory in Natural Science (CTN), Århus Allen Rodrigo, University of Auckland, NZ: <i>Stepping Stones to Reality: Computational and Mathematical Challenges to the Evolutionary Analysis of Rapidly Evolving Pathogens, and some Recent Solutions</i> Viggo Andreassen, University of Roskilde: <i>Mathematical Models of the Epidemiology and Evolution of Drifting Influenza A</i>
26/2-2007	1/07	Biostatistisk Afdeling, København Esben Budtz-Jørgensen, Københavns Universitet: <i>Structural equation models for multivariate longitudinal data</i>
22/3 2007	1/07	Bioinformatics Research Center (BiRC) and Centre for Theory in Natural Science (CTN), Århus <i>Workshop on Association Mapping and Linkage Analysis</i>
16-17/4 2007	1/07	Bioinformatics Research Center (BiRC), Århus <i>Mathematical Genetics of Selection &amp; Adaptation</i>
7-8/5 2007	1/07	Forskerskolen i Biostatistik, København <i>Group sequential and adaptive designs for clinical trials</i>
2-7/6 2007	1/07	Kuusamo, Finland <i>Second Baltic-Nordic Conference on Survey Sampling</i>
17-19/9, 8-10/10, 2007	1/07	Forskerskolen i Biostatistik, København <i>Statistical Analysis of Survival Data for Biostatistical/Statistical PhD students</i>

## NYT om Navne

Henrik Loft, Lundbeck er per 01dec2006 udnævnt til Senior Specialist i Biostatistics Department.

## Deadlines i år 2007

MEDDELELSER udkommer	Frist for indlevering af bidrag:
2: 5. marts	23. februar
3: 2. april	23. marts
4: 1. maj	20. april
5: 4. juni	25. maj
6: 3. september	24. august
7: 1. oktober	21. september
8: 5. november	26. oktober
9: 3. december	23. november