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### Returneres ved varig adresseændring

Næste nummer af "MEDDELELSER" udkommer 1. december 2009. Bidrag skal være redaktøren i hænde senest den 20. november, 12.00.

# **MEDDELELSER**

Dansk Selskab for Teoretisk Statistik

### Julemøde i DSTS

Klimaændringer: Kan de overhovedet forudsiges, side 3

#### Seminarer

Seminar in applied mathematics and statistics, H.C. Ørsted institute, KU side 4 Seminar i anvendt statistik, Biostatistisk afdeling, KU side 5

Wiley discount to all DSTS members, side 6

### Dansk Selskab for Teoretisk Stafistik Bestyrelse 2008

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Charlotte Hindsberger Novo Nordisk Tlf: 30 79 65 92 Meddelelser er medlemsblad for Dansk Selskab for Teoretisk Statistik (DSTS), se http://www.dsts.dk.

Selskabets formål er at fremme den statistiske videnskab og dens anvendelser.

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

Selskabet har en elektronisk nyhedsliste E-Meddelelser, se http://www.dsts.dk/du/index.htm.

Bidrag og stillingsopslag til Meddelelser sendes til redaktøren - redia dats dk. Bidrag i elektronisk form modtages i PDF format med indlejrede fonte i sidestørrelse A4, egnet til sort/hvid tryk i A5 format. Alternativt modtages Word.

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Meddelelser-udkommer 9 gange om året, den første mandag eller tirsdag i måneden undtagen januar, juli og august måned.

Udgivelsesplan for Meddelelser 2009

Nr.	Hidrag senest	Udkommer
+	23. januar kl. 12	2. februar
2	20. februar kl. 12	2. morts
ě	27 marts kl. 12	6-april
4	24. opril kl. 12	4 maj
5	22. maj kl. 12	4. juni
6	21. august kl. 12	1-september
7	25 september ki. 12	5:-oktober
-8	23. oktober kl. 12	2. november
9	20. november kl. 12	1. december

### Julemøde i DSTS Tirsdag den 8/12 2009 klokken 17.15 med foredraget:

### Klimaændringer: Kan de overhovedet forudsiges?

ved Lektor Peter Ditlevsen\*

Forestillingen om menneskeskabte klimaændringer har eksisteret i mere end et århundrede, eller stort set ligeså længe som der findes optegnelser over direkte målinger af temperaturen (den instrumentelle optegnelse). De temperaturændringer, som rapporteres af det internationale klimapanel IPCC over de næste 50 år, er af samme størrelsesforhold som ændringerne fra den sidste istid til nu, altså langt større end de ændringer vi har set igennem de sidste 100 år, dette bygger altså alene på klimateori og modeller.

For at detektere en signifikant stigning i temperaturen som følge af den øgede antropogene drivhuseffekt må den naturlige baggrundsvariation kendes. Her er den instrumentelle optegnelse alt for begrænset, og vi afhænger af indirekte proxy-målinger for tidligere tiders klimavariation. De største af disse variationer er netop istidsvariationer, som vi endnu ikke har nogen fuldstændig forståelse af og teori for. Vi står altså i den paradoksale situation at vi forudsiger variationer af samme størrelsesorden som de største naturlige udsving, som vi ikke har nogen fuldstændig teori om og ikke kan reproducere i vores modeller.

Ud fra statistiske analyser af de observerede variationer, kan vi uddrage informationer om den bagvedliggende klimadynamik, og komme med (forsigtige) udsagn om forudsigeligheden af voldsomme klimaforandringer.

\*Peter Ditlevsen er lektor ved Niels Bohr Institutet, Is og Klima-gruppen.

Sted: HCØ, Københavns Universitet. Auditorium 8.

Tilmelding til den efterfølgende middag på en restaurant i nærheden: Niels.R.Hansen@math.ku.dk, senest den 4/12.

## DEPARTMENT OF MATHEMATICAL SCIENCES UNIVERSITY OF COPENHAGEN



#### SEMINAR IN APPLIED MATHEMATICS AND STATISTICS

Wednesday, November 11, 2009, 15:15, aud. 10, H.C. Ørsted Institute Speaker: Patricia Reynaud-Bouret, Nice Sophia-Antipolis University Title: Adaptive estimation for Hawkes processes; application to genome analysis

Thursday, November 12, 2009, 14:15, aud. 10, H.C. Ørsted Institute Speaker: Vincent Rivoirard, Université Paris Sud - Orsay Title: Lasso-type estimators for density estimation

Friday, November 20, 2009, 14:15, aud. 10, H.C. Ørsted Institute Speaker: Boualem Djehiche, KTH - Royal Institute of Technology Title: An optimal stopping problem related to cash-flows of investments

Tuesday, November 24, 2009, 16:15, aud. 10, H.C. Ørsted Institute Speaker: Vladimir Vinogradov, Ohio University Title: On canonical generalized linear models generated by members of the extended family of zero-modified geometric distributions - a case study

Friday, November 27, 2009, 14:15, aud. 10, H.C. Ørsted Institute Speaker: Anand Vidyashankar, Cornell University Title: TBA OCTOBER 23, 2009

UNIVERSITETSPARKEN 5 DK-2100 COPENHAGEN DENMARK

http://www.math.ku.dk/

Biostatistisk Afdeling Københavns Universitet

23. oktober 2009 J.nr. 241-0002/07

#### Seminar i anvendt statistik

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

Mandag d. 2, november 2009, kl. 15.15, lokale 7.0 01.

#### Bendix Carstensen

## Steno Diabetes Center, Gentofte & Department of Biostatistics, University of Copenhagen

#### Practical aspects of multistate modelling: Representation, timescales and prediction

A multistate model describes transitions between a finite number of states; for example different stages of disease progression. Transitions are described by rates (intensities), but normally these are not the only quantities of interest.

Working with multistate models in practise requires a representation of the data that allows representation of any kind of model as well as any kind of timescales for the description of rates.

In practise it means that for all persons the time spent in a state must be described by time of entry and exit as well the state in which the time is spent and the state to which the transition occurs. The time of entry and exit must be represented on all of the timescales of interest. With such a representation it is possible to model transition rates between states either separately or jointly if some parameters are assumed common for different transitions.

The representation of such data is unified in the Lexis objects in the Epi package for R. This machinery will be introduced, and the use of it for analysis shown.

Probabilities of state occupancy will be of interest; but these are frequently complicated functions of the intensities. It is therefore easier to estimate such probabilities by simulating a large number of individuals' transitions through the model and deriving the probabilities by simple counting. Tools for simulation of multistate models and summarizing these in the Epi package will also be described.

Prediction of diabetes occurrence in Denmark is done based on estimated transition rates between states "Well", "Diabetes", "Dead, no diabetes" and "Dead with diabetes". This requires that the population for which the prediction is made is specified (a hypothetical cohort or the current Danish population). Since mortality of diabetes patients depend both on current age and duration of diabetes we also need methods that take multiple timescales into account. Data from the Danish National Diabetes Register will be used for illustration of predictions both using explicit calculations and a simulation approach.

#### Torsdag d. 19. november 2009, kl. 15.15, lokale 1.1.12. BEMÆRK ugedag!

#### Bianca De Stavola

#### London School of Hygiene and Tropical Medicine

#### Familial and socio-economic influences on foetal growth across three generations: The Uppsala Birth Cohort Multigenerational study, Sweden, 1915-2002

Size at birth is a key indicator of the health of the newborn and a predictor of subsequent morbidity and mortality over the life course. Foetal growth is known to be influenced by familial factors, with twin and family studies having attributed 30-40% of the variance in birthweight to genes (maternal and foetal). However parental size partly reflects social disadvantage from earlier generations. We will analyse unique data across three generations from the Uppsala Birth Cohort Multigenerational (UBCoS Multigen) Study to quantify the continuities in biological disadvantage that can be attributed to earlier social disadvantage. UBCoS Multigen includes social and demographic variables on males and females born in Uppsala during 1915-1929, and on their children and grandchildren, if born before 2003. Path analysis will be employed to partition the size at birth associations between grandparents and their grandchildren into genetic, generation-specific and intergenerational environment contributions. The role of missing data and the inclusion of the missing data mechanism in the model will be discussed. Comparisons with the results obtained from standard linear regression modelling will be drawn and some general conclusions suggested.

This is work in collaboration with Ilona Koupil (Karolinska Institute and Stockholm University) and David Leon (LSHTM).

Esben Budtz-Jørgensen

## Wiley discount to all DSTS members

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## Kalender 2009 - 2010

Dato	No.	Aktivitet
2. Nov. 09	.8	Seminar, Biostatistisk Afdeling, KU.  Practical aspects of multistate modelling: Representation, time- scales and prediction
3. Nov. 09	7	Punktproces formiddagsmøde, Formøde til todagesmødet
3-4. Nov. 09	6	Todagesmøde i DSTS, Syddansk Universitet
11. Nov. 09	8	Seminar, H.C. Ørsted Institute, KU.  Adaptive estimation for Hawkes processes; application to genome analysis
12. Nov. 09	8	Seminar, H.C. Ørsted Institute, KU.  Lasso-type estimators for density estimation
19. Nov. 09	8	Seminar, Biostatistisk Afdeling, KU. Familial and socio-economic influences on foetal growth across three generations: The Uppsala Birth Cohort Multigenerational study, Sweden, 1915-2002
20. Nov. 09	8	Seminar, H.C. Ørsted Institute, KU.  An optimal stopping problem related to cash-flows of investments
24. Nov. 09	8	Seminar, H.C. Ørsted Institute, KU. On canonical generalized linear models generated by members of the extended family of zero-modified geometric distributions - a case study
27. Nov. 09	8	Seminar, H.C. Ørsted Institute, KU. TBA
24-28 Jan. 10	6	Workshop, Thiele Centre, University of Aarhus. Workshop on Ambit Processes, Non-Semimartingales and Appli- cations