Meddelelser v/Morten Frydenberg
Institut for Biostatistik
Aarhus Universitet

BREV
Ukonvoluteret

PP
Danmark

Returneres ved varig adresseændring

Næste nummer af "MEDDELELSER" udkommer 1. oktober 1999.

Bidrag til dette nummer skal være redaktøren i hænde senest

fredag den 24. september 1999.

Bidrag bedes sendt til:

Meddelelser, v/Morten Frydenberg
Institut for Biostatistik
Vennelyst Boulevard 6
8000 Århus C.
eller med e-mail til: morten@biostat.au.dk

medlinfo@dsts.dk **skal** benyttes ved **indmeldelse** og **adresseændring** i DSTS .

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

Annoncering af stillinger er kr. 500 pr. side

MEDDELELSER

Dansk Selskab for Teoretisk Statistik

Seminarer i Matematisk statistik og Sandsynlighedsregning

Seminarerne afholdes onsdage kl. 15:15 præcis i auditorium 10 på
H.C. Ørsted Instituttet.
Der serveres te i lokale E325 kl. 15:00.

15. september: Valeri T. Stefanov, The University of Western Australia:

Explicit Limit Results for Markov Chains and Other Markov Processes.

Finite-state Markov chains with either a discrete or continuous time parameter, Markov renewal processes and Markov-additive processes are major stochastic models used by researchers in queuing and reliability theory, computer science, biological sciences, insurance etc. The statistical literature abounds with limit results (central limit theorems, laws of large numbers, laws of iterated logarithm) for various functionals of these processes. However most of the general results are not applicable in practice because the distributions of the respective limiting quantities are not, in general, available in an explicit form. The aim of this talk is to present a unifying general methodology for finding explicit solutions to these problems. The methodology is based on viewing these models as special {\it exponential families}; as such they exhibit some very nice properties - these lead not only to satisfactory solutions to the above mentioned problems but have also an impact on other related areas. The theory will be applied to a few simple examples.

22. september: Anne-Mette Krabbe Pedersen, Department of Genetics and Ecology, University of Aarhus:

Probabilistic models of DNA sequence evolution with context dependent rates of substitution

We consider Markov processes of DNA sequence evolution in which the instantaneous rates of substitution at a site are allowed to depend upon the states at the sites in a neighbourhood of the site at the instant of the substitution. We characterise the class of Markov process models of DNA sequence evolution for which the stationary distribution is a Gibbs measure, and give a procedure for calculating the normalising constant of the measure. We develop an MCMC method for estimating the transition probability between sequences under models of this type. Finally, we analyse an alignment of two HIV-1 gene sequences using the developed theory and methodology. This is joint work with Jens Ledet Jensen (Department of Theoretical Statistics, University of Aarhus)

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24. årgang nr. 7

September 1999

Selskabets bestyrelse:

Formand: Peter Dalgaard Biostatistisk Afdeling Panum Instituttet Blegdamsvej 3 2200 København N	Tlf: 3532 7918 Fax: 3532 7907 e-mail: p.dalgaard@biostat.ku.dk
Kasserer Ernst Hansen Afdeling for Teoretisk Statistik Københavns Universitet Universitetsparken 5 2100 København Ø	Tlf: 3532 0773 Fax: 3532 0772 e-mail: erhansen@math.ku.dk
Redaktør: Morten Frydenberg Institut for Biostatistik Aarhus Universitet Vennelyst Boulevard 6 8000 Århus C	Tlf: 8942 6130 Fax: 8942 6140 e-mail: morten@biostat.au.dk
Sekretær: Helle Andersen NOVO Krogshøjvej 53 2880 Bagsværd	Tlf: 4442 1957 Fax: 4442 1065 e-mail: hand@novo.dk
Jyske anliggender: Bjarne Højgaard Institut for Elektroniske Systemer Aalborg Universitet Frederik Bajersvej 7 9200 Aalborg Øst	Tlf: 9635 8080 9635 8927 *(direkte)* Fax: 9815 8129 e-mail: malik@math.auc.dk
Webmaster: Henrik Stryhn Statens Veterinære Serumlaboratorium Bülowsvej 27 1790 København V	Tlf: 3530 0237 Fax: 3530 0120 e-mail: hes@svs.dk

Selskabets www-adresse: Http://www.dsts.dk.

Generiske e-mail-adresser i selskabet:
Formand: fmd, formand, chair, chairman **Kasserer:** kass, kasserer, treas, treasurer
Redaktør: red, redaktoer, edit, editor **Sekretær:** sekr, sekretaer, secr, secretary
Jyske anliggender: jysk, jyskeanl, jutland **Webmaster:** web, webmaster, www
Meddelelser: medd, meddelelser, newsl, newsletter
Bestyrelsen: best, bestyr, bestyrelse, board

medlinfo@dsts.dk **skal** benyttes ved **indmeldelse** og **adresseændring** i DSTS .

Seminarer

Department of Theoretical Statistics
University of Aarhus
Seminarerne afholdes torsdag kl. 14.15-15.15 i H2.28

9. september: Bent Nielsen, Nuffield College, Oxford:

Testing for rank in bivariate canonical correlation analysis

The likelihood ratio test for the hypothesis that the smallest of two canonical correlations is zero is considered. In this testing problem the largest canonical correlation is a nuisance parameter. Two asymptotic distribution apply depending on this parameter being zero or not and hence the test is not even asymptotically similar. As a consequence the test based on the asymptotic distribution is not particular good in finite sample. Here, the asymptotic distribution is described. Next, an accurate approximation to the exact distribution is given in the case when the nuisance parameter is assumed known. Finally, the case of an unknown nuisance parameter is considered.

REFERENCES:
B. Nielsen (1999): The likelihood-ratio test for rank in bivariate canonicalcorrelation analysis. Biometrika 86, p. 279-288.
B. Nielsen (1998): Conditional test for rank in bivariate canonical correlation analysis.

http://www.nuff.ox.ac.uk/Users/Nielsen/discuss.html

30. september: Gordon Smyth, Department of Mathematics, University of Queensland:

Double Generalized Linear Models: Approximate REML and Diagnostics

This paper considers double generalized linear models, which allow the mean and dispersion to be modelled simultaneously in a generalized linear model context. Estimation of the dispersion parameters is based on a chisquare on 1 df approximation to the unit deviances, and the accuracy of the saddle-point approximation which underlies this is discussed. Approximate REML methods are developed for estimation of the dispersion, and these are related to the likelihood adjustment methods of McCullagh and Tibshirani (1990) and Cox and Reid (1987). The approximate REML methods can be implemented with very little added complication in a generalized linear model setting by adjusting the working vector and working weights. S-Plus functions for double generalized linear models are described. Through two data examples it is shown that the approximate REML methods are more robust than maximum likelihood, in the sense of being less sensitive to perturbations in the mean model.

Organizer: Jens Ledet Jensen

Senior-statistiker ved Institut for Sygdomsforebyggelse

Institut for Sygdomsforebyggelse søger en erfaren statistiker.

Instituttet er en forskningsinstitution under Hovedstadens Sygehusfællesskab og er beliggende på Kommunehospitalet i København. Instituttets statistikere udfører anvendt statistisk analyse for forskere ved instituttet og forskningen omfatter primært sundhedsvidenskabelige befolkningsstudier. For tiden drejer det sig blandt andet om projekter i samarbejde med Center for Epidemiologisk Grundforskning, Hovedstadens Center for Prospektive Befolkningsundersøgelser, Fænomenologisk Psykiatrisk Forskningsenhed og Copenhagen Trial Unit.

Kvalifikationer

Du skal have

- lyst og evner til at varetage og udvikle det faglige statistiske niveau
- lyst og evner til ledelsesansvar
- erfaring indenfor biostatistik
- lyst til at arbejde med anvendt statistisk analyse og formidling af resultaterne, samt interesse for at sætte dig ind i nye forskningsprojekter.
- en matematisk-statistisk uddannelse som cand.scient., cand.stat., cand.polyt. eller lignende.
- gode evner for samarbejde med andre forskere

Vi kan tilbyde

Ansættelse som senior-statistiker med ledelsesansvar for statistikgruppen, der pt. består af 5 statistikere. Arbejdsopgaverne er meget varierede, idet der anvendes en bred vifte af statistiske metoder fra biostatistikken og beslægtede områder. Det drejer sig bl.a. om log-lineære Poisson-modeller, Cox-modeller, varians-komponent modeller. Derudover er vi i gang med at udvikle kompetence i analysestrategier for longitudinelle designs og i statistiske metoder for genetisk epidemiologi. Instituttet har et tæt samarbejde med Biostatistisk Afdeling på Panum Instituttet.

Løn- og ansættelsesvilkår

Løn i henhold til gældende overenskomst mellem din faglige organisation og HS, med mulighed for kvalifikationstillæg.

Ansøgning

Ansøgning sendes til Thorkild I.A. Sørensen, Institut for Sygdomsforebyggelse, Kommunehospitalet, opg. 23A, 1399 København K - senest mandag den 20. september 1999. Nærmere oplysninger kan fås ved henvendelse til Lene Aastrøm Hansen, tlf. 33 38 38 86.

Statistiker

Genopslag

Ved Københavns Amts Center for Sygdomsforebyggelse søges en statistiker (37 timer pr. uge) med erfaring inden for epidemiologisk forskning. Centret har til formål at drive forskning inden for populationsepidemiologi, klinisk epidemiologi og forebyggelse, baseret på longitudinelle data, indsamlet blandt stikprøver af befolkningen siden begyndelsen af 1960-erne, centrale registre og kliniske databaser.

Du skal være: dynamisk, udadvendt og vant til at arbejde selvstændigt. Du skal have interesse for at sætte dig ind i nye forskningsprojekter og evne til at formulere opgaverne i statistiske modeller. Du skal have matematisk-statistisk uddannelse som cand.scient., cand.stat., ingeniør eller lignende. Du skal have gode evner for samarbejde med andre forskere. Vi vil også lægge vægt på at du er stabil og fleksibel.

Du kommer til at arbejde på: Center for Sygdomsforebyggelse.

Vi kan tilbyde: et dynamisk miljø med gode muligheder for faglig udvikling. Foruden adskillige forskere er der ved centret i forvejen ansat tre statistikere og to datamatikere. Arbejdsopgaverne er meget varierede, idet der anvendes en bred vifte af statistiske metoder fra biostatistikken og beslægtede områder. Det drejer sig bl.a. om log-lineære Poisson-modeller, Cox-modeller, varians-komponent modeller for normalfordelt og binominalfordelte variable.

Løn- og ansættelsesforhold: løn i henhold til gældende overenskomst mellem din faglige organisation og amtet. Tiltrædelse snarest.

Er du interesseret i at høre nærmere: kan du ringe til centerchef, overlæge, dr.med. Torben Jørgensen, tlf. 4323-3255.

Ansøgning bedes sendt til: Centerchef, overlæge, dr.med. Torben Jørgensen, Københavns Amts Center for Sygdomsforebyggelse, Amtssygehuset i Glostrup, Opgang 8, 7. sal, 2600 Glostrup.

Ansøgningsfrist: 15. september 1999.

Beregner

Ved Københavns Amts Center for Sygdomsforebyggelse søges en studerende til en række beregningsopgaver inden for epidemiologisk forskning. Personen, der skal være i gang med sidste del af studiet, vil blive ansat på timebasis. Centret har til formål at drive forskning inden for populationsepidemiologi, klinisk epidemiologi og forebyggelse, baseret på longitudinelle data, indsamlet blandt stikprøver af befolkningen siden begyndelsen af 1960-erne, centrale registre og kliniske databaser.

Du skal være: dynamisk, udadvendt, stabil og fleksibel. Du skal være i gang med en matematisk statistisk uddannelse, som stud.scient., stud.stat. eller lignende. Du skal have gode evner for samarbejde med andre forskere og meget gerne have tidligere erfaringer med lignende projektarbejde.

Du kommer til at arbejde på: Center for Sygdomsforebyggelse.

Vi kan tilbyde: et dynamisk videnskabeligt miljø. Ved centret er der, foruden en række forskere, ansat tre statistikere og to datamatikere. Arbejdsopgaverne er meget varierede, idet der anvendes en bred vifte af statistiske metoder fra biostatistikken og beslægtede områder. Du vil blive superviseret af en statistiker eller seniorforsker.

Løn- og ansættelsesforhold: Du ansættes på timebasis og aflønnes efter gældende overenskomst mellem din faglige organisation og amtet. Tiltrædelse snarest.

Er du interesseret i at høre nærmere: kan du ringe til centerchef, overlæge, dr.med. Torben Jørgensen, tlf. 4323-3255.

Ansøgning bedes sendt til: Centerchef, overlæge, dr.med. Torben Jørgensen, Københavns Amts Center for Sygdomsforebyggelse, Amtssygehuset i Glostrup, Opgang 8, 7. sal, 2600 Glostrup.

Ansøgningsfrist: 15. september 1999.

KAROLINSKA INSTITUTET
invites applications for the position of
PROFESSOR OF BIOSTATISTICS
at The Department of Medical Epidemiology

Reference no 2852/99 PA

Applicants should hold an advanced academic degree in mathematical statistics, statistics, biostatistics, or a related field. Experience from working in a medical setting is essential. Knowledge of statistical methods used in genetics and of genetic epidemiology is a plus. The position, which will be filled at the full professor level involves responsibilities in research and teaching, including supervision of graduate students in biostatistics. Partial affiliation with the Department of Mathematical Statistics at Stockholm University is a strong possibility.

The appointment will be made by the President of Karolinska Institutet upon recommendation of the recruitment committee. Grounds for qualification and preferment are stated in the Swedish Higher Education Ordinance. Individuals who have proven scientific, pedagogical and administrative experience shall be considered qualified for the position. Cooperative and leadership skills are also required.

The Department of Medical Epidemiology is engaged in studies covering a broad spectrum of diseases, with strengthening links to basic science and to clinical research. The national registers and many large prospective cohorts offer unique data sources for etiologic research.

The qualifications of those seeking the position shall be assessed in accordance with the Qualifications Portfolio in use at Karolinska Institutet since 1 February 1998, which is available on the KI homepage at http://info.ki.se/news/job_opportunities/qualifications/index_en.html or by order through the registrar's office at +46-8-728 65 95.

The assessment shall be weighted in the following manner: a factor of three for research qualifications; a factor of two for pedagogial qualifications; and a factor of one for managerial, developmental and cooperative skills.

Applications, accompanied by a publications list (see points A and D), shall have arrived at The Registrar, Karolinska Institutet, Nobels väg 5, SE-171 77 Stockholm, Sweden,
NO LATER THAN 30 SEPTEMBER 1999.

All other documents shall be submitted within four weeks of the final date of application, i.e. no later than 28 October 1999.

The following documents shall be submitted in quadruplicate:

The documents listed under points B-F shall be written in ENGLISH.

A) Application
B) Certified CV
C) A written account of scientific and pedagogical qualifications as well as administrative and managerial experience reported in accordance with the Karolinska Institutet's Qualifications Portfolio. The report shall include a description of the applicant's personal contributions to any co-authored publications, particularly those appended to the application.
D) Complete publications list
E) Brief written statement of plans for future research
F) Reprints of twenty articles or other works which should, in the applicant's opinion, be given primary consideration.

The documents shall be submitted in four identical packages for immediate forwarding to the external expert referees.

Karolinska Institutet (KI) wishes to promote equality through a more even distriution of male and female staff members. At present, the majority of professors at KI are men. Accordingly, the University particularly encourages women to apply for the position.

Further information is available from Professor Hans-Olov Adami, Chairman, Department of Medical Epidemiology, Karolinska Institutet telephone: +46-8-728 61 80, fax: +46-8-31 49 57, email: Hans-Olov.Adami@mep.ki.se or from Professor Nancy Pedersen (Genetic Epidemiology), telephone: +46-8-728 74 18, fax: +46-8-31 49 75, email: Nancy.Pedersen@mep.ki.se and by Professor Juni Palmgren (Biostatistics), Department of Mathematical Statistics, Stockholm University, telephone: +46-8-16 45 57, email: juni@matematik.su.se

MaPhySto
Centre for Mathematical Physics and Stochastics

Concentrated Advanced Course on

Lévy Processes

Lectures by Ken-iti Sato (Nagoya University)

January 24-28, 2000

University of Aarhus

In the above-mentioned week, MaPhySto will organize a Concentrated Advanced Course on Lévy Processes. The course will take place at the Department of Mathematical Sciences, University of Aarhus. Each day there will be 2-4 hours of lectures plus exercise sessions.

Content

Lévy processes are stochastic processes on the Euclidean space, stochastically continuous and with stationary independent increments. Examples are Brownian motion, Poisson processes, stable processes (such as Cauchy processes), and subordinators (such as Gamma-processes). They form a basic class in stochastic analysis. This course aims at giving an introduction to elementary properties of Lévy process and to transformations between Lévy processes. Familiarity with the method of characteristic functions and some knowledge of Brownian motion, Poisson processes, and infinitely divisible distributions are expected. The following are the main contents of the lectures.

1. Characterization of Lévy processes by the Lévy-Khintchine representation of infinitely divisible distributions. Probabilistic meaning of the characterization.
2. Transformations of Lévy processes to Lévy processes. Especially, the subordination invented by Bochner and the density transformation (mutual absolute continuity in the path space in finite time) of Skorohod, Newman, and Kunita-S.Watanabe will be discussed in detail.
3. Large time behaviors of Lévy processes. Especially recurrence, transience, and oscillation are characterized. (Chung-Fuchs, Spitzer, Port-Stone, Shepp, Kesten, Erickson)
4. Time evolution of unimodality and multimodality of the distributions of Lévy processes on the line. (Wolfe, Yamazato, Sato, Toshiro Watanabe)

The following forthcoming book will be a reference: K. Sato, *Lévy Processes and Infinitely Divisible Distributions*, Cambridge University Press, to appear in autumn, 1999.

More Information and Registration

From the web page `www.maphysto.dk/events/LevyCAC2000/` you may find more information on this event. From there it is also possible to register for the course (there is no registration fee). You are also welcome to contact us at any of the below-mentioned addresses.

The deadline for registration is **December 20, 1999**.

MaPhySto
Department of Mathematical Sciences
University of Aarhus, Ny Munkegade
DK–8000 Aarhus C, Denmark

Phone: +45 8942 3532
+45 8942 3521
+45 8942 3515
Fax: +45 8613 1769

Email: maphysto@maphysto.dk
oebn@maphysto.dk
shave@maphysto.dk
URL: www.maphysto.dk

Summer School on

Stereology and Geometric Tomography

Sandbjerg Manor, 20–25 May, 2000

The aim of the summer school is to give an overview of modern stereology and its relation to geometric tomography, including both the mathematical and statistical theory and the practical applications.

Stereology is the area of stochastics dealing with statistical inference about spatial structures from geometric samples of the structure such as two-dimensional sections and one-dimensional probes. The development of stereological methods involve the use of advanced mathematical tools, especially from geometric measure theory and integral geometry. Stereology is now in world-wide use in many areas of biology and medicine, most importantly in neuroscience and cancer grading. Other areas of application are geology, metallography and mineralogy.

Geometric tomography is closely related to stereology, as is apparent from its definition: "geometric tomography is the area of mathematics dealing with the retrieval of information about a geometric object from data about its sections, or projections, or both". Geometric tomography has connections with convex geometry, geometric probing in robotics, computerized tomography, and other areas.

The summer school will be held at Sandbjerg Manor, a conference centre owned by University of Aarhus, situated in the southern part of Jutland, Denmark. The summer school is organized by **StocLab** (Laboratory for Computational Stochastics) and **MaPhySto** (Centre for Mathematical Physics and Stochastics), University of Aarhus.

The teaching team includes

- Adrian Baddeley (University of Western Australia)
- Richard Gardner (Western Washington University)
- Hans Jørgen G. Gundersen (University of Aarhus)
- Eva B. Vedel Jensen (University of Aarhus)
- Kiên Kiêu (Institut National de la Recherche Agronomique, Versailles)

Lectures by invited researchers in related fields such as convex geometry, stochastic geometry and spatial statistics are also planned, as well as lectures by the participants of the summer school.

The summer school is addressed to PhDs, PostDocs and other researchers in mathematics. Scientists from the natural sciences with a strong background and interest in mathematics are also welcome. The number of participants is limited to 50. Participation will therefore be by application only.

Support

A limited number of grants for students to attend the school, covering registration, accommodation and meals, can be applied for, leaving only travel expenses to be paid.

Registration

To apply for participation please fill out the registration form located at

`www.maphysto.dk/events/S-and-GT2000/register.html`

The deadline for application is 1 March, 2000. The registration fee is DKK 750.

More Information

From the web-page `www.maphysto.dk/events/S-and-GT2000/` you may find regularly updated information on this and other events. You are also welcome to contact the MaPhySto secretariat at `maphysto@maphysto.dk` or the organizer Eva B. Vedel Jensen at `stoclab@imf.au.dk`.

Kalender 1999/2000

(arrangementer annonceret i MEDDELELSER)

Dato	Med. nr.	Aktivitet
6-10/9	3/99	The 7th European Course in advanced statistics: Environmental statistics. Deadline 15.4.99.
9/9	7/99	Seminar. Bent Nielsen: Testing for rank in bivariate canonical correlation analysis. (ATS-AU)
15/9	7/99	Seminar. Valeri T. Stefanov: Explicit limit results for markov chains and other markov processes. (ATS-KU)
22/9	7/99	Seminar. Anne-Mette Krabbe Pedersen: Probablistic models of DNA sequence evlution with context dependent rates of substitution. (ATS-KU)
30/9	7/99	Seminar. Gordon Smyth: Double generalized linear models: approximate REML and diagnostics.
4-8/10	3/99	NORFA Course. Survival and event history analysis. Deadline 5.5.99
17-22/1 2000	3/99	MaPhySto workshop on Computational Stochastics. (Århus) Http://www.maphysto.dk/events/compstoc2000. (Reg senest 1.10.99)
24-28/1 2000	7/99	MaPhySto concentrated advanced course on Lévy Processes. (Reg senest 20.12.99)
20-25/5 2000	7/99	Summer School on Stereology and Geometric Tomography. (Reg senest 1.3.00.
5-8/6 2000	1/99	18th Nordic Conference in Mathematical Statistics. 2000. Http://www.math.uio.no/~nordstat/

Deadlines i 1999

Frist for indlevering af bidrag:	MEDDELELSER udkommer
24. september	1. oktober
25. oktober	1. november
24. november	1. december