BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 37 **FREDAGEN DEN 14 NOVEMBER 2008**

BRÅKET

Veckobladet från Institutionen för matematik vid Kungl Tekniska Högskolan och Matematiska institutionen vid Stockholms universitet

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Sista manustid för nästa nummer:
Torsdagen den 20 november kl. 13.00.

Money, jobs: Se sidorna 8 – 10.

SEMINARIER

Fr 11–14 kl. 10.00. Informellt doktorandseminarium i teoretisk datalogi. Lasse Edlund: *Secure and confidential applications on UICC.* Rum 1439, KTH CSC. Se sidan 4.

Fr 11–14 kl. 10.30. Licentiatseminarium i mekanik. Lars-Uve Schrader, Mekanik, KTH, presenterar sin licentiatavhandling: *Receptivity of Boundary Layers under Pressure Gradient.* Opponent: **Dr Tamer Zaki,** Department of Mechanical Engineering, Imperial College, London. Sal K1, KTH, Teknikringen 56, b.v. Se sidan 7.

Fr 11–14 kl. 12.15 – 13.00. GRU-seminarium i matematik. Lars Brandell: *Resultatet av det diagnostiska provet i matematik.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 36 sidan 7.

Ti 11–18 kl. 11.00. KTH/Nordita/SU Seminar in Theoretical Physics. Jack Harris, Yale University: *Dispersive optomechanics: a new approach to mechanical quantum systems.* Sal FA31, Roslagstullsbacken 21, AlbaNova universitetscentrum. Se Bråket nr 36 sidan 5.

Ti 11–18 kl. 13.15. Plurikomplexa seminariet. Johannes Lundqvist, SU: *Toric residues.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se nedan.

Fortsättning på nästa sida.

PLURIKOMPLEXA SEMINARIET

Johannes Lundqvist: Toric residues

Abstract: In 1996 David Cox introduced the notion of toric residues. The aim for this seminar is to define the toric residue and to do so I will also define toric varieties. Examples will be given and a connection to the ordinary local Grothendieck residue on $\mathbb{C}^n$ will be discussed.

Tid och plats: Tisdagen den 18 november kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

Seminarier (fortsättning)

Ti 11–18 kl. 15.30 – 16.30. Institut Mittag-Leffler Seminar. Jie Qing, UC Santa Cruz: *Scattering in conformal geometry.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 5.

On 11–19 kl. 10.15 – 12.00. Kombinatorikseminarium. Alice Lesser: *Optimal and hereditarily optimal realizations of metric spaces.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

On 11–19 kl. 13.15 – 14.15. Seminarium i analys och dynamiska system. Michael Benedicks: *Nonlinear evolution equations, Coupled Map Lattices and non-invertible dynamics in two dimensions.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

On 11–19 kl. 13.15. Algebra and Geometry Seminar. Michael Shapiro, University of Michigan: *Title to be announced.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

On 11–19 kl. 14.00. Seminarium i matematisk statistik. *(Observera tiden!)* **Professor Thomas Mathew,** Department of Mathematics and Statistics, University of Maryland: *Generalized confidence intervals: Methodology and applications.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 3.

On 11–19 kl. 15.30. Seminarium i matematisk statistik. John Glasser, CDC, Atlanta: *A population model of influenza designed to evaluate projected pandemic vaccine production in Taiwan.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidorna 6 – 7.

On 11–19 kl. 16.00. KTH/SU Mathematics Colloquium. Dan Laksov, KTH: *Iterated linear recursions and Schubert calculus.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Kaffe/te serveras kl. 15.30 i pausrummet, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 4. Se Bråket nr 36 sidan 7.

On 11–19 kl. 19.00. Populärvetenskaplig föreläsning i fysik. Professor Mark Pearce, Fysik, KTH: *Kommer PAMELA att hitta mörk materia? Om antimateria och jakten på mörk materia.* Oskar Kleins auditorium, Roslagstullsbacken 21, AlbaNova universitetscentrum. Se Bråket nr 36 sidan 6.

To 11–20 kl. 10.00. Optimization and Systems Theory Seminar. *(Observera dagen och tiden!)* **Margaret Wright,** Courant Institute, New York University, USA: *Title to be announced.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

To 11–20 kl. 10.30. Seminar in Fluid Mechanics. Andreas Carlson, Mekanik, KTH: *Droplet dynamics in bifurcating channels.* Seminarierummet, Institutionen för mekanik, KTH, Teknikringen 8. Se sidan 8.

To 11–20 kl. 14.00 – 15.00. Institut Mittag-Leffler Seminar. Sergio Dain, Universidad Nacional de Córdoba: *Axisymmetric evolution of Einstein equations and mass conservation.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

To 11–20 kl. 15.15 – 16.15. AlbaNova and Nordita Colloquium in Physics. Anders Flodström: *Free universities?* Oskar Kleins auditorium, Roslagstullsbacken 21, AlbaNova universitetscentrum.

Fortsättning på nästa sida.

Seminarier (fortsättning)

To 11–20 kl. 15.30–16.30. Institut Mittag-Leffler Seminar. Mark Heinzle, Universität Wien: *Mixmaster: fact and belief.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 7.

Fr 11–21 kl. 13.15–14.15. Graduate Student Seminar. Alan Sola, Matematik, KTH: *Univalent functions IV.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.

Ti 11–25 kl. 15.15–16.00. Föreläsning. Ewa Wigaeus Tornqvist, gästprofessor i vårdergonomi vid KTH: *Datorarbete, teknik och hälsa.* Sal E3, KTH, Osquars Backe 14, 2 tr. Efterföljande mingel med förtäring i anslutning till salen. Förhandsanmälan skall göras senast den 21 november. Se sidan 4.

On 11–26 kl. 13.15. Algebra and Geometry Seminar. Holger Brenner: *Title to be announced.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

To 11–27 kl. 13.15–14.15. DNA-seminariet Uppsala-KTH (Dynamical systems, Number theory, Analysis). Henrik Ueberschaer, University of Bristol: *Title to be announced.* Sal 64119, Ångströmlaboratoriet, Uppsala universitet.

SEMINARIUM I MATEMATISK STATISTIK

Thomas Mathew:
Generalized confidence intervals:
Methodology and applications

Summary: The concept of generalized confidence intervals is somewhat recent, and is useful to obtain confidence intervals for certain "complicated" parametric functions. The usual confidence intervals are derived using the percentiles of a pivotal quantity. Generalized confidence intervals are derived based on a generalized pivotal quantity (GPQ), which is a function of a random variable, its observed value, and also the parameters. In the talk, I will explain the construction of a GPQ and will describe the conditions that they must satisfy. I will then discuss a series of applications of the generalized confidence interval methodology for obtaining confidence intervals for a number of somewhat complicated problems: confidence intervals for

(i) the lognormal mean,
(ii) the lognormal variance,
(iii) the mean and variance of limited and truncated normal as well as lognormal distributions, and
(iv) a problem involving the bivariate normal distribution.

In each case, I will motivate the problem with specific applications and will also illustrate the results using the relevant data analysis. Some attractive features of the generalized confidence intervals are that they are easy to compute and they exhibit excellent performance even for small sample sizes.

Tid och plats: Onsdagen den 19 november kl. 14.00 i rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket.

INFORMELLT DOKTORANDSEMINARIUM I TEORETISK DATALOGI

Lasse Edlund: Secure and confidential applications on UICC

Abstract: Mobile operators today are looking for new technologies to add to their existing services. Services that add value and generate income could be different kinds of proximity payment and entrance systems using NFC technology. This kind of short range radio technology is new and there have been no real implementations of banking or entrance system for mobile phones aside from a few trials. The main goal is to let the mobile phones replace the need for various RFID and magnetic cards used today.

This thesis investigates how to manage multiple applications on a single UICC, this way many different actors can share a single hardware resource.

Usually a smart card given for these services is owned by the service provider, but in our case the SIM card is owned and managed by the Mobile Network Operators. In order to be able to delegate rights and maintain security in an unsafe environment, there have been different standards and ideas proposed to solve all issues.

Some of these proposals run along the interests of mobile operators, others of financial institutions, but they all want to achieve the same goal, increasing revenue. This is only possible if all parts of this economic ecosystem get a part of the financial gain in a fair way.

There are trials ongoing with mobile NFC technology that replace credit cards, and many actors companies have shown interest in using the mobile phone's secure and contactless interface to replace existing security devices.

Tid och plats: Fredagen den 14 november kl. 10.00 i rum 1439, KTH CSC.

FÖRELÄSNING

Ewa Wigaeus Tornqvist: Datorarbete, teknik och hälsa

Sammanfattning: Den snabba utvecklingen av ny informationsteknologi har medfört omfattande förändringar i arbetslivet. Datoriseringen har haft många positiva effekter på arbetsvillkoren; t.ex. effektivisering av många verksamheter, snabbare informations- och kommunikationsmöjligheter samt möjlighet till flexiblare arbetsplatser och arbetstider.

Datoriseringen har också en "baksida" i form av icke önskvärda förändringar av arbetsinnehåll och arbetsmiljö som visat negativa hälsokonsekvenser. Datoriseringen har medfört en ökning av långvarigt stillasittande arbete i låsta arbetsställningar med brist på variation och naturliga pauser. Många datoranvändare upplever stress när tekniken krånglar och över alla nya system och programvaror som man hela tiden måste lära sig, samt stress över det snabbt ökande informationsflödet och krav på att alltid vara nåbar via mail eller mobiltelefon.

Vanliga hälsobesvär vid intensivt datorarbete är smärta och värk i nacke, skuldra, arm och hand. Föreläsningen kommer att fokusera på arbetsrelaterade faktorer som påverkar risken att få dessa besvär samt möjliga orsaksmekanismer.

Tid och plats: Tisdagen den 25 november kl. 15.15 – 16.00 i sal E3, KTH, Osquars Backe 14, 2 tr. Efterföljande mingel med förtäring i anslutning till salen. Välkommen att bekräfta ditt deltagande senast den 21 november till personalutbildning@admin.kth.se.

INSTITUT MITTAG-LEFFLER SEMINAR

Jie Qing:
Scattering in conformal geometry

Abstract: Conformally compact Riemannian manifolds were known to be a good way to study the conformal geometry. But recent researches related to the so-called AdS/CFT correspondence brought back interests to this subject. The recent study of the scattering of Poincaré-Einstein metrics of Graham and Zworski made it more clear that the scattering operators as a meromorphic family of pseudo-differential operators are the great source to produce global and local conformal invariants. We will report some recent work in this direction.

Tid och plats: Tisdagen den 18 november kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

KOMBINATORIKSEMINARIUM

Alice Lesser:
Optimal and hereditarily optimal realizations of metric spaces

Abstract: An *optimal realization* of a given finite metric space is a weighted graph which preserves the metric's distances and has minimal total edge weight. Finding optimal realizations is known to be NP-hard, and solutions are not necessarily unique.

It was conjectured by Andreas Dress in 1984 that any extremally weighted optimal realization could be found as a subgraph of the *hereditarily optimal realization* Γ_d, a graph which in general has a higher total edge weight than the optimal realization but has the advantages of being unique and possible to construct explicitly via the *tight span* of the metric.

I will present some results and some open questions related to this problem; in particular I will show that there exist counterexamples to Dress's conjecture: graphs such that some, but not all, extremally weighted optimal realizations are subgraphs of Γ_d.

Tid och plats: Onsdagen den 19 november kl. 10.15 – 12.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Michael Benedicks:
Nonlinear evolution equations, Coupled Map Lattices and non-invertible dynamics in two dimensions

Abstract: The talk is inspired by recent work of Pesin and Yurchenko, who discovered nonlinear evolution equations which seem to have "strange attractors". More specifically, after discretization one obtains a Coupled Map Lattice (CML), whose local maps have strange attractors. We will also try to relate this to Sinai-Ruelle-Bowen measures for CML's (work by Bunimovich-Sinai and Kupiainen-Bricmont).

Tid och plats: Onsdagen den 19 november kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

INSTITUT MITTAG-LEFFLER SEMINAR

Sergio Dain:
Axisymmetric evolution of Einstein equations and mass conservation

Abstract: In this talk I will analyse a gauge for axisymmetric evolution of isolated systems such that the total mass can be written as a positive definite integral on the space-like hypersurfaces of the foliation and the integral is constant along the evolution. The conserved mass integral controls the square of the extrinsic curvature and the square of first derivatives of the intrinsic metric. I will discuss applications of this result for the global existence problem in axial symmetry.

Finally, I will also present some preliminary results on the local conservation of energy in axial symmetry.

Tid och plats: Torsdagen den 20 november kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINARIUM I MATEMATISK STATISTIK

John Glasser:
A population model of influenza designed to evaluate projected pandemic vaccine production in Taiwan

Abstract: Background: We endeavor to reproduce historical observations and to identify and remedy the cause of any disparate predictions before using models to inform public policy-making. We have no finely age- and time-stratified observations from historical pandemics, but prior exposure of older adults to a related strain is among the more compelling hypotheses for the w-shaped age-specific mortality characterizing the 1918 pandemic, blurring the distinction between annual and pandemic influenza.

Methods: We are attempting to reproduce patterns in annual morbidity and mortality via a cross-classified compartmental model whose age class sojourns approximate the longevity of clusters of closely-related strains. In this population model, we represent effective interpersonal contacts via a generalization of Hethcote's formulation of mixing as a convex combination of contacts within and between age groups. Information about mixing has been sought in face-to-face conversations, a surrogate for contacts by which respiratory diseases might be transmitted, but could also be obtained from household and community transmission studies. We reanalysed observations from several such studies to learn about age-specific preferences, proportions of contacts with others of the same age. And we obtained age-specific forces of infection from proportions reporting illness in a prospective study of household transmission during the 1957 influenza pandemic, which we gamma distributed to correct for misclassification. Then we fit our model to weekly age-specific hospitalizations from Taiwan's National Health Insurance Program, 2000 – 2007, by adjusting a) age-specific coefficients of harmonic functions by which we model seasonality and b) probabilities of hospitalization given influenza.

Results: While our model accounts for only 30 % of the temporal variation in hospitalizations, estimated conditional probabilities resemble official health resource utilization statistics. Moreover, younger and older people are most likely to be hospitalized and elderly ones to die of influenza, with modelled deaths 10.6 % of encoded influenza or pneumonia mortality.

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Conclusions: Having satisfactorily reproduced recent patterns in influenza morbidity and mortality in Taiwan via a deterministic model, we will switch to a discrete event-time simulator and — possibly with different initial conditions and selected parameters — evaluate the sufficiency of projected pandemic vaccine production.

Tid och plats: Onsdagen den 19 november kl. 15.30 i rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket.

LICENTIATSEMINARIUM I MEKANIK

Lars-Uve Schrader

presenterar sin licentiatavhandling:

Receptivity of Boundary Layers under Pressure Gradient

Opponent: **Dr Tamer Zaki,** Department of Mechanical Engineering, Imperial College, London.

Abstract: Boundary-layer flow over bodies such as aircraft wings or turbine blades is characterized by a pressure gradient due to the curved surface of the body. The boundary layer may experience modal and non-modal instability, and the type of dominant instability depends on whether the body is swept with respect to the oncoming flow or not. The growth of these disturbances causes transition of the boundary-layer flow to turbulence. Provided that they are convective in nature, the instabilities will only arise and persist if the boundary layer is continuously exposed to a perturbation environment. This may for example consist of turbulent fluctuations or sound waves in the free stream or of non-uniformities on the surface of the body. In engineering, it is of relevance to understand how susceptive to such perturbations the boundary layer is, and this issue is subject of *receptivity analysis.*

In this talk, receptivity of simplified prototypes for flow past a wing is studied. In particular, the three-dimensional swept-plate boundary layer and the boundary layer forming on a flat plate with elliptic leading edge are considered. The response of the boundary layer to vortical free-stream disturbances and surface roughness is analysed, receptivity mechanisms are identified, and their efficiency is quantified.

Tid och plats: Fredagen den 14 november kl. 10.30 i sal K1, KTH, Teknikringen 56, b.v.

INSTITUT MITTAG-LEFFLER SEMINAR

Mark Heinzle:
Mixmaster: fact and belief

Abstract: We discuss the asymptotics toward the initial singularity of the Mixmaster Universe (Bianchi type IX spacetime). In the first part of the talk we will present a new and succinct proof of the 'Bianchi type IX attractor theorem'. (This theorem is originally due to Ringström.) The methods employed demonstrate that Bianchi type IX is too special to serve as a good role model in the context of generic spacelike singularities. The second part of the talk is devoted to open questions. We formulate a number of conjectures that formalize previous vague ideas about Mixmaster asymptotics.

Tid och plats: Torsdagen den 20 november kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINAR IN FLUID MECHANICS

Andreas Carlson:
Droplet dynamics in bifurcating channels

Abstract: Droplet dynamics is an intrinsic and trivial part in everyday life that can be observed during rainfall and in your kitchen sink. Due to their ubiquitous occurrence with fascinating physical phenomena, they have attracted the attention of scientists for more than a century. Nonetheless, many physical phenomena involving droplets are yet not fully understood. This is a direct consequence of the complex physical picture that is formed by the competition between hydrodynamic and free-surface forces, in addition to the wetting phenomenon that govern the nature of the interaction between the interface and the solid surface. The upcoming talk will discuss the physics governing the resulting dynamics of liquid droplets as they interact with the edge of a channel bifurcation. A phenomenological description will be given based on numerical experiments with the Finite Element Phase Field method. A multiphase flow consisting of two binary immiscible liquids is simulated in channels with a geometrical shape of a Y-junction that is frequently encountered in droplet microfluidics. Two different cases will be described, controlled and freely evolving droplets. In the former case the prospect of active control of droplet division is explored by an additional inflow, the tuning flow, of the continuous phase in the lower daughter branch. In the latter case droplets evolve freely in a junction with symmetric outflow conditions. Novel interfacial dynamics and droplet flow regimes will be presented, along with a comparison with experimental results.

Tid och plats: Torsdagen den 20 november kl. 10.30 i seminarierummet, Institutionen för mekanik, KTH, Teknikringen 8.

GRADUATE STUDENT SEMINAR

Alan Sola:
Univalent functions IV

Abstract: This talk will be devoted to the classical problem of when a conformal mapping of the unit disk to a simply connected domain can be extended continuously to the boundary. I plan to present Carathéodory's theorem on Jordan curves and the prime end correspondence theorem. A similar problem is to determine when the derivative of the conformal mapping is continuous at the boundary, and we shall discuss this problem as well.

Tid och plats: Fredagen den 21 november kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

MONEY, JOBS

Columnist: Johannes Lundqvist, Department of Mathematics, Stockholm University. E-mail: johannes@math.su.se.

Info = information. This will be given and repeated until obsolete. Rely on other sources as well.

BBKTH = Bulletin Board at the Department of Mathematics, KTH.

BBSU = Bulletin Board at the Department of Mathematics, SU.

The following information, with links, is also available at http://www2.math.su.se/~johannes/mj.html.

Unless stated otherwise, a given date is the last date (e.g. for applications), and the year is 2008. A number without an explanation is a telephone number.

(Continued on the next page.)

Standard information channels

1. A channel to information from Vetenskapsrådet: http://www.vr.se/naturteknik/index.asp.
2. A channel to information from the European Mathematical Society: http://www.emis.de.
3. A channel to information from the American Mathematical Society: http://www.ams.org.
4. KTH site for information on funds: http://www.kth.se/aktuellt/stipendier.
5. Stockholm University site for information on funds: http://www2.su.se/forskning/stipendier/databas.php3.
6. Umeå site for information on funds: http://www.umu.se/umu/aktuellt/stipendier_fond_anslag.html.
7. Job announcement site: http://www.maths.lth.se/nordic/Euro-Math-Job.html. This is run by the European Mathematical Society.
8. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) site for information on funds: http://www.stint.se.
9. Nordisk Forskerutdanningsakademi (NorFA) site for information on funds: http://www.norfa.no.
10. Svenska institutet (SI) site for information on funds: http://www.si.se.

New information

Money to apply for

11. Stiftelsen Anna-Greta och Holger Crafoords fond utlyser bidrag och anslag för att främja grundforskning inom matematik och vissa naturvetenskaper. Såväl enskilda som institutioner kan beviljas medel för bland annat vetenskaplig verksamhet, vetenskapliga konferenser och inbjudan av utländska gästforskare. Bidrag och anslag delas ut företrädesvis till unga forskare. Sista ansökningsdag är den 1 mars 2009. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=11&br=ns&ver=6up.

Old information

Money to apply for

12. Stiftelsen G. S. Magnusons fond utdelar stipendier och anslag inom ämnesområdet matematik för följande ändamål: Stöd till doktorander. Stöd till den som önskar ytterligare meritera sig efter doktorsexamen. Stöd till svenska forskare för forskning hemma eller i utlandet samt för inbjudan av utländska gästforskare. Bidrag för att kvarhålla forskare inom landet. Stöd till den som inom sin verksamhet utnyttjar matematik och som önskar bidrag till vetenskaplig förkovran inom ämnet. Sista ansökningsdag är den 2 februari 2009. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=45.

Jobs to apply for

13. KTH söker en doktorand i beräkningsmatematisk modellering. Sista ansökningsdag är den 21 november. Web-info: http://www.kth.se/aktuellt/tjanster/2/ShowAdd.aspx?ID=139350.
14. KTH utlyser en postdoc-tjänst i beräkningsmatematisk modellering. Sista ansökningsdag är den 21 november. Web-info: http://www.kth.se/aktuellt/tjanster/2/ShowAdd.aspx?ID=139361.
15. Lunds universitet söker en biträdande universitetslektor (associate senior lecturer) i matematik med inriktning mot icke-linjära partiella differentialekvationer. Sista ansökningsdag är den 28 november. Web-info: http://www.science.lu.se/upload/LUPDF/natvet/Utlysningar/081128_3331e.pdf.
16. SU söker tre doktorander i matematikämnets didaktik med följande inriktningar: Bedömning i matematik. Mångkulturalitet. Grundläggande matematiskt kunnande. Sista ansökningsdag är den 20 november. Web-info: http://www.umn.su.se/content/1/c6/05/03/16/doktanst_did08.pdf.
17. SU söker en doktorand i matematisk statistik. Sista ansökningsdag är den 20 november. Web-info: http://www.math.su.se/content/1/c6/02/88/59/foutb0810_sve.pdf. Se Bråket nr 34 sidan 9.
18. Försvarets radioanstalt (FRA) söker en matematiker/kryptolog. I arbetet ingår bland annat att med matematiska metoder analysera och värdera signalskyddssystem, analysera och konstruera algoritmer och att göra teoretiska utredningar av matematisk och matematisk-statistisk karaktär. Sista ansökningsdag är den 17 november. Web-info: http://www.fra.se/tjanst-0188.shtml.
19. Københavns Universitet söker doktorander i matematik. Sista ansökningsdag är den 1 januari 2009. Web-info: http://www.math.ku.dk/english/programmes/ph.d/apply/.

(Continued on the next page.)

20. Institut Mittag-Leffler announces a number of Post Doctoral Fellowship Grants for the academic year 2009/2010. The subject areas for the year's two programs are: Mathematical Logic: set theory and model theory (September 1 – December 15, 2009). Dynamics and PDE's (January 15 – June 15, 2010). Last day for application is January 20, 2009. Web-info: http://www.mittag-leffler.se/programs/0910/grants.php.
21. Umeå universitet söker två universitetslektorer i matematik, varav en är med inriktning mot matematisk analys. Sista ansökningsdag är den 15 december. Web-info: http://www.umu.se/umu/aktuellt/arkiv/lediga_tjanster/312-3204,3036-08.html.
22. Umeå universitet söker en professor i matematisk statistik. Sista ansökningsdag är den 15 december. Web-info: http://www.umu.se/umu/aktuellt/arkiv/lediga_tjanster/311-3037-08.html.
23. Skolan för datavetenskap och kommunikation (CSC) vid KTH kungör "the Dahlquist Postdoctoral Fellowship", uppkallat efter professor Germund Dahlquist, KTHs pionjär inom numerisk analys. Priset är forskning på heltid på KTH Numerisk Analys. Prisperioden är ett år, och kan förlängas med ytterligare ett år. Sista ansökningsdag är den 15 november. Web-info: http://www.kth.se/csc/om/priser/dqf/1.14813?l=sv_SE.