



BRÅKET



Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 7

FREDAGEN DEN 20 FEBRUARI 2009

BRÅKET

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

Redaktör: Gunnar Karlsson

Telefon: 08-790 84 79

Adress för e-post:
gunnarkn@math.kth.se

Bråket på Internet: <http://www.math.kth.se/braaket.html> eller
<http://www.math.kth.se/braket/>

Postadress:

Red. för Bråket
Institutionen för matematik
KTH
100 44 Stockholm

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Sista manustid för nästa nummer:
Torsdagen den 26 februari
kl. 13.00.

Disputation i matematik

Andreas Enblom skall disputerar på avhandlingen *Properties of the Discrete and Continuous Spectrum of Differential Operators* fredagen den 27 februari kl. 14.00 i sal F3, KTH, Lindstedtsvägen 26, b.v. Se Bråket nr 6 sidan 6.

Money, jobs: Se sidorna 8–9.

SEMINARIER

Fr 02–20 kl. 11.00–12.00. Optimization and Systems Theory Seminar. Petter Ögren, FOI: *Task planning and control of Semi-autonomous Surveillance UGVs*. Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 4.

Fr 02–20 kl. 15.15–16.15. Matematiska kollokviet i Uppsala. Ralf Fröberg, SU: *Koszul algebras*. Höggsalen, Ångströmlaboratoriet, Uppsala universitet. Kaffe/te serveras utanför föreläsningssalen kl. 14.55. Se Bråket nr 6 sidan 7.

Må 02–23 kl. 15.15–16.00. Seminarium i matematisk statistik. Akoo Hematbolland presenterar sitt examensarbete: *Resource optimization in embedded systems based on data mining*. Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

Må 02–23 kl. 16.15–17.00. Seminarium i finansiell matematik. William Sjöberg presenterar sitt examensarbete: *Structured products: optimal allocation in different market climates*. Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 3.

Ti 02–24 kl. 13.15. Plurikomplexa seminariet. Boris Shapiro, SU: *On Heine-Stieltjes theory*. Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 4.

Fortsättning på nästa sida.

Disputation i matematisk statistik

Patricia Geli Rolfhamre skall disputerar på avhandlingen *From Penicillin Binding Proteins to Community Interventions: Mathematical and Statistical Models Related to Antibiotic Resistance* fredagen den 27 februari kl. 13.00 i sal 14, hus 5, Matematiska institutionen, SU, Kräftriket. Se Bråket nr 6 sidan 7.

Seminarier (fortsättning)

- Ti 02–24 kl. 14.00–15.00. Institut Mittag-Leffler Seminar. Christophe Garban,** Université Paris Sud: *The Fourier spectrum of critical percolation*. Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 5.
- Ti 02–24 kl. 15.30–16.30. Institut Mittag-Leffler Seminar. Federico Camia,** Vrije Universiteit, Amsterdam: *Ising Euclidean fields and cluster area measures*. Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.
- On 02–25 kl. 10.00–11.45. Logikseminariet Stockholm-Uppsala. Per Martin-Löf:** *Evaluation of open expressions*. Sal 16, hus 5, Matematiska institutionen, SU, Kräftriket.
- On 02–25 kl. 13.15–14.15. Seminarium i analys och dynamiska system. Fredrik Johansson,** KTH: *Optimal Hölder exponent of the SLE path and a rate of convergence for LERW*. Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 7.
- On 02–25 kl. 15.15. Seminarium i matematisk statistik. Rolf Sundberg:** *Flat and multimodal likelihoods and model lack of fit in curved exponential families*. Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 3.
- On 02–25 kl. 16.00. KTH/SU Mathematics Colloquium. Professor Andrzej Zuk,** Université Paris 7: *Groups generated by automata*. 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 sidan 6.
- To 02–26 kl. 14.00–15.00. Institut Mittag-Leffler Seminar. Timo Seppäläinen,** University of Wisconsin-Madison: *Fluctuation bounds for a class of zero range processes*. Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.
- To 02–26 kl. 14.15. Seminarium i matematikens filosofi. Sten Lindström,** Umeå universitet och SCAS: *Mathematical existence*. Thunbergssalen vid Kollegiet för samhällsforskning (SCAS), Linneanum, Thunbergsvägen 2, Uppsala universitet.
- To 02–26 kl. 15.30–16.30. Institut Mittag-Leffler Seminar. Alan Hammond,** ENS, Paris: *Trapping of a biased random walk on a supercritical tree*. Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 7.
- Fr 02–27 kl. 12.15–13.00. Utbildningsseminarium i matematik. KTH:s Virtuella Campus.** Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.
- Må 03–02 kl. 11.00. Optimization and Systems Theory Seminar. (Observera dagen!) Bijoy Ghosh,** Texas Tech University: *On the problem of looking optimally*. Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.
- On 03–04 kl. 13.15. Algebra and Geometry Seminar. Jérôme Scherer:** *Title to be announced*. Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

Fortsättning på nästa sida.

Seminarier (fortsättning)

On 03–04 kl. 16.00–17.00. KTH/SU Mathematics Colloquium. Viviane Baladi, École Normale Supérieure, Paris: *Statistical properties of piecewise hyperbolic systems such as billiards: new-old tools from analysis*. 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 sidan 7.

SEMINARIUM I FINANSIELL MATEMATIK**William Sjöberg**

presenterar sitt examensarbete:

Structured products: optimal allocation in different market climates

Abstract: The purpose of this thesis is to investigate if there is any difference in optimal allocation in structured products in different market climates. There are four different market climates considered; low/high interest rate and low/high implied volatility, where three assets are available; a risk less asset (bond), a risky asset (equity index) and a structured product (bond and derivative). This is accomplished by extracting the risk neutral density from the option market for the two different implied volatility levels. The risk neutral density is then transformed to a real world density corresponding to different expected risk premiums. Utility relations are explored for investments in structured products and a representative investor is defined. Portfolio optimization is performed on each scenario where the objective is to maximize terminal expected utility.

Tid och plats: Måndagen den 23 februari kl. 16.15–17.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I MATEMATISK STATISTIK**Rolf Sundberg:****Flat and multimodal likelihoods and model lack of fit
in curved exponential families**

Abstract: It is well-known that curved exponential families can have multimodal likelihoods (several roots to the likelihood equation). We investigate the relationship between locally flat or multimodal likelihoods and model lack of fit, the latter measured by the score (Rao) test statistic of the curved model as embedded in the corresponding full model. We provide a formula for the score test statistic, or a lower bound for it, when data yield a locally flat or convex likelihood (root of multiplicity > 1 , terrace point, saddle point, local minimum). The formula is related to the statistical curvature of the model, and it depends on the amount of Fisher information. We use three models as examples, including the Behrens-Fisher model, to see how a flat likelihood, etc., by itself necessarily indicates a bad fit of the model if sample sizes are large.

Tid och plats: Onsdagen den 25 februari kl. 15.15 i rum 306 (Cramér-rummet), hus 6, Matematiska institutionen, SU, Kräftriket.

OPTIMIZATION AND SYSTEMS THEORY SEMINAR

Petter Ögren:

Task planning and control of Semi-autonomous Surveillance UGVs

Abstract: This talk will cover two results from the AURES project (Autonomous UGV-systems for REconnnaissance and Surveillance), which is part of the FMV-funded TAIS program (Technologies of Autonomous and Intelligent Systems).

The first result describes how feedback linearization can be used to enhance the user interface for teleoperation of tracked UGVs. By introducing an intermediate control layer, a user interface that is very similar to so-called first person shooter (FPS) computer games, e.g. Doom and Half Life, can be created. The advantages of such interfaces is that they are intuitive, and that literally millions of potential future UGV-operators already have spent hundreds of hours training with them. The control mode gives the user direct control of the position and orientation of the on-board camera, while the actual orientation of the vehicle is abstracted away using feedback linearization.

The second result deals with choosing positions for a group of UGVs such that the combined camera images can be used to carry out a given surveillance task. Two such tasks are considered. The first is to monitor all walls of a given set of buildings, while satisfying camera constraints in terms of range, field of view and resolution. The second task is to create a line-of-sight perimeter around a given set of buildings to keep track of anyone entering or leaving the area.

Tid och plats: Fredagen den 20 februari kl. 11.00 – 12.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PLURIKOMPLEXA SEMINARIET

Boris Shapiro:

On Heine-Stieltjes theory

Abstract: In the 1860's and 1870's Eduard Heine, who is mainly known for the Heine-Borel theorem in calculus, published a Grossbuch on spherical functions which was hardly ever read, especially not during the last 60 years. The only five pages which are often quoted in modern literature contain an incomplete proof of the following statement.

Consider a linear differential equation of the form

$$Q(x)S''(x) + P(x)S'(x) + V(x)S(x) = 0, \tag{*}$$

where $Q(x)$ and $P(x)$ are fixed polynomials of degree k and $\leq k - 1$ respectively, and where $V(x)$ is an undefined polynomial of degree $\leq k - 2$ which we will choose later. Then, if the coefficients of $Q(x)$ and $P(x)$ are algebraically independent, there exist for any given nonnegative integer N exactly $(k + N - 2)! / ((k - 2)!N!)$ choices of $V(x)$, providing the equation (*) with a polynomial solution $S(x)$ of degree N . The missing piece of his proof is related to elimination theory (which hardly existed at that time) and should be of interest to people in commutative algebra.

I shall present recent generalizations of Heine's results. This is a report on an ongoing project with Milos Tater, Kouichi Takemura and Thomas Holst. At the moment we are in urgent need of a definition of a Strebel differential of order greater than two. No special preliminary knowledge should be required in order to follow the talk.

Tid och plats: Tisdagen den 24 februari kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

SEMINARIUM I MATEMATISK STATISTIK

Akoo Hematbolland

presenterar sitt examensarbete:

Resource optimization in embedded systems based on data mining

Abstract: This master thesis discusses the resource optimization in embedded systems for Scania's trucks. It is about analysing historical sale data to find out more information about customers' choice. A big part of the work has focus upon studying appropriate methods and tools to the analysis. Since we are dealing with a large amount of data, data mining techniques have been used to find relevant information about customers' choice. Methods and data mining tools (log-likelihood distance and two step clustering) have been tested on five different functions. With data mining a company's knowledge about customers' choice can reduce costs and improve the value of customer relationships.

Tid och plats: Måndagen den 23 februari kl. 15.15–16.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

INSTITUT MITTAG-LEFFLER SEMINAR

Christophe Garban:

The Fourier spectrum of critical percolation

Abstract: The indicator function for the existence of a percolation crossing in an n by n square can be seen as a function on the discrete cube $\{-1, 1\}^E$, where E is the set of edges. As such, it admits a “Fourier” expansion. In a joint work with Gabor Pete and Oded Schramm, we obtain sharp estimates for the “weight” of the Fourier coefficients at different frequencies. This good understanding of the spectrum has nice consequences for the model of dynamical percolation. For instance, we can prove in the case of the triangular lattice that the dimension of exceptional times is $31/36$, and in the $\mathbb{Z}^2$ case, we can prove the existence of such exceptional times. (I will start by recalling a few facts about critical percolation in two dimensions.)

Tid och plats: Tisdagen den 24 februari kl. 14.00–15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

UTBILDNINGSEMINARIUM I MATEMATIK

KTH:s Virtuella Campus

Sammanfattning: Under våren drar ett flerårigt projekt igång på KTH under det preliminära namnet ”KTH:s Virtuella Campus”. Detta projekt har som mål att förbättra nätstödet för undervisningen. I samband med starten har vi en utmärkt möjlighet att komma med idéer och förslag. Tanken med utbildningsseminariet denna gång är att diskutera och komma på olika typer av kursadministrativa nätstöd som lärare och administrativ personal på institutionen kan ha nytta av. Tommy Ekola kommer att inleda med en presentation av några konkreta förslag och därefter lämnas öppet för diskussion.

Alla som anmäler sitt deltagande i seminariet till Mattias Dahl (dahl@kth.se) senast kvällen före seminariet får en lunchsmörgås.

Tid och plats: Fredagen den 27 februari kl. 12.15–13.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

INSTITUT MITTAG-LEFFLER SEMINAR

Federico Camia:

Ising Euclidean fields and cluster area measures

Abstract: I will discuss a representation for the magnetization field of the critical two-dimensional Ising model in the scaling limit as a (conformal) random field, using renormalized area measures associated with SLE (Schramm-Loewner Evolution) clusters. The renormalized areas come from the scaling limit of critical FK (Fortuin-Kasteleyn) clusters, and the random field is a convergent sum of the area measures with random signs. The representation is based on the interpretation of the lattice magnetization as the sum of the signed “areas” of clusters.

If time permits, extensions to off-critical scaling limits, to three dimensions and to Potts models will also be discussed. The talk will be based on joint work with C. Newman (<http://arxiv.org/abs/0812.4030>) and on work in progress with C. Garban and C. Newman.

Tid och plats: Tisdagen den 24 februari kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

KTH/SU MATHEMATICS COLLOQUIUM

Andrzej Zuk:

Groups generated by automata

Abstract: The class of automata groups contains several remarkable countable groups. Their study has led to the solution of a number of important problems in group theory. Its recent applications have extended to the fields of algebra, geometry, analysis and probability.

Tid och plats: Onsdagen den 25 februari kl. 16.00 i 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.

INSTITUT MITTAG-LEFFLER SEMINAR

Timo Seppäläinen:

Fluctuation bounds for a class of zero range processes

Abstract: We look at the fluctuations of the particle current in stationary one-dimensional asymmetric particle systems with nonlinear flux. It is expected that the current seen by an observer travelling at the characteristic speed has fluctuations of magnitude $t^{1/3}$ and limits that obey Tracy-Widom related distributions. The correct order of magnitude (in the sense of variance bounds) is known for asymmetric exclusion processes and some flavours of zero range and bricklayer processes. For exclusion processes exact distributional limits are also known. This talk discusses the case of zero range processes. We explain how the variance bound for the current follows from superdiffusive moment bounds for a second class particle. The proofs rely on coupling constructions.

The talk is based on joint work with Márton Balázs and Júlia Komjáthy, Budapest.

Tid och plats: Torsdagen den 26 februari kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Fredrik Johansson:

Optimal Hölder exponent of the SLE path and a rate of convergence for LERW

Abstract: The Schramm-Loewner evolution (SLE) is a family of random fractal curves that is obtained by solving the Loewner equation with a Brownian motion input. In recent years SLE has been shown to describe the scaling limits of several lattice models from statistical physics, such as loop-erased random walk (LERW), critical percolation, and the Ising model. In the talk, we discuss recent joint work with G. F. Lawler (University of Chicago), where we establish the optimal Hölder exponent of the SLE path parameterized by capacity. We also discuss joint work in progress with C. Benes (CUNY) and M. Kozdron (University of Regina) on obtaining a rate of the convergence of LERW to SLE(2).

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

INSTITUT MITTAG-LEFFLER SEMINAR

Alan Hammond:

Trapping of a biased random walk on a supercritical tree

Abstract: We discuss recent joint work with Gerard Ben Arous, in which the asymptotically stable behaviour of a biased random walk on a supercritical Galton-Watson tree is demonstrated. In the model in question, the bias is randomized, with a non-lattice condition on the bias law, to ensure that a stable law arises in the limit.

Tid och plats: Torsdagen den 26 februari kl. 15.30–16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

KTH/SU MATHEMATICS COLLOQUIUM

Viviane Baladi:

Statistical properties of piecewise hyperbolic systems such as billiards: new-old tools from analysis

Abstract: Strong ergodic properties (such as exponential mixing) have been proved for various smooth dynamical systems by first obtaining a spectral gap for a suitable “transfer” operator acting on an appropriate Banach space. Some natural dynamical systems, such as billiards, are only piecewise smooth, and this poses serious technical problems. I will try to explain recent joint work with Sebastien Gouezel, in which we show that classical tools such as complex interpolation on anisotropic Sobolev-Triebel spaces, and an old result of Strichartz on Fourier multipliers, can solve those problems. I will also briefly discuss recent improvements.

The talk is based on work together with Gouezel, Balint, Liverani.

Tid och plats: Onsdagen den 4 mars kl. 16.00–17.00 i 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.

OPTIMIZATION AND SYSTEMS THEORY SEMINAR

Bijoy Ghosh:

On the problem of looking optimally

Abstract: In this talk we study the problem of optimally moving the eyes. We formulate the problem of eye movement with a suitable Riemannian Metric. Using the Euler Lagrange Equation, we write down the associated dynamics. We choose a suitable quadratic cost function and derive the state/costate equation. We find that these equations have singularities and that they can be removed if the dynamics is defined on a set of charts that cover the manifold. In effect we have a Two Point Boundary Value Problem that is now described on multiple charts. The problem is addressed when the eye movement satisfies both the Listing's constraint and when it does not. Simulations show that the optimal trajectories are highly oscillatory.

Tid och plats: Måndagen den 2 mars kl. 11.00 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 2009. A number without an explanation is a telephone number.

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

Jobs to apply for

11. Uppsala universitet söker en eller två doktorander i finansiell matematik. Sista ansökningsdag är den 16 mars. Web-info:
<http://www.personalavd.uu.se/ledigaplatser/378dorand.html>.
12. Mittuniversitetet (Sundsvall) söker en doktorand i matematik. Sista ansökningsdag är den 1 mars. Web-info:
<http://www.miun.se/Mittuniversitetet/Nyheter/Lediga-jobb/NATdoktmatematik>.

(Continued on the next page.)

13. Mittuniversitetet (Sundsvall) söker en doktorand i matematik/tillämpad matematik med inriktning mot matematiska modeller och metoder för ljusspridning. Sista ansökningsdag är den 1 mars. Web-info: <http://www.miun.se/Mittuniversitetet/Nyheter/Lediga-jobb/NATdoktorandtillampadmatematik/>.
14. Institutionen för matematik vid KTH söker två doktorander i finansiell matematik/matematisk statistik. Sista ansökningsdag är den 30 april. Web-info: <http://www.math.kth.se/finansdoks.html>.

Old information

Money to apply for

15. Sigrid Arrhenius Stipendiefond utlyser ett stipendium om 65 000 kr som ekonomiskt stöd åt en lovande forskare vid Stockholms universitets Naturvetenskapliga fakultet som avser att avlägga doktorsexamen under åren 2009 eller 2010. Sista ansökningsdag är den 27 februari. Web-info: <http://www.science.su.se/pub/jsp/polopoly.jsp?d=11800&a=56671>.
16. Vetenskapsrådet utlyser bidrag till anställning som postdok i Sverige. Bidraget skall ge möjlighet för forskare med svensk doktorsexamen eller med utländsk examen som bedöms motsvara doktorsexamen att vistas vid svensk högskola eller svenskt forskningsinstitut. Sista ansökningsdag är den 26 februari. Web-info: <http://www.vr.se/huvudmeny/sokabidrag/vetenskapsradetsutlysningar/utlysningvy.4.aad30e310abcb9735780004381.html?resourceId=-1873&languageId=1>.
17. Vetenskapsrådet utlyser postdoktorsstipendium. Stipendierna skall ge möjlighet för forskare med svensk doktorsexamen eller examen från EUI (European University Institute) att vistas vid utländskt universitet eller forskningsinstitut. Sista ansökningsdag är den 26 februari. Web-info: <http://www.vr.se/huvudmeny/sokabidrag/vetenskapsradetsutlysningar/utlysningvy.4.aad30e310abcb9735780004381.html?resourceId=-1935&languageId=1>.
18. Svenska matematikersamfundet utlyser resestipendier (Knut och Alice Wallenbergs stiftelses resefond och Mats Esséns minnesfond) avsedda för forskare som ej ännu avlagt doktorsexamen. Wallenbergsstipendierna (högst 3000 kr/person) är till för att utnyttjas som delfinansiering för konferensresor och kortare utlandsvistelser. Essénstipendierna (högst 6000 kr/person) är i första hand avsedda för deltagande i sommarskolor och liknande aktiviteter. Sista ansökningsdag är den 31 mars. Web-info: <http://www.maths.lth.se/matematiklu/personal/dencker/resebidrag.html>.
19. 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. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=11&br=ns&ver=6up.

Jobs to apply for

20. Helsingfors universitet söker två universitetslektorer i matematik. Utländska sökande behöver inte kunna tala finska eller svenska. Sista ansökningsdag är den 4 mars. Web-info: <http://www.helsinki.fi/facultyofscience/vacancies/universitylecturer.html>.
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