BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 13 **FREDAGEN DEN 3 APRIL 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: Onsdagen den 8 april kl. 13.00.

Belöning till Ola Hössjer

Kungl. Vetenskapsakademien har beslutat att *professor Ola Hössjer* skall få 2009 års Göran Gustafssonpris i matematik. Se sidan 5.

Nordic university-level mathematics team-competition

Denna skall äga rum den 16 – 20 april. Se sidan 8.

SEMINARIER

Fr 04–03 kl. 13.15 – 14.15. Graduate Student Seminar. Dan Petersen, Matematik, KTH: *Some neat results from model theory about algebraically closed fields.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 3.

Fr 04–03 kl. 15.15 – 16.15. Matematiska kollokviet i Uppsala. *(Observera lokalen!)* **Ulf Persson,** Chalmers tekniska högskola, Göteborg: *Surfaces in your backyard — an introduction to the classification of surfaces.* Siegbahnsalen, Ångströmlaboratoriet, Uppsala universitet. Kaffe/te serveras utanför föreläsningssalen kl. 14.55. Se Bråket nr 12 sidan 6.

Fortsättning på nästa sida.

Disputation i matematisk statistik

Andreas Lindell skall disputera på avhandlingen *Theoretical and Practical Applications of Probability: Excursions in Brownian Motion, Risk Capital Stress Testing, and Hedging of Power Derivatives* fredagen den 3 april kl. 13.00 i sal 14, hus 5, Matematiska institutionen, SU, Kräftriket. Se Bråket nr 11 sidan 5.

Disputation i datalogi

Magnus Rosell skall disputera vid KTH på avhandlingen *Text Clustering Exploration — Swedish Text Representation and Clustering Results Unraveled* måndagen den 6 april kl. 13.15. Se sidorna 7 – 8.

Nästa nummer av Bråket

utkommer den 9 april, på skärtorsdagen. Material måste vara red. tillhanda senast onsdagen den 8 april kl. 13.00.

Money, jobs: Se sidorna 9 – 10.

Seminarier (fortsättning)

Ti 04–07 kl. 13.15. Plurikomplexa seminariet. Annemarie Luger, Lund: *Om generaliserade Nevanlinnafunktioner.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 3.

Ti 04–07 kl. 14.00 – 15.00. Institut Mittag-Leffler Seminar. Colin McDiarmid, University of Oxford: *Random graphs with few disjoint cycles.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 4.

Ti 04–07 kl. 15.30 – 16.30. Institut Mittag-Leffler Seminar. Rob van den Berg, CWI, Amsterdam: *Sharpness of percolation transitions in some dependent two-dimensional models.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 5.

On 04–08 kl. 13.15. Algebra and Geometry Seminar. Lars Halvard Halle, Leibniz Universität Hannover: *Motivic zeta functions of abelian varieties.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 4.

On 04–08 kl. 15.15. Seminarium i matematisk statistik. Malvina Luczak, London School of Economics: *Laws of large numbers for epidemic models with countably many types.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 4.

To 04–09 kl. 10.30. Seminar in Fluid Mechanics. Yohann Duguet, Mekanik, KTH: *Localized patterns in transitional shear flows: pipe flow and plane Couette flows.* Seminarierummet, Institutionen för mekanik, KTH, Teknikringen 8. Se sidan 3.

Ti 04–14 kl. 14.00 – 15.00. Institut Mittag-Leffler Seminar. Bela Bollobas, University of Cambridge: *Projections, entropy and sumsets.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

Ti 04–14 kl. 15.30 – 16.30. Institut Mittag-Leffler Seminar. Johan Jonasson, Chalmers tekniska högskola, Göteborg: *The bottom-to-top shuffle and the overlapping cycles shuffle.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 8.

On 04–15 kl. 13.15 – 14.15. Seminarium i analys och dynamiska system. Per Sjölin, KTH: *Maximal operators of Schrödinger type with a complex parameter.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 9.

To 04–16 DNA-seminariet Uppsala-KTH (Dynamical systems, Number theory, Analysis). Johan Andersson: *Title to be announced.* Seminariet skall äga rum i Uppsala. Tid och sal meddelas senare.

To 04–16 kl. 14.00 – 15.00. Institut Mittag-Leffler Seminar. Vlada Limic, Université de Provence, Marseille: *The Lambda-coalescent speed of coming down from infinity.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

To 04–16 kl. 15.30 – 16.30. Institut Mittag-Leffler Seminar. Anders Martin-Löf, Stockholms universitet: *Pfaff, Ising and statistical mechanics.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

GRADUATE STUDENT SEMINAR

Dan Petersen:
Some neat results from model theory about algebraically closed fields

Abstract: Model theory, and mathematical logic in general, has a reputation as a discipline of mathematics with few applications in "everyday" pure mathematics. With a big disclaimer that I know very little model theory, I will show how some simple results in model theory can prove striking results in algebra. Of course all this is classical but maybe not so well-known for non-model theorists. If time permits we shall see how one can use the notions of *completeness* and *quantifier elimination* to prove, respectively: (i) Ax's theorem (every injective morphism from an algebraic variety over an algebraically closed field to itself is surjective), by reducing to proving it for varieties over finite fields (for which the result is trivial!); (ii) the Nullstellensatz (every nontrivial ideal I in $k[x_1, \ldots, x_n]$ has a common zero) by reducing to proving that I has a common zero in some algebraically closed extension field of k (which again is trivial!). I will assume no particular knowledge of model theory or algebra.

Tid och plats: Fredagen den 3 april kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PLURIKOMPLEXA SEMINARIET

Annemarie Luger:
Om generaliserade Nevanlinnafunktioner

Sammanfattning: En analytisk funktion som avbildar det övre halvplanet på sig självt kallas för en Nevanlinnafunktion (även Herglotz- eller R-funktion) och dessa funktioner är mycket väl studerade.

I föredraget fokuserar vi på en större klass av funktioner, de så kallade generaliserade Nevanlinnafunktionerna, som även kan ha vissa singulariteter. Vi ger en överblick som sträcker sig från den operatorteoretiska bakgrunden fram till några tillämpningar.

Tid och plats: Tisdagen den 7 april kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

SEMINAR IN FLUID MECHANICS

Yohann Duguet:
Localized patterns in transitional shear flows:
pipe flow and plane Couette flows

Abstract: In this talk I will present recent numerical results about subcritical transition in shear flows. The notion of edge states, describing the mild dynamics at the exact threshold of transition, is here extended to large hydrodynamical systems displaying spatio-temporal intermittency. In pipe flow (resp. Couette flow), I will show using full DNS and a reduced order model how slugs (resp. spots) result from the instability of localized edge states. Finally, I will focus on the formation of stable localized turbulent patterns in plane Couette flow (stripes), typical of the lowest values of Re where transition is observed.

Tid och plats: Torsdagen den 9 april kl. 10.30 i seminarierummet, Institutionen för mekanik, KTH, Teknikringen 8.

INSTITUT MITTAG-LEFFLER SEMINAR

Colin McDiarmid:
Random graphs with few disjoint cycles

Abstract: Fix a positive integer k and consider the collection of graphs with no $k+1$ vertex-disjoint cycles. We introduce an extension of a classical result of Erdős and Pósa; and deduce that almost all such labelled graphs on the vertex set $1, \ldots, n$ have a set of k nodes hitting all cycles. This yields an asymptotic counting formula for such graphs; and allows us to deduce further properties of a graph R_n taken uniformly at random from the class: we see for example that the probability that R_n is connected tends to a specified limit as $n \to \infty$. The graphs considered here may be thought of as those with no $k+1$ disjoint C_3-minors. We consider also variants involving different excluded minors, for example where there are no $k+1$ disjoint C_4-minors.

This is joint work with Valentas Kurauskas.

Tid och plats: Tisdagen den 7 april kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

ALGEBRA AND GEOMETRY SEMINAR

Lars Halvard Halle:
Motivic zeta functions of abelian varieties

Abstract: I will discuss recent work, which is joint with Johannes Nicaise.

To any abelian variety A defined over a discretely valued field, we associate a motivic zeta function $Z(A;T)$, which measures the behaviour of the Néron model of A under tame base change. In residue characteristic zero, the zeta function is rational, and we compute explicitly the poles and their orders. Furthermore, we show that a global version of Denef and Loeser's motivic monodromy conjecture is satisfied for A.

The situation in positive characteristic will also be discussed. In this case we obtain partial results.

Tid och plats: Onsdagen den 8 april kl. 13.15 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I MATEMATISK STATISTIK

Malvina Luczak:
Laws of large numbers for epidemic models with countably many types

Abstract: In modelling parasitic diseases, it is natural to distinguish hosts according to the number of parasites that they carry, leading to a countably infinite type space. Proving the analogue of the deterministic equations, used in models with finitely many types as a "law of large numbers" approximation to the underlying stochastic model, has previously either been done case by case, using some special structure, or else not attempted. In this work, we prove some general theorems of this sort, and complement them with rates of convergence. In this talk, we describe joint work with Andrew Barbour, some of it completed and some in progress.

Tid och plats: Onsdagen den 8 april kl. 15.15 i rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket.

INSTITUT MITTAG-LEFFLER SEMINAR

Rob van den Berg:
Sharpness of percolation transitions
in some dependent two-dimensional models

Abstract: Ordinary (independent) percolation models have a sharp percolation transition: below the percolation threshold the cluster size distribution has exponential decay. For two-dimensional models this was first proved by Kesten (1980).

In 1981 Russo proved a so-called approximate zero-one law and pointed out that a key step in Kesten's argument can be seen as a special case of this more general law. A few years ago, results by Bollobas and Riordan for the two-dimensional Voroinoi percolation model triggered new research in that direction.

I will discuss some other spatially dependent two-dimensional models where approximate zero-one laws (also called sharp-threshold results) have been applied recently with varying levels of success.

Tid och plats: Tisdagen den 7 april kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

Ola Hössjer får Göran Gustafssonpriset i matematik

Kungl. Vetenskapsakademien har beslutat att *Ola Hössjer,* professor i matematisk statistik vid Stockholms universitet, skall få 2009 års Göran Gustafssonpris i matematik. Prissumman är 4,6 miljoner kr, varav 100 000 kr är en personlig belöning och 4,5 miljoner kr skall finansiera pristagarens forskning. Ola Hössjer får priset "för att han på ett fruktbart sätt lyckats förena stora teoretiska insatser inom matematisk statistik med mycket intressanta tillämpningar inom modern vetenskap och teknik, inte minst inom statistisk genetik".

Följande är en populärvetenskaplig beskrivning, hämtad från KVA:s hemsida:

Ola Hössjers forskning handlar om matematiska metoder att dra slutsatser från data behäftade med slumpvariation, *statistisk inferensteori.* Han har tillämpat dessa metoder inom flera olika områden, bland annat signalbehandling, genetik och försäkringsmatematik.

I ett arbete utvecklas en generell teori för skattning av funktioner med ordningsrestriktioner med hjälp av statistiskt självlikformiga processer. Ett enkelt exempel är skattning av dos-responskurvor, som oftast är växande och anger den medicinska effekten av ett läkemedel som funktion av dess koncentration i kroppen.

Ola Hössjer har intresserat sig för *multifraktaler,* objekt med oregelbunden form som återfinns inom många områden, exempelvis geofysik. I ett arbete erhålls nya generella resultat för det så kallade dimensionsspektrat hos multifraktaler, samt hur man kan skatta detta med insamlade data.

Under de senaste åren har Ola Hössjer huvudsakligen koncentrerat sin forskning till *statistisk genetik,* speciellt genletningsmetoder för ärftliga sjukdomar. Han har erhållit nya resultat för hur stora datamaterial som krävs för att lokalisera sjukdomsgener längs kromosomer samt beräknat sannolikheten för att sådana gener inte upptäcks. Grunden för resultaten är den slumpvariation som uppstår genom Mendelsk nedärvning av DNA, överkorsningar av genetiskt material och spridning av en sjukdomsorsakande mutation till en viss andel av befolkningen. I vissa av arbetena används metoder från populationsgenetiken, så kallade koalescensprocesser.

Låt oss hjärtligt gratulera Ola till denna förnämliga utmärkelse!

Mikael Passare

INSTITUT MITTAG-LEFFLER SEMINAR

Bela Bollobas:
Projections, entropy and sumsets

Abstract: In this talk I shall review Shearer's entropy inequality and its strengthening due to Madiman and Tetali, together with the projection inequality I proved with Thomason about fifteen years ago that generalizes the classical sixty-year-old Loomis-Whitney inequality. Furthermore, I shall present the common extensions of all these inequalities Paul Balister and I have proved recently. We have used these results to strengthen some of the inequalities concerning sums of sets of integers proved recently by Gyarmati, Matolcsi and Ruzsa.

Tid och plats: Tisdagen den 14 april kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

INSTITUT MITTAG-LEFFLER SEMINAR

Vlada Limic:
The Lambda-coalescent speed of coming down from infinity

Abstract: Consider a Lambda-coalescent that comes down from infinity, or equivalently, that starts from a configuration containing infinitely many blocks at time 0 and attains a configuration containing a finite number N_t of blocks at any time $t > 0$, almost surely. We exhibit a deterministic function $v : (0, \infty) \to (0, \infty)$, such that $N_t/v(t) \to 1$, almost surely and in L^p for any $p \geq 1$, as $t \to 0$. Our approach relies on martingale methods.

The talk is based on a joint work with Julien and Nathanael Berestycki.

Note: I propose to use the whole hour in the format of "question followed by an answer", in hope of recreating the atmosphere of an informal discussion that takes place in one's office. No prerequisite in the subject matter is assumed. Come interested!

Tid och plats: Torsdagen den 16 april kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

INSTITUT MITTAG-LEFFLER SEMINAR

Anders Martin-Löf:
Pfaff, Ising and statistical mechanics

Abstract: In statistical mechanics the Ising model was constructed to provide a simple non-trivial model of a ferromagnetic system where a phase transition occurs at a critical temperature. This was shown by Onsager's ingenious exact calculation of the free energy of the system around 60 years ago. His result was considered quite complicated at the time. Later in the sixties another method was presented by Kasteleyn who used an "elementary" but ingenious combinatorial-analytical method reducing the problem to evaluating the "Pfaffian" of a certain matrix. His method will be presented in the talk and the concepts needed will be explained. It is hoped that this beautiful piece of work will be appreciated as a basic ingredient needed in anybody's education in statistical mechanics.

Tid och plats: Torsdagen den 16 april kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

DISPUTATION I DATALOGI

Magnus Rosell

skall disputera på avhandlingen

Text Clustering Exploration —
Swedish Text Representation and Clustering Results Unraveled

måndagen den 6 april 2009 kl. 13.15 i sal F3, KTH, Lindstedtsvägen 26, b.v. Till opponent har utsetts *professor Tapio Salakoski,* Department of Information Technology, University of Turku, Finland.

Abstract of the thesis

Text clustering divides a set of texts into clusters (parts), so that texts within each cluster are similar in content. It may be used to uncover the structure and content of unknown text sets as well as to give new perspectives on familiar ones. The main contributions of this thesis are an investigation of text representation for Swedish and some extensions of the work on how to use text clustering as an exploration tool. We have also done some work on synonyms and evaluation of clustering results.

Text clustering, at least such as it is treated here, is performed using the vector space model, which is commonly used in information retrieval. This model represents texts by the words that appear in them and considers texts similar in content if they share many words. Languages differ in what is considered a word. We have investigated the impact of some of the characteristics of Swedish on text clustering.

Swedish has more morphological variation than for instance English. We show that it is beneficial to use the lemma form of words rather than the word forms. Swedish has a rich production of solid compounds. Most of the constituents of these are used on their own as words and in several different compounds. In fact, Swedish solid compounds often correspond to phrases or open compounds in other languages. Our experiments show that it is beneficial to split solid compounds into their parts when building the representation.

The vector space model does not regard word order. We have tried to extend it with nominal phrases in different ways. We have also tried to differentiate between homographs, words that look alike but mean different things, by augmenting all words with a tag indicating their part of speech. None of our experiments using phrases or part of speech information have shown any improvement over using the ordinary model.

Evaluation of text clustering results is very hard. What is a good partition of a text set is inherently subjective. External quality measures compare a clustering with a (manual) categorization of the same text set. The theoretical best possible value for a measure is known, but it is not obvious what a good value is — text sets differ in difficulty to cluster, and categorizations are more or less adapted to a particular text set. We describe how evaluation can be improved for cases where a text set has more than one categorization. In such cases the result of a clustering can be compared with the result for one of the categorizations, which we assume is a good partition.

In some related work we have built a dictionary of synonyms. We use it to compare two different principles for automatic word relation extraction through clustering of words.

Text clustering can be used to explore the contents of a text set. We have developed a visualization method that aids such exploration, and implemented it in a tool, called Infomat. It presents the representation matrix directly in two dimensions. When the order of texts and words are changed, by for instance clustering, distributional patterns that indicate similarities between texts and words appear.

(Continued on the next page.)

We have used Infomat to explore a set of free text answers about occupation from a questionnaire given to over 40 000 Swedish twins. The questionnaire also contained a closed answer regarding smoking. We compared several clusterings of the text answers to the closed answer, regarded as a categorization, by means of clustering evaluation. A recurring text cluster of high quality led us to formulate the hypothesis that "farmers smoke less than the average", which we later could verify by reading previous studies. This hypothesis generation method could be used on any set of texts that is coupled with data that is restricted to a limited number of possible values.

INSTITUT MITTAG-LEFFLER SEMINAR

Johan Jonasson:
The bottom-to-top shuffle and the overlapping cycles shuffle

Abstract: The mixing time of two somewhat similar card shuffles will be considered. The bottom-to-top shuffle is the shuffle where a deck of n cards is shuffled by at each step picking uniformly at random one of the bottom $k = k(n)$ cards and moving that card to the top of the deck. For this shuffle it is known that the mixing time is of order $(n^3/k^2)\log n$; I will explain how to prove this.

For the overlapping cycles, each step consists of picking either the bottom card or the k'th bottom card, each with probability 1/2, and moving that card to the top. For this shuffle, no upper bound is known. Lower bounds which are believed to be tight are known only when k is a constant. I will explain some of the difficulties that arise when one tries to analyse this shuffle. My hope is that the listener will find this to be an attractive open problem.

Tid och plats: Tisdagen den 14 april kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

Nordic university-level mathematics team-competition, NMC

The third Nordic mathematics competition for university students will be arranged in April 2009. The participants in this competition should be Bachelor's or Master's level students in Nordic universities. The competition is team based, and a team consists of 3 – 5 students.

The competition starts on Thursday, April 16, at 12.00 and ends on Monday, April 20, at 18.00. Teams must register before Tuesday, April 14, at 12.00.

The teams will solve a set of mathematical problems at their own institutions during four day's time and submit the solutions by e-mail. The level of the problems will be chosen so as to provide even the most able of students with sufficient challenge.

Members of the faculties are asked to suggest problems, preferably latest on Wednesday, April 8. A good problem is challenging but does not require extensive knowledge of advanced mathematical theories.

For more information, see http://cc.oulu.fi/~phasto/competition/.

Please send proposals for problems and team registrations to Hans Rullgård (hansr@math.su.se).

The competition is organized under the auspices of the Finnish, Norwegian and Swedish Mathematical Societies.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Per Sjölin:

Maximal operators of Schrödinger type with a complex parameter

Abstract: Maximal operators of Schrödinger type but with a complex parameter are considered. For these operators we obtain results which in a certain sense lie between the results for the corresponding maximal operator for solutions to the Schrödinger equation and for solutions to the heat equation.

Tid och plats: Onsdagen den 15 april 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 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. SU söker två doktorander i matematik. Anställningarna har ämnesbeskrivningarna "Geometric invariants of finite groups" respektive "Geometry on configuration spaces with applications to homological algebra, number theory, and quantization". Sista ansökningsdag är den 4 maj. Web-info: http://www.math.su.se/content/1/c6/02/88/39/applic09.pdf.
12. SU söker två doktorander i matematisk statistik. Sista ansökningsdag är den 4 maj. Web-info: http://www.math.su.se/content/1/c6/02/88/39/FoutbVT09.pdf.
13. KTH söker en lektor i matematisk statistik. Sista ansökningsdag är den 20 april. Web-info: http://www.kth.se/aktuellt/tjanster/2/ShowAdd.aspx?ID=153685.
14. Lunds universitet söker en eller två doktorander i matematisk statistik. Sista ansökningsdag är den 8 maj. Web-info: http://www3.lu.se/info/lediga/admin/document/PA2009-1208eng.pdf.

(Continued on the next page.)

15. Uppsala universitet söker en professor i matematisk statistik. Sista ansökningsdag är den 15 maj. Web-info: http://www.math.uu.se/inform/vacant.php.

Old information

Money to apply for

16. Vetenskapsrådet utlyser projektbidrag. Dessa ges under en bestämd period för forskning i syfte att lösa en definierad forskningsuppgift. Bidraget söks av enskild forskare och ges under längst fem år. Projektbidraget kan innefatta medel för löner för olika typer av anställningar, materiel, resor, publiceringskostnader m.m. samt utrustning till en kostnad lägre än 2 000 000 kr, exklusive indirekta kostnader. Minsta möjliga belopp att söka för projektbidrag är 100 000 kr per år, exklusive indirekta kostnader. Sista ansökningsdag är den 15 april. Web-info: http://www.vr.se/huvudmeny/sokabidrag/vetenskapsradetsutlysningar/utlysningsvy.4.aad30e310abcb9735780004381.html?resourceId=-1945&languageId=1.

Jobs to apply for

17. Uppsala universitet söker en professor i statistik. Sista ansökningsdag är den 20 april. Web-info: http://www.personalavd.uu.se/ledigaplatser/340prof.html.
18. Uppsala universitet söker tre doktorander i statistik. Sista ansökningsdag är den 15 april. Web-info: http://www.personalavd.uu.se/ledigaplatser/579dorand.html.
19. 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/finansdokt.html.
20. Umeå universitet söker en universitetslektor i matematisk statistik. Sista ansökningsdag är den 3 april. Web-info: http://www8.umu.se/umu/aktuellt/arkiv/lediga_tjanster/312-103-09.html.
21. Vetenskapsrådet utlyser bidrag för anställning som forskarassistent. Sista ansökningsdag är den 15 april. Web-info: http://www.vr.se/huvudmeny/sokabidrag/vetenskapsradetsutlysningar/utlysningsvy.4.aad30e310abcb9735780004381.html?resourceId=-1839&languageId=1.