BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 27 **FREDAGEN DEN 16 SEPTEMBER 2005**

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 22 september kl. 13.00.

Disputation i matematik

Jesper Tidblom disputerar vid SU på avhandlingen *Improved L^p Hardy Inequalities* onsdagen den 21 september kl. 10.00. Se sidan 10.

Disputation i matematik

Tomas Ekholm disputerar vid KTH på avhandlingen *Schrödinger Operators in Waveguides* fredagen den 23 september kl. 10.00. Se sidan 7.

SEMINARIER

Fr 09–16 kl. 13.00 – 14.00. Small talk seminar. Roy Skjelnes: *Algebraic spaces.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 7.

Fr 09–16 kl. 13.15. Mathematical Physics Seminar. Vadim Kuznetsov, Leeds University: *Eigenproblem for Jacobi matrices: hypergeometric series solution.* Seminarierummet i hus 11 (rum 112:028), Roslagstullsbacken 11, AlbaNova universitetscentrum. Se sidan 16.

Fortsättning på nästa sida.

Disputation i matematik

Göran Hamrin disputerar vid Uppsala universitet på avhandlingen *Effective Domains and Admissible Domain Representations* torsdagen den 29 september kl. 10.15. Se sidan 14.

Kurser

Håkan Hedenmalm: Bergmanrum och kärnfunktioner. Se sidan 13.

Anders Szepessy: Computational Methods Coupling Molecular Dynamics and Continuum Differential Equations. Se sidan 16.

Workshop in Spectral Theory of PDE

Denna äger rum vid KTH torsdagen den 22 september. Se sidan 6.

Gästforskare vid Uppsala universitet

Professor Helmut Schwichtenberg är gäst i Uppsala. Se sidan 5.

Seminarier (fortsättning)

Må 09–19 kl. 10.15. Seminarium i teoretisk datalogi. Tarmo Uustalu, Institute of Cybernetics, Tallinn: *A compositional natural semantics and Hoare logic for low-level languages.* Rum 1537, Nada, KTH, Lindstedtsvägen 3, plan 5. Se Bråket nr 26 sidan 6.

Må 09–19 kl. 13.00. Licentiatseminarium i teoretisk datalogi. Johan Glimming, Nada, KTH, presenterar sin licentiatavhandling: *Dialgebraic Semantics of Typed Object Calculi.* Opponent: **Tarmo Uustalu,** Institute of Cybernetics, Tallinn. Sal D3, KTH, Lindstedtsvägen 5, b.v. Se Bråket nr 26 sidan 3.

Må 09–19 kl. 13.15 – 14.15. Seminar in Analysis and its Applications. Vladimir Tkachev: *Positive definite collections.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 26 sidorna 6 – 7.

Må 09–19 kl. 15.15 – 16.00. Seminarium i finansiell matematik. Carl Mikael Bergman presenterar sitt examensarbete: *Estimating Volatility Structures for Pricing Options with Electricity Forwards and Futures as Underlying Assets.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 26 sidan 5.

Må 09–19 kl. 15.15. PDF Seminar (Partial Differential Equations and Finance). Henrik Shahgholian, KTH: *American type options, and free boundary regularity.* Sal 3513, MIC, Polacksbacken, Uppsala universitet. Se sidan 4.

The PDF Seminars will be given about once a month, alternating between Uppsala University and KTH.

Må 09–19 kl. 15.30 – 16.30. Mittag-Leffler Seminar. *(Extra seminar. Please note the day!)* **Robin S. Johnson,** University of Newcastle: *Tsunamis.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

Må 09–19 kl. 16.15 – 17.00. Seminarium i finansiell matematik. Magnus Kullberg presenterar sitt examensarbete: *Valuing Credit Default Swaps.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 26 sidan 4.

Ti 09–20 kl. 13.30. Plurikomplexa seminariet. *(Observera tiden!)* **Norman Levenberg,** Bloomington: *A Hilbert Lemniscate Theorem in* C^2. Sal 2215, MIC, Polacksbacken, Uppsala universitet. Se sidan 5.

Ti 09–20 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Michael Struwe, ETH, Zürich: *Uniqueness for nonlinear wave equations.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

Ti 09–20 kl. 15.15. Plurikomplexa seminariet. *(Observera tiden!)* **Stefanie Nivoche,** Toulouse: *Polynomial convexity, Pluricomplex Green Function for a compact set in* $\mathbf{C}^n$ *and applications.* Sal 2215, MIC, Polacksbacken, Uppsala universitet. Se sidan 5.

Ti 09–20 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Evgeni Korotyaev, Humboldt-Universität, Berlin: *Spectral estimates for Schrödinger operators with periodic matrix potentials on the real line.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

Fortsättning på nästa sida.

Seminarier (fortsättning)

On 09–21 kl. 8.45 – 9.35. Presentation av examensarbete i matematisk statistik. Marina Ann Stolin: *Analysing the accident frequency of the Commercial Airlines Total Loss Catastrophes.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 11.

On 09–21 kl. 9.40 – 10.25. Presentation av examensarbete i matematisk statistik. Vasileios Keisoglou: *Application of statistical methods in the determination of health loss distribution and health claims behaviour.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 11.

On 09–21 kl. 10.15 – 11.15. Kombinatorikseminarium. Håkan Lennerstad, Blekinge Tekniska Högskola: *Double optimization, over partitions and matrices, of an operator on* 0,1*-matrices.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 6.

On 09–21 kl. 10.30 – 12.15. Logikseminariet Stockholm-Uppsala. *(Observera tiden!)* **Steve Vickers,** Birmingham: *Classifying categories.* Sal 3513 (hus 3), MIC, Polacksbacken, Uppsala universitet. Se sidorna 13 – 14.

Logikseminarierna i Uppsala kommer i fortsättningen att äga rum på förmiddagar.

On 09–21 kl. 10.45 – 11.30. Presentation av examensarbete i matematisk statistik. Katarzyna Grabowska: *Occurrence of invasive pneumococcal disease and number of excess cases due to influenza.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 12.

On 09–21 kl. 11.35 – 12.20. Presentation av examensarbete i matematisk statistik. Anna Naziropoulou: *Simulering av inflations- och återförsäkringsinverkan på avsättning för oreglerade skador med hänsyn till Solvens II.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 12.

On 09–21 kl. 13.15 – 14.15. Seminarium i analys och dynamiska system. A. Borichev, Bordeaux: *Sampling and interpolation in radial weighted spaces of analytic functions.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

On 09–21 kl. 15.15. Plurikomplexa seminariet. *(Extra seminarium. Observera dagen och tiden!)* **Jan Wiegerinck,** Amsterdam: *Pluripolar hulls and topology.* Sal 2215, MIC, Polacksbacken, Uppsala universitet. Se sidan 8.

To 09–22 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Kristian Jenssen, Pennsylvania State University: *Systems of conservation laws with prescribed wave curves.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

To 09–22 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Mario Ohlberger, Universität Freiburg: *A posteriori error control for approximations of non-linear conservation laws.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

To 09–22 kl. 17.00. Plurikomplexa seminariet. *(Extra seminarium. Observera dagen och tiden!)* **Frank Kutzschebauch,** Sundsvall: *On the density property.* Sal 2215, MIC, Polacksbacken, Uppsala universitet. Se sidan 9.

Fr 09–23 kl. 11.00 – 12.00. Optimization and Systems Theory Seminar. Jakob Björnberg, KTH och University of Cambridge: *Robust model predictive control for constrained, linear systems through approximate dynamic programming.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.

Fortsättning på nästa sida.

Seminarier (fortsättning)

Må 09–26 kl. 13.15–14.15. Seminar in Analysis and its Applications. Erik Lindgren, KTH: *On the regularity of a singular variational problem.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 10.

On 09–28 kl. 13.15–14.15. Seminarium i analys och dynamiska system. Professor emeritus Richard Beals, Yale University: *Exact solutions of some linear PDE: (almost) elliptic and (almost) hyperbolic.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

On 09–28 kl. 13.15–15.00. Algebra- och geometriseminarium. Mattias Jonsson: *The valuative tree.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

On 09–28 kl. 16.00–17.00. KTH/SU Mathematics Colloquium. Professor emeritus Richard Beals, Yale University: *The KdV and Camassa-Holm equations.* 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 8.

To 09–29 kl. 10.15. Licentiatseminarium i infrastruktur, särskild inriktning mot risk och säkerhet. Per Näsman presenterar sin licentiatavhandling: *Risk Analysis — A Tool in Decision-making. Empirical examples from the area of transportation and the field of medicine.* Opponent/granskare: **Dr Björn Jonsson.** Sal V12, KTH, Teknikringen 72, entréplanet. Se sidan 15.

To 09–29 kl. 13.00–15.00. Seminarium i statistik. *(Observera dagen!)* **Professor Tom Snijders,** University of Groningen: *Statistical methods for the simultaneous dynamics of social networks and individual behaviour.* Sal B705, Statistiska institutionen, SU, Universitetsvägen 10B, plan 7, Frescati. Se sidan 9.

Professor Snijders skall promoveras till hedersdoktor vid Samhällsvetenskapliga fakulteten, SU, fredagen den 30 september.

Fr 09–30 kl. 11.00–12.00. Optimization and Systems Theory Seminar. Rembert Reemtsen, Brandenburg University of Technology Cottbus: *Title to be announced.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PDF SEMINAR
(PARTIAL DIFFERENTIAL EQUATIONS AND FINANCE)

Henrik Shahgholian:
American type options, and free boundary regularity

Abstract: We discuss the behaviour of the exercise region for multi-asset American put options close to maturity. We will present the result in the context of the regularity theory for fully nonlinear parabolic obstacle problems. We also present some ideas (based on geometric evolution of surfaces) for analysing the exercise region for more complex payoffs such as max-value of two underlyings for both put and call options. If time permits, we also present some ideas/questions for the barrier and Bermudan options.

Tid och plats: Måndagen den 19 september kl. 15.15 i sal 3513, MIC, Polacksbacken, Uppsala universitet.

PLURIKOMPLEXA SEMINARIET

Norman Levenberg:
A Hilbert Lemniscate Theorem in C^2

Abstract: Given a compact set K with connected complement in the complex plane C (i.e., K is polynomially convex) and given an arbitrary open neighbourhood U of K, the Hilbert Lemniscate Theorem says that there exists a holomorphic polynomial p with sup-norm one on K so that the lemniscate $L := \{z : |p(z)| \leq 1\}$ is contained in U. Moreover, one can construct a sequence $\{p_n\}$ of polynomials with $\deg(p_n) = n$ so that the normalized counting measure of the zeros associated to p_n converges to the potential-theoretic equilibrium measure for K. Let K be a compact, polynomially convex circled set in C^2. We construct a sequence of pairs $\{P_n, Q_n\}$ of homogeneous polynomials in two variables with $\deg(P_n) = \deg(Q_n) = n$ such that the sets $K_n := \{(z, w) : |P_n(z, w)| \leq 1, |Q_n(z, w)| \leq 1\}$ approximate K and the normalized discrete measures μ_n associated to the finite set $\{P_n = Q_n = 1\}$ converge to the pluripotential-theoretic Monge-Ampère measure for K. The key ingredient is an approximation theorem for subharmonic functions of logarithmic growth in one complex variable.

This is joint work with T. Bloom and Y. Lyubarskii.

Tid och plats: Tisdagen den 20 september kl. 13.30 i sal 2215, MIC, Polacksbacken, Uppsala universitet.

PLURIKOMPLEXA SEMINARIET

Stefanie Nivoche:
Polynomial convexity, Pluricomplex Green Function for a compact set in $\mathbf{C}^n$ and applications

Abstract: We generalize Hilbert's Lemniscate Theorem to $\mathbf{C}^n$. More precisely, any polynomially convex compact subset K of $\mathbf{C}^n$ can be approximated from outside by special polynomial polyhedra $\mathcal{P}$ defined by proper polynomial mappings with almost all their zeros in $\mathcal{P}$. In the particular case where K is balanced, we can choose the polynomial mapping "almost" homogeneous with a large zero at the origin. A consequence of this generalization is an approximation of the pluricomplex Green function for the compact set K with pole at infinity, by maximal plurisubharmonic functions in $\mathcal{L}^+$ with logarithmic poles in $\mathcal{P}$.

Tid och plats: Tisdagen den 20 september kl. 15.15 i sal 2215, MIC, Polacksbacken, Uppsala universitet.

Guest researcher at the Department of Mathematics, Uppsala University

Professor Dr. Helmut Schwichtenberg from Ludwig-Maximilians-Universität München is going to spend his sabbatical term as a guest of the Department of Mathematics, Uppsala University, during September 20, 2005 — March 20, 2006. His area is mathematical logic, especially proof theory, lambda-calculus, recursion theory, and its applications to computer science. He is a member of the Bavarian Academy of Sciences, and of the scientific board of the Oberwolfach institute.

His office will be in room 3333, Department of Mathematics, MIC, Polacksbacken, Uppsala University.

KOMBINATORIKSEMINARIUM

Håkan Lennerstad:
Double optimization, over partitions and matrices, of an operator on $0,1$-matrices

Abstract: An operator T maps a $0,1$-matrix P on a natural number by means of a partition A of the columns. The $0,1$-matrices considered have the same number of ones on each row. T adds the columns in each partition set as vectors, then takes the maximum componentwise, and adds the elements of the remaining column vector. Let $m(P)$ be the number of rows in P. Denoting by $T(P)$ the minimal $T(A,P)$ over all partitions A, we want to find the maximum of $T(P)/m(P)$ over all $n \times k$-matrices P with q ones in each row. This gives the extremal function $g(n,k,q) = \max_P(\min_A T(A,P)/m(P))$. The function g can be given by an explicit formula. It is unbounded.

The problem arises in the context of performance comparisons in parallel computing. Many variants of the above basic problem have arisen. In all variations considered, extremal matrices have all possible rows with equal frequency, hence $m(P)$ is a multiple of $\binom{n}{q}$. However, the kind of partition that is optimal is less stable. This depends on the convexity of T.

Tid och plats: Onsdagen den 21 september kl. 10.15 – 11.15 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

Workshop in Spectral Theory of PDE

This will take place on Thursday, September 22, 2005, in seminar room 3733, Department of Mathematics, KTH, Lindstedtsvägen 25, floor 7.

Information: http://www.math.kth.se/~laptev/ESF/05/Stockholm/index.html.

Program

9.20 – 9.50 **Pavel Exner,** Prague, Czech Republic: *Isoperimetric problems for singular interactions.*

10.00 – 10.30 **Sergey Levin,** Stockholm University: *Coulomb Fourier transformation: Application to three-body scattering with charged particles.*

10.30 – 11.00 Coffee break.

11.00 – 11.30 **Pavel Drábek,** University of West Bohemia, Czech Republic: *The p-Laplacian — the challenge and inspiration for nonlinear analysts.*

11.40 – 12.10 **Alexander Motovilov,** JINR, Dubna, Russia: *Perturbation of spectral subspaces: Some sharp estimates.*

12.10 – 14.00 Lunch.

14.00 – 14.30 **Thomas Hoffmann-Ostenhof,** Erwin Schrödinger Institute, Vienna: *Spectral theory and nodal domains.*

14.40 – 15.10 **Timo Weidl,** Stuttgart University, Germany: *Some applications of the LW trick.*

15.10 – 15.40 Coffee break.

15.40 – 16.10 **Achilles Tertikas,** University of Crete: *Hardy-Sobolev inequalities.*

16.20 – 16.50 **Rupert Frank,** KTH: *Title to be announced.*

ALGEBRA- OCH GEOMETRISEMINARIUM

Inget seminarium i denna serie ges onsdagen den 21 september på grund av Jesper Tidbloms disputation. Mattias Jonssons seminarium är flyttat till den 28 september.

SMALL TALK SEMINAR

Roy Skjelnes: Algebraic spaces

Abstract: I will define algebraic spaces as presented in Donald Knutson's book on that particular topic (Lecture Notes in Mathematics 203).

Tid och plats: Fredagen den 16 september kl. 13.00 – 14.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

DISPUTATION I MATEMATIK

Tomas Ekholm

disputerar på avhandlingen

Schrödinger Operators in Waveguides

fredagen den 23 september kl. 10.00 i sal D3, KTH, Lindstedtsvägen 5, b.v. Till fakultetsopponent har utsetts *professor Pavel Exner,* Nuclear Physics Institute, Academy of Sciences, Rez, Tjeckien.

Abstract of the thesis

In this thesis, which consists of four papers, we study the discrete spectrum of Schrödinger operators in waveguides. In these domains the quadratic form of the Dirichlet Laplacian operator does not satisfy any Hardy inequality. If we include an attractive electric potential in the model or curve the domain, then bound states will always occur with energy below the bottom of the essential spectrum. We prove that a magnetic field stabilizes the threshold of the essential spectrum against small perturbations. We deduce this fact from a magnetic Hardy inequality, which has many interesting applications in itself.

In Paper I we prove the magnetic Hardy inequality in a two-dimensional waveguide. As an application, we establish that when a magnetic field is present, a small local deformation or a small local bending of the waveguide will not create bound states below the essential spectrum.

In Paper II we study the Dirichlet Laplacian operator in a three-dimensional waveguide, whose cross-section is not rotationally invariant. We prove that if the waveguide is locally twisted, then the lower edge of the spectrum becomes stable. We deduce this from a Hardy inequality.

In Paper III we consider the magnetic Schrödinger operator in a three-dimensional waveguide with circular cross-section. If we include an attractive potential, eigenvalues may occur below the bottom of the essential spectrum. We prove a magnetic Lieb-Thirring inequality for these eigenvalues. In the same paper we give a lower bound on the ground state of the magnetic Schrödinger operator in a disc. This lower bound is used to prove a Hardy inequality for the magnetic Schrödinger operator in the original waveguide setting.

In Paper IV we again study the two-dimensional waveguide. It is known that if the boundary condition is changed locally from Dirichlet to magnetic Neumann, then without a magnetic field bound states will occur with energies below the essential spectrum. We however prove that in the presence of a magnetic field, there is a critical minimal length of the magnetic Neumann boundary condition above which the system exhibits bound states below the threshold of the essential spectrum. We also give explicit bounds on the critical length from above and below.

PLURIKOMPLEXA SEMINARIET

Jan Wiegerinck:
Pluripolar hulls and topology

Abstract: The pluripolar hull of a graph of a holomorphic function is now well understood if the function is defined on the complement of a set of capacity 0 in $\mathbb{C}$. Then the hull is a graph over a subset of $\mathbb{C}$. With the classical theory of analytic continuation in mind, one may wonder if this comes about only because there are no continua contained in this complement. We give an example showing that holomorphic functions defined in the hull of fat Cantor sets may have a multiple sheeted hull. This is joint work with E. Poletsky.

Next we will turn to the plurifine topology in $\mathbb{C}^n$, and discuss the fundamental question whether this is a locally connected topology. This concerns ongoing work with S. El Marzguioui.

Tid och plats: Onsdagen den 21 september kl. 15.15 i sal 2215, MIC, Polacksbacken, Uppsala universitet.

OPTIMIZATION AND SYSTEMS THEORY SEMINAR

Jakob Björnberg:
Robust model predictive control for constrained, linear systems through approximate dynamic programming

Abstract: The talk begins by reviewing how one can approach robust model predictive control for discrete-time, uncertain, constrained systems by dynamic programming. We then specialize to a certain class of linear systems with parametric uncertainties, so-called polyhedral dynamic programming, and demonstrate how to represent the cost-to-go functions and feasible sets exactly and compactly in terms of polyhedra in this case. As a method to lower the computational complexity we then present an approximation technique for dynamic programming that is suitable for this problem class. This is at the expense of optimality, but nevertheless allows to generate robustly stable feedback laws that are guaranteed to respect all constraints.

Tid och plats: Fredagen den 23 september kl. 11.00 – 12.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

KTH/SU MATHEMATICS COLLOQUIUM

Richard Beals:
The KdV and Camassa-Holm equations

Abstract: The well-known KdV equation was proposed in 1895 to describe long waves in shallow water. It is now known to have explicit solutions (multi-solitons) with interesting interactions, computable in an unexpected way. The same is true of an equation proposed much more recently: the Camassa-Holm equation. The C-H special solutions (peakons, anti-peakons) have even more interesting interactions. They come from finite-dimensional Hamiltonian systems and can be calculated explicitly, but in a completely different way from KdV.

Tid och plats: Onsdagen den 28 september 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.

PLURIKOMPLEXA SEMINARIET

Frank Kutzschebauch: On the density property

Abstract: In the talk we recall the density property for complex manifolds, a property implying the presence of a big group of automorphisms. The notion was introduced by Varolin as a generalization of the Andersén-Lempert theory in C^n. We then give new examples of manifolds with density property and describe a general method of proving the algebraic density property for a manifold or a given geometric structure. We illustrate this method by proving a result concerning the following question posed by Forstneric: If A is an algebraic subset of C^n of codimension at least 2, does the geometric structure of all holomorphic vectorfields on C^n which vanish on A have the density property?

This is a report on a joint work under progress with S. Kaliman.

Tid och plats: Torsdagen den 22 september kl. 17.00 i sal 2215, MIC, Polacksbacken, Uppsala universitet.

SEMINARIUM I STATISTIK

Tom Snijders: Statistical methods for the simultaneous dynamics of social networks and individual behaviour

Abstract: In many applications, social networks are not static but evolve over time. This can be due to purely structural, network-endogenous mechanisms (like reciprocity or transitivity), but also due to individual characteristics of the actors in the network (what is a relevant choice of actor characteristics will depend on the type of relation — one may think of gender, age, habits, substance use and other health behaviours, political preferences, etc.). Changeable individual characteristics, in turn, are often mediated by social networks. Processes of social influence, contagion, or group differentiation, all depend on the social network as their 'structural substrate'. Examples are smoking initiation among adolescents — and other substance use and abuse —, the formation of attitudes and norms, the dynamics of fads, collaboration in organizations, etc. This mutual interference between network dynamics and the dynamics of changeable actor characteristics, together with the already complex interdependence structure that characterizes social networks in general, poses a statistical challenge. In principle, the collection of longitudinal (panel) data on networks and individual characteristics allows for separating effects in both causal directions on empirical grounds.

Since recently, statistical methods have been developed to analyse the dynamics of social networks, and also the simultaneous and interrelated dynamics of social networks and the behaviour of the actors in the network. These methods are based on stochastic microsimulation models representing the dynamics of a relational network in a set of actors. Associated to these models are procedures for parameter estimation and testing, using Markov chain Monte Carlo methods. Researchers who have been active in developing these statistical methods include, in addition to the speaker, Johan Koskinen, Christian Steglich, Michael Schweinberger, and Mark Huisman. A review will be given of the work on this methodology and on some applications.

Tid och plats: Torsdagen den 29 september kl. 13.00 – 15.00 i sal B705, Statistiska institutionen, SU, Universitetsvägen 10B, plan 7, Frescati.

DISPUTATION I MATEMATIK

Jesper Tidblom

disputerar på avhandlingen

Improved L^p Hardy Inequalities

onsdagen den 21 september kl. 10.00 i sal 14, hus 5, Matematiska institutionen, Stockholms universitet, Kräftriket. Till fakultetsopponent har utsetts *professor Achilles Tertikas,* University of Crete, Heraklion.

Abstract of the thesis

This thesis consists of four articles dealing with different problems in the theory of Hardy inequalities.

Paper I: *A geometrical version of Hardy's inequality for* $\overset{\circ}{W}^{1,p}(\Omega)$.

The aim of this article is to prove a Hardy-type inequality, concerning functions in $\overset{\circ}{W}^{1,p}(\Omega)$ for some domain $\Omega \subset \mathbb{R}^n$, involving the volume of Ω and the distance to the boundary of Ω. The inequality is a generalization of a previously proved inequality by M. and T. Hoffmann-Ostenhof and A. Laptev, which dealt the special case $p = 2$.

Paper II: *A Hardy inequality in the Half-space.*

Here we prove a Hardy-type inequality in the half-space which generalizes an inequality originally proved by V. Maz'ya to the so-called L^p case. This inequality had previously been conjectured by the mentioned author. We will also improve the constant appearing in front of the remainder term in the original inequality (which is the first improved Hardy inequality appearing in the litterature).

Paper III: *Geometric many particle Hardy inequalities.*

In this article we prove some results about the constants appearing in Hardy inequalities related to many particle systems. We show among other things that in $\mathbb{R}^{3N}$

$$-\Delta \geq C(N) \sum_{i \neq j}^{N} \frac{1}{|x_i - x_j|^2},$$

where $C(N) = \frac{1}{2N}$.

We also discuss an interesting geometric aspect on the problem of improving this constant.

Paper IV: *Various results in the theory of Hardy inequalities and personal thoughts.*

In this article we give some results concerning improved inequalities in Half-spaces and other conic domains. Also, some examples of applications of improved Hardy inequalities in the theory of viscous incompressible flow will be given.

SEMINAR IN ANALYSIS AND ITS APPLICATIONS

Erik Lindgren:
On the regularity of a singular variational problem

Abstract: We study the optimal regularity for a minimizer of a functional of the form $J(u) = \int_D \frac{|\operatorname{grad} u|^2}{2} + F(u)\,dx$, where F is merely Hölder continuous. Similar functionals have been studied earlier under a sign condition. Using iterative and blow-up arguments we obtain the same optimal $C^{1,\alpha}$-regularity as the known result in the case of non-negativity.

Tid och plats: Måndagen den 26 september kl. 13.15 – 14.15 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PRESENTATIONER AV EXAMENSARBETEN I MATEMATISK STATISTIK

Onsdagen den 21 september kommer fyra examensarbeten i matematisk statistik att presenteras vid Matematiska institutionen, SU. Lokalen för alla presentationerna är rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. En inledning till presentationerna ges kl. 8.45 – 8.50.

Marina Ann Stolin: Analysing the accident frequency of the Commercial Airlines Total Loss Catastrophes

Abstract: Nowadays, actuaries and analysts frequently use predictive modelling in several capacities, in everything from pricing, reserving, reinsurance to identifying future customers. Basically, predictive modelling is a process by which one uses statistical analysis of data to make predictions about future events. Use of this technique will allow considering all possible factors simultaneously, permit for the nature of random processes and will provide necessary diagnostics. It will remove a potential "double-counting" of the variables and can explain interaction effects.

In this thesis, I will present a model for the accident frequency of the commercial aviation catastrophes exceeding the cost of 10 million USD, using the technique of predictive modelling. The thesis will include a discussion of the various aspects of designing such a model, including the type of rating factors, accuracy of the data, homogeneity of the classes, and level of available information needed.

Tid: Onsdagen den 21 september kl. 8.50 – 9.35.

Vasileios Keisoglou: Application of statistical methods in the determination of health loss distribution and health claims behaviour

Abstract: This thesis describes a method of analysing health loss data in order to determine the claim behaviour and make it possible for forecast and budgeting. For the purpose of this thesis, health loss data are retrieved from the health products portfolio of a company in the Greek market.

The company is currently selling morbidity risk type products like health and personal accident coverage. The company has developed some approaches/methodologies to quantify the morbidity risk. The appropriateness of each approach depends on product features and availability of data.

As this company is still developing a methodology for morbidity risk measurement, further investigation for this subject is needed. This investigation requires the application of statistical methods. Morbidity insurance products are products that cover the financial risk of sickness. Morbidity risk is the risk of variations in claim levels and timing due to fluctuations in policyholder morbidity. The goal of this diploma work is to study the claim behaviour from past experience and to apply the most appropriate methods that fit the available data, capturing all the volatility and uncertainty.

Tid: Onsdagen den 21 september kl. 9.40 – 10.25.

(Fortsättning på nästa sida.)

Katarzyna Grabowska:
Occurrence of invasive pneumococcal disease and number of excess cases due to influenza

Abstract: Influenza is associated with seasonal outbreaks, often with a high rate of morbidity and mortality. It is also known to be a cause of significant amount of secondary bacterial infections. Streptococcus pneumoniae is the main pathogen causing secondary bacterial pneumonia after influenza and subsequently, influenza could participate in obtaining Invasive Pneumococcal Disease (IPD).

In this study, we aim to investigate the relation between influenza and IPD and estimate the yearly excess of IPD cases due to influenza. For this purpose, we use influenza periods as an indicator for influenza activity as a risk factor in subsequent analysis. The statistical modelling has been made in two modes. First, two negative binomial regression models have been constructed, and by estimating the contribution of influenza in the models, the excess number of IPD cases has been calculated. Secondly, an "influenza free" baseline was constructed, and differences in IPD data and baseline were used to estimate a yearly additional number of IPD cases due to influenza. Both modes were calculated using zero to four weeks lag time. The analysis shows a yearly increase of 72 – 118 IPD cases due to influenza, which corresponds to 12 – 24 % per influenza season. Also, a lag time of one to three weeks appears to be of significant importance in the relation between IPD and influenza.

Tid: Onsdagen den 21 september kl. 10.45 – 11.30.

Anna Naziropoulou:
Simulering av inflations- och återförsäkringsinverkan på avsättning för oreglerade skador med hänsyn till Solvens II

Sammanfattning: En försäkringsgivare skall vid varje tidpunkt, då försäkringsfall inträffat, kunna betala ut ersättning till den försäkrade. Oftast handlar det om pengar som skall betalas ut om flera år, i flera år, framåt. Då de flesta betalningar är långsiktiga krävs av ett försäkringsbolag att avsätta pengar i en så kallad reserv. Storleken på reserven är bl.a. beroende av hur stor del av skadekostnaden som är återförsäkrad.

Dagens reservsättningsmetoder tar ingen explicit hänsyn till inflationen och ger endast en punktskattning som motsvarar väntevärdet för återstående betalningar, d.v.s. ungefär 50:e percentilen. Vi har här studerat hur omfattande den inflationsjusterade Chain Ladder-reserven skall vara för att motsvara 75, 90 respektive 99 % percentilen. Vikten av återförsäkring för försäkringsbolagen har belysts genom att variera självbehållens storlek i ett Excess of loss-kontrakt. Olika inflationsmodeller och inflationsantaganden, i enlighet med Riksbankens inflationsmål, har gjorts för att simulera och studera inflationens betydelse i avsättningsprocessen. Resultaten har varit att vi kommit med förslag till nya nivåer för bestämning av bolagens reserv med explicit hänsyn till inflationen, jämfört med dagens beräkning med implicit hänsyn till tidigare inflation. Till exempel så skall en reserv på 50 % percentilnivån, i enlighet med Riksbankens inflationsmål, utökas med 0,87 % för att inflationsjusteras.

Tid: Onsdagen den 21 september kl. 11.35 – 12.20.

Kaffe serveras i rasten kl. 10.25 – 10.45. Efter den sista presentationen ges en avslutning. Samtliga rapporter kommer inom kort att finnas på sidan http://www.math.su.se/matstat/reports/serieb.

DOKTORANDKURS I MATEMATIK

Håkan Hedenmalm: Bergmanrum och kärnfunktioner

Kursen löper över höstterminen 2005.

Vi möts på måndagar kl. 10.15 – 12.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

Det första mötet ägde rum måndagen den 12 september kl. 10.15.

Kurslitteratur:

1. Hedenmalm, Korenblum, Zhu: *Theory of Bergman Spaces.* GTM 199, Springer-Verlag, 2000.

2. Duren, Schuster: *Bergman Spaces.* MSM 100, AMS, 2004.

Upplysningar: http://www.math.kth.se/~haakanh/Bergmankurs/.

Håkan Hedenmalm

LOGIKSEMINARIET STOCKHOLM-UPPSALA

Steve Vickers: Classifying categories

Abstract: (Joint work with Erik Palmgren.)

The notion of classifying category (or syntactic category, or theory category) has long been a central part of categorical logic. Suppose L is a logic — by which I mean, approximately, a selection of connectives and deduction rules. We assume a corresponding class CL of categories is understood, with the structure needed to interpret the connectives of L. Thus if T is any theory in L, and C is a CL-category, we can say what are the models of T in C.

A classifying category for T (with respect to L) is formed by freely building a CL-category on a formal "generic" model of T. Then T models in C can be extended, uniquely up to isomorphism, to functors from CL to C that preserve the CL-structure. A well-known example is the classifying topos, where L is geometric logic.

A common construction (as "syntactic category") starts with a category whose objects and morphisms are equivalence classes of formulae. Structural inductions on formulae are then needed to prove the universal property of the classifying category.

My work with Erik Palmgren on Cartesian theories focuses attention on the use of the initial algebra theorem to embody structural inductions. We have applied this to the construction of classifying categories for the case where L is Cartesian logic (or more precisely for us quasi-equational logic) and CL is the class of Cartesian categories, with canonical terminal object and pullbacks. Corresponding syntactic categories are described in Johnstone's Elephant D, and analogous sketch-based constructions ("left-exact theories") are described in Barr and Wells' "Toposes, Triples and Theories". We show that for each quasi-equational theory T, there is another one, which we call Cart-with-T, whose models are Cartesian categories equipped with models of T. Then the classifying category for T with respect to Cartesian logic is constructed as an initial algebra for Cart-with-T. We prove its universal property in a strong form: the category of models of T in C is isomorphic (not just equivalent) to the category of strict Cartesian functors from the classifying category to C. We can then relax this to an equivalence to cover the case where C does not have canonical finite limits.

(Continued on the next page.)

It seems clear that the methods will also apply to other logics (though not to geometric logic because of the inifinitary disjunctions).

Tid och plats: Onsdagen den 21 september kl. 10.30 – 12.15 i sal 3513 (hus 3), MIC, Polacksbacken, Uppsala universitet.

DISPUTATION I MATEMATIK

Göran Hamrin

disputerar på avhandlingen

Effective Domains and Admissible Domain Representations

torsdagen den 29 september kl. 10.15 i sal sal 1211 (hus 1), MIC, Polacksbacken, Uppsala universitet. Till fakultetsopponent har utsetts *professor Dieter Spreen,* Theoretische Informatik, Universität Siegen, Tyskland.

Abstract of the thesis

This thesis consists of four papers in domain theory and a summary. The first two papers deal with the problem of defining effectivity for continuous cpos. The third and fourth paper present the new notion of an admissible domain representation, where a domain representation D of a space X is λ-admissible if, in principle, all other λ-based domain representations E of X can be reduced to X via a continuous function from E to D.

In Paper I we define a Cartesian closed category of effective bifinite domains. We also investigate the method of inducing effectivity onto continuous cpos via projection pairs, resulting in a Cartesian closed category of projections of effective bifinite domains.

In Paper II we introduce the notion of an almost algebraic basis for a continuous cpo, showing that there is a natural Cartesian closed category of effective consistently complete continuous cpos with almost algebraic bases. We also generalize the notion of a complete set, used in Paper I to define the bifinite domains, and investigate what closure results that can be obtained.

In Paper III we consider admissible domain representations of topological spaces. We present a characterization theorem of exactly when a topological space has a λ-admissible and κ-based domain representation. We also show that there is a natural Cartesian closed category of countably based and countably admissible domain representations.

In Paper IV we consider admissible domain representations of convergence spaces, where a convergence space is a set X together with a convergence relation between nets on X and elements of X. We study in particular the new notion of weak κ-convergence spaces, which roughly means that the convergence relation satisfies a generalization of the Kuratowski limit space axioms to cardinality κ. We show that the category of weak κ-convergence spaces is Cartesian closed. We also show that the category of weak κ-convergence spaces that have a dense, λ-admissible, κ-continuous and α-based consistently complete domain representation is Cartesian closed when $\alpha \leq \lambda \geq \kappa$. As natural corollaries we obtain corresponding results for the associated category of weak convergence spaces.

LICENTIATSEMINARIUM I INFRASTRUKTUR, SÄRSKILD INRIKTNING MOT RISK OCH SÄKERHET

Per Näsman

presenterar sin licentiatavhandling:

Risk Analysis — A Tool in Decision-making. Empirical examples from the area of transportation and the field of medicine

Opponent/granskare: **Dr Björn Jonsson.**

Abstract: In our daily life we are surrounded by different kinds of risks, and we constantly strive for better methods to quantify and in the prolongation manage these risks. Every activity involves some risks and there are some kinds of risks and some level of risks that we are unwilling to accept. We all like to live a life that is free from risks, but that is impossible.

The word risk has a lot of different interpretations. In this thesis we shall let risk stand for the combination of random or uncertain events with negative consequences for human health, life and welfare, and for the environment together with some measures of the likelihood of such events. We believe this is the prevailing concept or understanding of risk; as the probability of an event followed by some negative consequences or activities of that event.

In risk analysis one tries to recognize the nature of various risks and to assess the magnitude of the risks. In the risk analysis it is very important to know what system to consider, and this is not self-evident in many cases. The situation is cleary different for planning and/or building a system compared with running the same system in a real time state. The system that is going to be the subject to the risk analysis must be clearly defined and the limitations and the boundaries of the system must be set. It is very important to ensure that all persons involved in a risk analysis have a common understanding of the system being considered, including relevant operations.

During the past decades many studies have been carried out on risk-related topics, and the society has showed a significant interest in the field of risk analysis. Risk analysis is the interdisciplinary field of science that combines results and knowledge of probability theory, mathematical statistics, engineering, medicine, philosophy, psychology, economics and other applied disciplines.

In this thesis we will give some examples of different risk analyses carried out basically within two areas. The first part of the thesis (paper I – paper V) describes different risk analyses carried out in the area of transportation. This is an area with large differences between the different modes of transportation in respect to, for example number of users, number of accidents, magnitude of the accidents and accessible data. The latter part of the thesis (paper VI and paper VII) describes two risk analyses carried out in the field of medicine. Medicine is a science, which has used methods from the area of risk analysis for a long time. The different papers will be used to discuss risk analysis as a tool in decision-making.

Tid och plats: Torsdagen den 29 september kl. 10.15 i sal V12, KTH, Teknikringen 72, entréplanet.

MATHEMATICAL PHYSICS SEMINAR

Vadim Kuznetsov:
Eigenproblem for Jacobi matrices: hypergeometric series solution

Vadim Kuznetsov will report on a brand-new result obtained in collaboration with E. K. Sklyanin on a classical problem in perturbation theory.

Abstract: We study the perturbative power-series expansions of the eigenvalues and eigenvectors of a general tridiagonal (Jacobi) matrix of dimension d. The (small) expansion parameters are the entries of the two diagonals of length $d-1$ sandwiching the principal diagonal, which gives the unperturbed spectrum.

The solution is found explicitly in terms of multivariable (Horn-type) hypergeometric series of $3d-5$ variables in the generic case, or $2d-3$ variables for the eigenvalue growing from a corner matrix element. To derive the result, we first rewrite the spectral problem for a Jacobi matrix as an equivalent system of cubic equations, which are then resolved by the application of the multivariable Lagrange inversion formula.

Explicit formulae are also found for any monomial composed of eigenvector components.

Tid och plats: Fredagen den 16 september kl. 13.15 i seminarierummet i hus 11 (rum 112:028), Roslagstullsbacken 11, AlbaNova universitetscentrum.

GRADUATE COURSE

Anders Szepessy:
Computational Methods Coupling Molecular Dynamics and Continuum Differential Equations

The course will start on Thursday, October 6, at 10.15 – 12.00 in room 4523, Nada, KTH, Lindstedtsvägen 5, floor 5.

Molecular dynamics is a powerful method to determine material properties at positive temperature. This course will show some examples coupling molecular dynamics with continuum simulations, e.g. for phase boundaries. Sometimes a simplified molecular dynamics method with Brownian dynamics can be used; such stochastic differential equations with small noise have a relation to statistical mechanics, based on the theory of large deviations. The course will compare techniques to compute reaction rates and present some basic theory of large deviations for stochastic differential equations and statistical mechanics.

More information is given on http://www.nada.kth.se/~szepessy/mc_sde.html.

Welcome!
Anders Szepessy

MONEY, JOBS

Columnist: Tommi Asikainen, Department of Mathematics, SU. E-mail: tommi@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://www.math.su.se/~tommi/mj.html.
Unless stated otherwise, a given date is the last date (e.g. for applications), and the year is 2005. 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://www.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. Svenska institutet utlyser gäststipendier för avancerade akademiska studier i Sverige 2005/06 för icke-nordiska medborgare. Ansökan senast den 15 januari 2006. Web-info: http://www.studyinsweden.se.

Jobs, to apply for

12. Uppsala universitet, Matematiska institutionen inom Centrum för tillämpad matematik, söker en doktorand. Ansökan senast den 5 oktober. Info: Michael Melgaard, e-post Michael.Melgaard@math.uu.se, 018-471 32 18. Web-info: http://www.personalavd.uu.se/ledigaplatser/2887dorand.html.
13. Lunds universitet söker en vikarierande universitetslektor i matematik. Ansökan senast den 28 september. Info: Gudrun Gudmundsdottir, 046-222 44 67, e-post gudrun@maths.lth.se. Web-info: http://www.matematik.lu.se/JobsInLund/.

Old information

Money, to apply for

14. Vetenskapsrådet och Formas utlyser gemensamt Linnéstödet. Stödet riktas till ett antal starka grundforskningsmiljöer inom samtliga vetenskapsområden. Totalt kommer minst 14 miljöer att stödjas. Universitet och högskolor kan söka Linnéstöd till en eller flera starka forskningsmiljöer. Enskilda forskare eller forskargrupper kan inte söka. Enskilda forskare som medverkar i en ansökan om eller får ta del av Linnéstöd kan inneha, söka och/eller få andra former av bidrag från Vetenskapsrådet och/eller Formas. Web-info: http://www.vr.se/forskning/bidrag/ovrbidrag.jsp?resourceId=-134&languageId=1.
15. Resebidrag ur jubileumsdonationen, Knut och Alice Wallenbergs Stiftelse för forskare vid Stockholms universitet. Bidrag ges i första hand för sådana resor som befordrar ett personligt vetenskapligt utbyte till gagn för svensk forskning. Ansökan senast den 22 september. Web-info: http://www.su.se/forskning/stipendier/wallenberg.php3.

(Continued on the next page.)

16. Wenner-Gren Stiftelserna utlyser postdoktorala stipendier för svenska postdoktorer för utbildning utomlands, för utländska postdoktorer för utbildning i Sverige samt gästforskarstipendier för utländska seniora forskare i Sverige. Ansökan för dessa senast den 1 oktober. Web-info: http://www.swgc.org/.
17. Wenner-Gren Stiftelserna utlyser resestipendier för disputerade forskare under 40 år för resa till konferens utanför Sverige. Ansökan senast den 1 oktober. Web-info: http://www.swgc.org/.
18. Wenner-Gren Stiftelserna utlyser gästföreläsaranslag som ger institutioner bidrag till att bjuda in utländska gästföreläsare m.m. Ansökan kan inlämnas när som helst under året. Web-info: http://www.swgc.org/.
19. Vetenskapsrådets utbildningsvetenskapliga kommitté utlyser konferens- och resebidrag för i första hand unga och/eller nydisputerade forskare. Bidrag kan sökas när som helst under året. Web-info: http://www.vr.se/omvr/organisation/sida.jsp?unitId=24.
20. Svenska institutet ger bidrag för utbildning och forskning utomlands. Sista ansökningsdag varierar för olika länder. Web-info: http://www.si.se.
21. Letterstedtska föreningen utlyser bidrag, i första hand till anordnande av nordiska konferenser och seminarier, men även till enskilda personer för bidrag till studieresor till annat nordiskt land. Web-info: http://www.letterstedtska.org/.
22. NordForsk utlyser mobilitetsstipendier för vistelse vid en annan nordisk institution. Web-info: http://www.nordforsk.org/meny.cfm?m=142,218.
23. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) erbjuder korttidsstipendier: 2 veckor till 3 månader långa besök. Stipendierna är avsedda för besök vid utländska institutioner, alternativt för att bjuda in en utländsk forskare. De kan ej sökas av doktorander. Ansökan kan göras löpande under året. Info: Agneta Granlund, 08-671 19 95, e-post agneta.granlund@stint.se. Web-info: http://www.stint.se/index.php?articleId=34.
24. Från Vetenskapsrådet kan resebidrag sökas av främst disputerade forskare, av doktorander i undantagsfall. Bidrag kan bland annat sökas för konferensdeltagande (ej posterpresentation), för att representera Sverige i viktiga sammanhang samt för att bjuda in utländska gästforskare. Bidrag för resa till internationellt forskningssamarbete kan också få finansiering. Ansökan skall vara inkommen senast två månader innan resan äger rum. Ansökningar behandlas ej mellan den 15 juni och den 15 augusti. Info: Mona Berggren, 08-546 44 246, e-post Mona.Berggren@vr.se. Web-info: http://www.vr.se/forskning/bidrag/ovrbidrag.jsp?resourceId=665&languageId=1.
25. Från Vetenskapsrådet kan konferensbidrag sökas med huvudsyftet att göra det möjligt att inbjuda framstående utländska föredragshållare. Ansökan skall vara inkommen senast två månader innan konferensen äger rum. Ansökningar behandlas ej mellan den 15 juni och den 15 augusti. Info: Mona Berggren, 08-546 44 246, e-post Mona.Berggren@vr.se. Web-info: http://www.vr.se/forskning/bidrag/ovrbidrag.jsp?resourceId=822&languageId=1.
26. Från Knut och Alice Wallenbergs Stiftelse ställs anslag till rektors för KTH förfogande för att ”i första hand användas till bidrag för sådana resor, som bäst befordrar ett personligt vetenskapligt utbyte till gagn för svensk forskning. Bidrag skall främst beviljas till yngre forskare. Medel kan även — efter rektors bedömning — undantagsvis disponeras för utländska gästforskare.” Bidrag kan sökas under hela året. Info: Anette Nyström, 08-790 70 59. Web-info: se punkt 4 ovan.

Jobs, to apply for

27. Universitetet i Tammerfors söker en professor i matematik. Ansökan senast den 15 september. Web-info: http://www.uta.fi/ajankohtaista/avoimet_virat.html.
28. Lunds universitet söker en doktorand i matematisk statistik. Ansökan senast den 15 september. Info: Ulla Holst, 046-222 85 49, e-post ulla@maths.lth.se. Web-info: http://www3.lu.se/info/lediga/admin/document/4410.pdf.
29. Aarhus Universitet söker en lektor i matematisk statistik. Ansökan senast den 30 september kl. 12.00. Web-info: http://www.nat.au.dk/default.asp?id=10606&la=UK.
30. Uppsala universitetet söker en professor i tillämpad matematik. Ansökan senast den 29 september. Info: Anders Öberg, 018-471 31 96, e-post Anders.Oberg@math.uu.se, alt. Svante Janson, 018-471 31 88, e-post Svante.Janson@math.uu.se. Web-info: http://www.personalavd.uu.se/ledigaplatser/2140prof_eng.html.
31. Uppsala universitetet söker en professor i matematik. Ansökan senast den 29 september. Info: Anders Öberg, 018-471 31 96, e-post Anders.Oberg@math.uu.se, alt. Svante Janson, 018-471 31 88, e-post Svante.Janson@math.uu.se. Web-info: http://www.personalavd.uu.se/ledigaplatser/2139prof_eng.html.