BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 33 **FREDAGEN DEN 27 OKTOBER 2006**

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 2 november kl. 13.00.

Disputation i statistik

Peter Lundquist disputerar vid SU på avhandlingen *Estimating Interviewer Effects in Sample Surveys: Some Contributions* onsdagen den 8 november kl. 13.00. Se sidan 7.

Institut Mittag-Leffler

firar sitt 90-årsjubileum med ett symposium den 9 – 10 november. Se sidan 9.

SEMINARIER

Fr 10 – 27 kl. 10.00 – 12.00. Högre seminarium i språkfilosofi och logik. Dag Westerståhl, Göteborg: *The conflict between classical and intuitionistic mathematics — a case for relativism?* Rum D700, Filosofiska institutionen, SU. Se sidan 4.

Fr 10 – 27 kl. 11.00 – 12.00. Joint CIAM and Optimization and Systems Theory Seminar. John S. Baras, Institute for Systems Research, Electrical and Computer Engineering Department and Computer Science Department, University of Maryland, USA: *Autonomic wireless networks and computational problems on graphs.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 32 sidan 4.

Fr 10 – 27 kl. 13.15 – 14.15. Graduate Student Seminar. Michael Björklund, Matematik, KTH: *Ergodic theory of Infinite Measure Spaces I.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 31 sidan 9.

Må 10 – 30 kl. 10.15. Licentiatseminarium i numerisk analys. Mohammad Motamed presenterar sin licentiatavhandling: *Phase Space Methods for Computing Creeping Rays.* Opponent: **Universitetslektor Sverker Holmgren,** Institutionen för informationsteknologi, Uppsala universitet. Sal D41, KTH, Lindstedtsvägen 17, 1 tr. Se Bråket nr 32 sidorna 6 – 7.

Fortsättning på nästa sida.

Provföreläsningar för professuren i matematisk statistik vid KTH

Dessa äger rum fredagen den 10 november vid KTH. Se sidan 10.

Money, jobs: Se sidorna 11 – 12.

Seminarier (fortsättning)

Må 10–30 kl. 11.15–11.45. Presentation av examensarbete i matematik. Jan Johansson: *A particle in a magnetic field of an infinite rectilinear current.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

Må 10–30 kl. 13.15–14.15. Seminarium i PDE och spektralteori. Denis Borisov, Nuclear Physics Institute, Prague: *On spectrum of a periodic operator with a small localized perturbation.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 6.

Må 10–30 kl. 13.15. Informellt doktorandseminarium i teoretisk datalogi. Isaac Elias, Teorigruppen, KTH CSC, och Stockholm Bioinformatics Center: *Fast Neighbor Joining.* Rum 1537, KTH CSC, Lindstedtsvägen 3, plan 5. Se sidan 5.

Ti 10–31 kl. 10.15. Plurikomplexa seminariet. August Tsikh, Krasnojarsk: *Multidimensional Mellin transforms and coamoebas.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 4.

Ti 10–31 kl. 13.15. Plurikomplexa seminariet. Alexej Schuplev, SU: *A new proof of the Khovanskii theorem for the total sum of residues.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 6.

On 11–01 kl. 10.15–12.00. Logikseminariet Stockholm-Uppsala. *(Observera tiden!)* **Annika Kanckos,** doktorand vid Matematiska institutionen, Helsingfors universitet, med Jan von Plato som handledare, håller ett gästföredrag i bevisteori med titeln: *A direct Gentzen-style consistency proof for Heyting arithmetic.* Sal 16, hus 5, Matematiska institutionen, SU, Kräftriket.

On 11–01 kl. 11.00–12.00. Kombinatorikseminarium. *(Observera tiden!)* **Anders Björner,** KTH: *Generalizing the upper and lower bound theorems for simplicial polytopes.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

On 11–01 kl. 13.15–14.15. Seminarium i analys och dynamiska system. Eero Saksman, Jyväskylä: *On quantitative estimates for vector-valued singular integrals.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 3.

On 11–01 kl. 15.00–15.45. Seminarium i matematisk statistik. Andreas Nordvall Lagerås, Matematisk statistik, SU: *A population model for Λ-coalescents with neutral mutations.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 7.

On 11–01 kl. 15.15–16.00. Seminarium i numerisk analys. Fredrik Bengzon, Umeå universitet: *Adaptive finite element methods for multiphysics problems.* Rum 4523, KTH CSC, Lindstedtsvägen 5, plan 5.

On 11–01 kl. 16.00. KTH/SU Mathematics Colloquium. Stefan Giller, Lodz: *Basic facts on Borel summability of semiclassical series in one-dimensional quantum mechanics with polynomial potentials.* Sal 14, hus 5, Matematiska institutionen, SU, Kräftriket. Se sidan 6.

To 11–02 kl. 10.15. Docentföreläsning i Electromagnetic Engineering. Lars Jonsson: *Dynamics of a soliton in an external potential. What is a soliton and how does it move?* Seminarierummet, Teknikringen 33, KTH. Se Bråket nr 32 sidan 9.

Fortsättning på nästa sida.

Seminarier (fortsättning)

To 11–02 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Edoardo Sernesi, Università Roma Tre: *Moduli of fibrations.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 8.

To 11–02 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Paul Pearson, Northwestern University: *Topological modular forms, cohomology theories and formal groups.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 10.

To 11–02 kl. 19.00. Populärvetenskaplig föreläsning i fysik. Professor Per-Erik Tegnér, Fysik, SU: *Det tyngsta grundämnet: Om sökandet efter det tyngsta grundämnet.* Oskar Kleins auditorium, Roslagstullsbacken 21, AlbaNova universitetscentrum. Se Bråket nr 32 sidan 5.

Fr 11–03 kl. 13.15 – 14.15. Graduate Student Seminar. Axel Hultman, Matematik, KTH: *A user's guide to discrete Morse theory.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 4.

Må 11–06 kl. 16.00. Gästföreläsning, anordnad av Svenska nationalkommittén för matematik. Professor Brian Davies, King's College, London: *Platonism and Pluralism in Mathematics.* Sal D1, KTH, Lindstedtsvägen 17, 3 tr. Se sidan 10.

On 11–08 kl. 11.00 – 12.00. Seminarium i analys och dynamiska system. *(Extra seminarium. Observera tiden!)* **Nicholas Varopoulos,** Paris: *Title to be announced.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

On 11–08 kl. 13.15 – 14.15. Seminarium i analys och dynamiska system. Yanyan Li, Rutgers: *Some Liouville theorem and gradient estimates.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 9.

Fr 11–10 kl. 10.00 – 12.00. Licentiatseminarium i tillämpad matematik. David A. Anisi presenterar sin licentiatavhandling: *Online Trajectory Planning and Observer Based Control.* Opponent och granskare: **Professor Daizhan Cheng,** Institute of Systems Science, Chinese Academy of Sciences, Beijing, China. Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.

Fr 11–10 kl. 13.15 – 14.15. Graduate Student Seminar. Eric Nordenstam, Matematik, KTH: *Title to be announced.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Eero Saksman:

On quantitative estimates for vector-valued singular integrals

Abstract: (Joint with S. Geiss and S. Montgomery-Smith.) Well-known results of Burkholder, McConnelly, and Bourgain relate boundedness of vector-valued singular integrals to boundedness of certain martingale transforms. In the talk we investigate quantitative versions of these results.

Tid och plats: Onsdagen den 1 november kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

HÖGRE SEMINARIUM I SPRÅKFILOSOFI OCH LOGIK

Dag Westerståhl:
The conflict between classical and intuitionistic mathematics — a case for relativism?

Abstract: My idea is that looking at this conflict from the perspective of discussions about relativism may yield some insights not usually emphasized in the standard accounts. Even though the idea of relativism (about truth) may itself be problematic, and even if the answer to the question in the title turns out to be negative, or unclear, it is hoped that something of value may come of the exercise of trying to answer it. By relativism in mathematics I do not mean pluralism, i.e. the idea that classical and intuitionistic mathematics can live happily side by side. A relativistic position presupposes conflict (of some sort), and at the same time, and pulling in the opposite direction, incommensurability (of some sort). Thus, I am interested in questions like: What kind of conflict (if any), and what kind of incommensurability (if any) do we have here? Can the parties communicate, i.e. can each understand what the other is up to, and if so, how? In particular, what role does the fundamental difference over the notion of truth play?

Tid och plats: Fredagen den 27 oktober kl. 10.00 – 12.00 i rum D700, Filosofiska institutionen, SU.

PLURIKOMPLEXA SEMINARIET

August Tsikh:
Multidimensional Mellin transforms and coamoebas

Abstract: We introduce two classes of spaces of holomorphic functions (in tube domains and in sectorial domains respectively), which are mapped onto each other by the multidimensional Mellin transformation and its inverse.

In the typical situation the inverse Mellin transform has singularities along complex algebraic hypersurfaces and the convergence of the corresponding integral is a sectorial domain which partly intersects the coamoeba of the singular hypersurface. We present examples in the context of solving general algebraic equations.

Tid och plats: Tisdagen den 31 oktober kl. 10.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

GRADUATE STUDENT SEMINAR

Axel Hultman:
A user's guide to discrete Morse theory

Abstract: The theory is not even in its teens yet, but already Robin Forman's discrete Morse theory has become one of the principal tools in combinatorial topology. In short, discrete Morse theory provides a method to systematically "collapse away" cells in a cell complex in order to obtain a smaller complex with the same homotopy type. I will illustrate how one typically works with Forman's theory by computing the homotopy type of a certain graph complex which shows up in connection with spaces of phylogenetic trees.

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

INFORMELLT DOKTORANDSEMINARIUM I TEORETISK DATALOGI

Isaac Elias: Fast Neighbor Joining

Abstract: Reconstructing the evolutionary history of a set of species is a fundamental problem in biology, and methods for solving this problem are gaged based on two characteristics: accuracy and efficiency. Neighbor Joining (NJ) is a so-called distance-based method that, thanks to its good accuracy and speed, has been embraced by the phylogeny community. It takes the distances between n taxa and produces in $\Theta(n^3)$ time a phylogenetic tree, i.e., a tree which aims to describe the evolutionary history of the taxa. In addition to performing well in practice, the NJ algorithm has optimal reconstruction radius.

The contribution of this seminar is twofold: (1) we present an algorithm called Fast Neighbor Joining (FNJ) with optimal reconstruction radius and optimal run time complexity $O(n^2)$ and (2) we present a greatly simplified proof for the correctness of NJ. Initial experiments show that FNJ in practice has almost the same accuracy as NJ, indicating that the property of optimal reconstruction radius has great importance to their good performance. Moreover, we show how improved running time can be achieved for computing the so-called correction formulas.

This is joint work with Jens Lagergren.

Tid och plats: Måndagen den 30 oktober kl. 13.15 i rum 1537, KTH CSC, Lindstedtsvägen 3, plan 5.

KOMBINATORIKSEMINARIUM

Anders Björner: Generalizing the upper and lower bound theorems for simplicial polytopes

Abstract: After an introduction to and review of the upper and lower bound theorems for simplicial polytopes (due to McMullen and Barnette, respectively, circa 1970), I will go on to discuss the following theorem:

Let $S(n,d)$ and $C(n,d)$ denote, respectively, the stacked and the cyclic d-dimensional polytopes on n vertices. Furthermore, $f_i(P)$ denotes the number of i-dimensional faces of a polytope P.

Let P be a d-dimensional simplicial polytope. Suppose that

$$f_r(S(n_1,d)) \leq f_r(P) \leq f_r(C(n_2,d))$$

for some integers n_1, n_2 and $r \leq d-2$. Then,

$$f_s(S(n_1,d)) \leq f_s(P) \leq f_s(C(n_2,d))$$

for all s such that $r < s < d$.

Some special cases were previously known. For $r = 0$ these inequalities are the well-known lower and upper bound theorems. The $s = d-1$ case of the upper bound part is the "generalized upper bound theorem" of Kalai.

The result is implied by a more general "comparison theorem" for f-vectors. Among its consequences is a similar lower bound theorem for centrally-symmetric simplicial polytopes.

Tid och plats: Onsdagen den 1 november kl. 11.00 – 12.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I PDE OCH SPEKTRALTEORI

Denis Borisov:
On spectrum of a periodic operator with a small localized perturbation

Abstract: We study the spectrum of a periodic self-adjoint operator on the axis perturbed by a small localized non-self-adjoint operator. It is shown that the continuous spectrum is independent of the perturbation, the residual spectrum is empty, and the point spectrum has no finite accumulation points. We study the existence of the embedded eigenvalues. We establish the necessary and sufficient conditions of the existence of the eigenvalues and construct their asymptotic expansions. The asymptotic expansions for the associated eigenfunctions are also obtained. Examples are given.

This is a joint work with R. Gadyl'shin.

Tid och plats: Måndagen den 30 oktober kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PLURIKOMPLEXA SEMINARIET

Alexej Schuplev:
A new proof of the Khovanskii theorem for the total sum of residues

Abstract: The first multidimensional analogue of the theorem on the total sum of residues of a rational function on the Riemann sphere was Jacobi's residue formula. It can be proved by studying the behaviour of the rational function given in $\mathbb{C}^n$ in the projective compactification of the space. A toric compactification of $\mathbb{C}^n$ (or $(\mathbb{C}_*)^n$) gives a more general result which is due to Askold Khovanskii. Using the Bochner-Martinelli type residue currents Alekos Vidras and Alain Yger were able in 2001 to prove those statements with weakened conditions.

In 2004 Mats Andersson defined residue currents for arbitrary holomorphic sections of a holomorphic line bundle over a complex manifold. In the frame of this approach he gave a new proof of the general form of Jacobi's residue formula. In the talk I am going to show how the same idea works in the toric case.

Tid och plats: Tisdagen den 31 oktober kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

KTH/SU MATHEMATICS COLLOQUIUM

Stefan Giller:
Basic facts on Borel summability of semiclassical series in one-dimensional quantum mechanics with polynomial potentials

Abstract: We present basic results on Borel summability in one-dimensional quantum mechanics with polynomial potentials. We show that these are the fundamental solutions to the Schrödinger equation, whose semiclassical asymptotic expansions are Borel summable to the solutions themselves, and that the fundamental solutions are unique in this respect.

Tid och plats: Onsdagen den 1 november kl. 16.00 i sal 14, hus 5, Matematiska institutionen, SU, Kräftriket.

SEMINARIUM I MATEMATISK STATISTIK

Andreas Nordvall Lagerås:
A population model for Λ-coalescents with neutral mutations

Abstract: Coalescent processes are Markov processes describing, for example, the genealogy of a sample from a population with fixed size. In a sense they are the natural analogies of branching processes when branches are to merge, not split, in a Markovian way. The dynamics of the whole population has some nice representations when there are no mutations in the lineages of the population.

I will present some recent results about the dynamics when the mutation rate is positive, but mutations do not change the fitness of lineages.

Tid och plats: Onsdagen den 1 november kl. 15.00 – 15.45 i rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket.

DISPUTATION I STATISTIK

Peter Lundquist

disputerar på avhandlingen

Estimating Interviewer Effects in Sample Surveys: Some Contributions

onsdagen den 8 november 2006 kl. 13.00 i sal Ahlmansalen, Geovetenskapens hus, SU, Svante Arrhenius väg 8, Stockholm. Till opponent har utsetts *biträdande professor Stig Danielsson,* Linköpings universitet.

Abstract of the thesis

This thesis focuses on measurement errors that could be ascribed to the interviewers. To study interviewer variability, a measurement error model is formulated, which makes a clear distinction between three sources of randomness: the sample selection, interviewer assignment, and interviewing.

In the first paper the variance of the observed sample mean is derived, and it is seen how this variance depends on parameters of the measurement error model and on the number of interviewers. An estimator of the interviewer variance, which is seen to be unbiased, and a biased intra-interviewer correlation estimator are suggested. In a simulation study it is seen that the simulation variance of the interviewer variance estimator increases for both high and low interviewer assignments and seems to have a minimum somewhere in between.

The second paper presents an expression of the variance of the observed sample mean under stratified random sampling. Two possible estimators of the variance of the mean are considered, one of which has a slight positive bias, the other a negative bias, which can be large. Two different estimators of the interviewer variance are studied. Only one of them makes it possible to find a reasonable estimate of the intra-interviewer correlation.

In the third paper an expression for the variance of the interviewer variance estimator is derived. This result may prove useful in designing future studies of interviewer variance. For a large population it will be possible to use an approximate variance, irrespective of the underlying distribution of the unknown true values.

The fourth paper deals with some issues in planning and analysing an interviewer variance study. Three problems are considered: (i) Determining the number of interviewers and the appropriate size of the interviewer assignments; (ii) Finding the probability of negative estimates of the interviewer variance; (iii) Testing for interviewer variance.

MITTAG-LEFFLER SEMINAR

Edoardo Sernesi: Moduli of fibrations

Abstract: I show how to prove some results on surfaces containing linear systems of curves with general moduli by studying deformations of fibrations over the projective line.

Tid och plats: Torsdagen den 2 november kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

LICENTIATSEMINARIUM I TILLÄMPAD MATEMATIK

David A. Anisi

presenterar sin licentiatavhandling:

Online Trajectory Planning and Observer Based Control

Opponent och granskare: **Professor Daizhan Cheng,** Institute of Systems Science, Chinese Academy of Sciences, Beijing, China.

Abstract: The main body of this thesis consists of four appended papers. The first two consider different aspects of the trajectory planning problem, while the last two deal with observer design for mobile robotic and Euler-Lagrange systems respectively.

The first paper addresses the problem of designing a real time, high performance trajectory planner for aerial vehicles. The main contribution is two-fold. Firstly, by augmenting a novel safety maneuver at the end of the planned trajectory, this paper extends previous results by having provable safety properties in a three-dimensional setting. Secondly, assuming initial feasibility, the planning method is shown to have finite time task completion. Moreover, in the second part of the paper, the problem of simultaneous arrival of multiple aerial vehicles is considered. By using a time-scale separation principle, one is able to adopt standard Laplacian control to this consensus problem, which is neither unconstrained, nor first order.

Direct methods for trajectory optimization are traditionally based on *a priori* temporal discretization and collocation methods. In the second paper, the problem of adaptive node distribution is formulated as a constrained optimization problem, which is to be included in the underlying nonlinear mathematical programming problem. The benefits of utilizing the suggested method for online trajectory optimization are illustrated by a missile guidance example.

In the third paper, the problem of active observer design for an important class of non-uniformly observable systems, namely mobile robotics systems, is considered. The set of feasible configurations and the set of output flow equivalent states are defined. It is shown that the inter-relation between these two sets may serve as the basis for design of active observers. The proposed observer design methodology is illustrated by considering a unicycle robot model, equipped with a set of range-measuring sensors.

Finally, in the fourth paper, a geometrically intrinsic observer for Euler-Lagrange systems is defined and analysed. This observer is a generalization of the observer recently proposed by Aghannan and Rouchon. Their contractivity result is reproduced and complemented by a proof that the region of contraction is infinitely thin. However, assuming *a priori* bounds on the velocities, convergence of the observer is shown by means of Lyapunov's direct method in the case of configuration manifolds with constant curvature.

Tid och plats: Fredagen den 10 november kl. 10.00 – 12.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Yanyan Li:
Some Liouville theorem and gradient estimates

Abstract: The classical Liouville theorem says that a positive entire harmonic function must be a constant. We give a fully nonlinear version of it. This extension enables us to establish local gradient estimates of solutions to general conformally invariant fully nonlinear elliptic equations of second order. This talk will start from a proof of the classical Liouville theorem using only the comparison principle and the invariance of harmonicity under Möbius transformations and scalar multiplications. We will then outline the proof of the comparison principle used in establishing the new Liouville theorem. Finally we outline the proof of the gradient estimates via the Liouville theorem.

Tid och plats: Onsdagen den 8 november kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

INSTITUT MITTAG-LEFFLER CELEBRATES 90 YEARS

Symposium, 9 – 10 November 2006

The symposium will take place at Beijersalen, the Royal Swedish Academy of Sciences (Kungl. Vetenskapsakademien), Lilla Frescativägen 4, Stockholm.

Institut Mittag-Leffler was established in 1916 by the testament of Professor Gösta Mittag-Leffler (1846 – 1927) and his wife Signe. They willed that their villa in Djursholm with its library and other parts of the estate should be given to a foundation, whose purpose is to operate a research institute for the benefit of mathematics in the Nordic countries.

This mini-symposium is arranged in order to celebrate the Institute's 90th anniversary. Various topics related to the Institute and its history will be discussed.

Thursday, November 9

13.30 – 13.45 **Gunnar Öquist,** Permanent Secretary, the Royal Swedish Academy of Sciences, and **Anders Björner,** Director, Institut Mittag-Leffler: *Opening of the symposium.*

13.45 – 15.00 **Arild Stubhaug,** Oslo: *Under övertygelsens tecken: Gösta Mittag-Leffler och hans institut.*
Coffee break.

15.30 – 16.20 **Lennart Carleson,** Stockholm: *The dream of an institute.*

16.30 – 17.00 **Paul Malliavin,** Paris: *The renaissance of the Institut Mittag-Leffler.*

Friday, November 10

10.00 – 10.30 **Nicolas Varopoulos,** Paris: *Memories and retrospectives (personal and mathematical) from Institut Mittag-Leffler and Sweden.*
Coffee break.

11.00 – 11.30 **Jean Pierre Bourguignon,** Paris: *A praise of diversity, or How to make the case of mathematics in the definition of patterns for the support of science.*

11.40 – 12.10 **Olli Martio,** Helsinki: *Gösta Mittag-Leffler in Finland.*

12.15 – 12.30 **Lars Gårding,** Lund: *Från flydda tider . . .*
Lunch.

14.00 – 14.30 **Sigurdur Helgason,** MIT: *Lie group analysis at Institut Mittag-Leffler.*

14.40 – 15.00 **Jan-Erik Björk,** Stockholm: *Reminiscences of a postdoc from the early years.*

MITTAG-LEFFLER SEMINAR

Paul Pearson:
Topological modular forms,
cohomology theories and formal groups

Abstract: For every even periodic complex orientable cohomology theory, the cohomology of CP^∞ is a formal group. It is natural to ask: "Does a formal group determine such a cohomology theory?" The answer is yes, and we discuss a sheaf of cohomology theories on the moduli stack of formal groups. Restricting this sheaf to the moduli stack of elliptic curves, we get elliptic cohomology theories and a global theory of topological modular forms. Applications and generalizations will be discussed.

Tid och plats: Torsdagen den 2 november kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

GÄSTFÖRELÄSNING, ANORDNAD AV SVENSKA NATIONALKOMMITTÉN FÖR MATEMATIK

Brian Davies:
Platonism and Pluralism in Mathematics

Abstract: We describe arguments that have been given in support of Mathematical Platonism, and attempt to show that they are not decisive. We also give an account of Bishop's constructive mathematics, distinguishing between his philosophical claims and the interest of the mathematics itself.

Tid och plats: Måndagen den 6 november kl. 16.00 i sal D1, KTH, Lindstedtsvägen 17, 3 tr.

PROVFÖRELÄSNINGAR FÖR PROFESSUREN I MATEMATISK STATISTIK VID KTH

Dessa äger rum fredagen den 10 november 2006 kl. 8.30 – 10.25 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

Varje provföreläsning skall behandla följande ämne:

Inledande presentation om stokastiska processer
med anknytning till något teknikområde

Presentationen skall ses som inledningen på en naturlig tänkt fortsättning på kursen 5B1540 Sannolikhetsteori (denna kurs ges vid KTH för teknologer i F3 och I2 som har läst en grundkurs i matematisk statistik).

Provföreläsningarna hålls på svenska. Varje provföreläsning skall vara 20 minuter lång, och den följs av 5 minuter för eventuella frågor och diskussion. Sedan ges 5 minuters paus till nästa provföreläsning. Provföreläsningarna är offentliga och öppna för alla intresserade. Sökande till professuren får dock ej närvara vid medsökandes provföreläsningar.

Schema för provföreläsningarna: **Tom Britton** talar kl. 8.30 – 8.50. **Ingemar Kaj** talar kl. 9.00 – 9.20. **Timo Koski** talar kl. 9.30 – 9.50. **Dmitrii Silvestrov** talar kl. 10.00 – 10.20.

MONEY, JOBS

Columnist: Eric Emtander, Department of Mathematics, SU. E-mail: erice@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/~erice/mj.html.
Unless stated otherwise, a given date is the last date (e.g. for applications), and the year is 2006. 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.

Old information

Money to apply for

11. 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.
12. 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.
13. 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.
14. 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.
15. 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/.
16. 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.

(Continued on the next page.)

17. Svenska institutet ger bidrag för utbildning och forskning utomlands. Sista ansökningsdag varierar för olika länder. Web-info: Se punkt 10 ovan.

Jobs to apply for

18. Lunds universitet söker en doktorand i matematisk statistik med tillträde den 1 januari 2007. Sista ansökningsdag är den 20 november. Web-info: http://www3.lu.se/info/lediga/admin/document/1296-06.pdf.
19. Högskolan Dalarna och Statens Väg- och transportforskningsinstitut (VTI) söker tillsammans dels en universitetslektor i statistik (tillsvidareanställning), dels en biträdande universitetslektor i statistik (tjänsten är tidsbegränsad till fyra år med möjlighet till förlängning). Båda tjänsterna är placerade i Borlänge och har sista ansökningsdag den 15 december. Web-info: http://www.du.se/templates/NewsPage____6454.aspx respektive http://www.du.se/templates/NewsPage____6453.aspx.
20. Lunds universitet söker två biträdande universitetslektorer i matematik med inriktning mot matematisk analys. Tillträde snarast. Sökande skall kunna undervisa på både svenska och engelska. Sista ansökningsdag är den 1 november. Web-info: http://www3.lu.se/info/lediga/admin/document/3127-06.pdf.