BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 4 **FREDAGEN DEN 31 JANUARI 2003**

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 6 februari
kl. 13.00.

Disputation i optimeringslära och systemteori

Göran Sporre disputerar på avhandlingen *On some properties of interior methods for optimization* måndagen den 17 februari 2003 kl. 10.00 i Kollegiesalen, Administrationsbyggnaden, KTH, Valhallavägen 79. Se Bråket nr 3 sidan 6.

Money, jobs: Se sidorna 9 – 10.

SEMINARIER

Fr 01–31 kl. 10.15–12.00. Valda problem i geometri. Mikael Passare och **August Tsikh:** *Tropical geometry.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se Bråket nr 3 sidan 4.

Fr 01–31 kl. 11.00–12.00. Optimization and Systems Theory Seminar. Göran Sporre, Optimeringslära och systemteori, KTH: *On some properties of interior methods for optimization.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 3 sidan 7.

I seminariet ger Göran Sporre en sammanfattning av sin doktorsavhandling, vilken han kommer att försvara vid en offentlig disputation måndagen den 17 februari 2003 kl. 10.00. Se Bråket nr 3 sidan 6.

Må 02–03 kl. 13.15–15.00. Seminar in Analysis and its Applications. Harold Shapiro: *Complementary pairs of polynomials, and bent functions.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 3 sidan 8.

Må 02–03 kl. 15.15–17.00. Seminarium i matematisk statistik. Harald Lang: *Finansiell matematik är matematisk statistik.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 3 sidan 9.

Ti 02–04 kl. 10.15. Plurikomplexa seminariet. Frank Kutzschebauch, Sundsvall: *Proper holomorphic embeddings of Stein manifolds.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 3.

Fortsättning på nästa sida.

Teaching, Learning, and Popularization of Mathematics

Ett möte med denna titel äger rum vid KTH lördagen den 15 februari 2003. Se sidan 3.

Seminarier (fortsättning)

Ti 02–04 kl. 13.15. Plurikomplexa seminariet. Sebastian Sandberg, Göteborg: *A skew normal dilation on the numerical range of an operator.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 5.

Ti 02–04 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Irena Lasiecka, University of Virginia, Charlottesville, USA: *Mathematical control theory of coupled PDE systems with an interface.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidorna 4 – 5.

Ti 02–04 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Pirkko Kuusela, Helsinki University of Technology, Finland: *Internet and control theory: What is the connection?* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

On 02–05 kl. 10.15 – 11.15. Kombinatorikseminarium. Bernt Lindström: *Kombinatoriska problem för abelska grupper.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 3 sidan 5.

On 02–05 kl. 13.00. Logikseminariet Stockholm-Uppsala. *(Observera tiden och lokalen!)* **Erik Palmgren:** *Constructive completions of ordered sets, groups and fields.* Rum 3513, Matematiska institutionen, Polacksbacken, Uppsala universitet. Se sidan 8.

On 02–05 kl. 13.15. Seminarium i analys och dynamiska system. Pär Kurlberg, Chalmers tekniska högskola, Göteborg: *Eigenfunctions of quantized cat maps.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 3 sidan 8.

On 02–05 kl. 13.15. Algebra and Geometry Seminar. Roy Skjelnes: *On the good component of the Hilbert scheme.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 8.

On 02–05 kl. 15.15 – 16.00. Seminarium i matematik och fysik vid Mälardalens högskola (Västerås). Kaj Børge Hansen, Filosofiska institutionen, Uppsala universitet: *New definitions of the recursive functions.* Lektionssal R3-131, Mälardalens högskola, Västerås. Se sidan 7.

On 02–05 kl. 15.15. Seminarium i matematisk statistik. Niklas Norén, Neurologic: *Monte Carlo methods in Bayesian classification and dependency derivation.* Rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket. Se sidorna 6 – 7.

To 02–06 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Roberto Triggiani, University of Virginia, Charlottesville, USA: *Carleman/observability estimates without lower order terms: Global uniqueness and observability in one shot.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

To 02–06 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Jarmo Malinen, Helsinki University of Technology, Finland: *When is a linear system conservative?* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 5.

To 02–06 kl. 16.15 – 18.00. Seminarium i matematik och fysik vid Mälardalens högskola (Eskilstuna). Per-Olov Wickman, Lärarhögskolan i Stockholm: *Estetikens betydelse för att lära sig naturvetenskap — En studie av studenter som laborerar.* Lektionssal H122, Mälardalens högskola, Eskilstuna.

Fortsättning på nästa sida.

Seminarier (fortsättning)

Må 02–10 kl. 13.00. Seminarium i teoretisk datalogi. Viggo Kann och **Jonas Sjöbergh,** Nada, KTH: *Språkteknikforskning på Nada eller Sagan om de fem oeniga taggarna.* Rum 1537, Nada, KTH, Lindstedtsvägen 3, plan 5. Se sidan 5.

Må 02–10 kl. 13.15. Seminar in Analysis and its Applications. Vladimir Tkachev: *Lemniscates and Hamburger moments.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 9.

Må 02–10 kl. 15.15 – 16.00. Seminarium i finansiell matematik. Martin Lundvall presenterar sitt examensarbete: *On the Risk Management and Portfolio Analysis of Hedge Funds.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.

On 02–12 kl. 13.15 – 14.15. Seminarium i analys och dynamiska system. Per Sjölin: *A theorem of Antonov on convergence of Fourier series.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 7.

PLURIKOMPLEXA SEMINARIET

Frank Kutzschebauch: Proper holomorphic embeddings of Stein manifolds

Abstract: By the Remmert embedding theorem Stein manifolds are precisely those complex manifolds which can be properly holomorphically embedded into $\mathbf{C}^n$ (for sufficiently big n). For $k > 2$ the conjecture of Otto Forster saying that any Stein manifold of dimension k can be embedded into $\mathbf{C}^n$ for all $n \geq k + [k/2] + 1$ has been proved (Eliashberg and Gromov 1992, Schürmann 1997). In this talk we will not give new results about the embedding dimension. Instead we will assume that a Stein manifold X can be embedded into $\mathbf{C}^n$ and ask the questions:

1. How many embeddings of X into $\mathbf{C}^n$ are there?
2. What additional properties can these embeddings have?

Tid och plats: Tisdagen den 4 februari kl. 10.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

TEACHING, LEARNING, AND POPULARIZATION OF MATHEMATICS

Svenska Matematikersamfundet arrangerar ett möte med denna titel lördagen den 15 februari 2003. Mötet äger rum i sal E1, KTH, Lindstedtsvägen 3, b.v. Information om mötet finns på http://www.math.kth.se/SMS.html.

Program

9.15 – 10.00 **Matts Håstad:** *New Mathematics once.*

10.15 – 11.00 **Rudolf Straesser:** *Researching how people meet with Maths: Didactics of Mathematics.*

11.30 – 12.15 **Torulf Palm:** *Applied mathematical school tasks and compulsory school students' solution strategies.*

14.00 – 14.45 **Jean-Pierre Kahane:** *The irrationals in Plato.*

15.00 – 15.45 **Stefano Marmi:** *Chaotic behaviour in the solar system.*

16.15 – 17.00 **Anders Björner:** *Some thoughts about the popularization of mathematics.*

MITTAG-LEFFLER SEMINAR

Irena Lasiecka: Mathematical control theory of coupled PDE systems with an interface

Abstract: The main aim of this talk is to present a short survey of recent results pertaining to control problems governed by dynamics which consist of coupled PDE's of different types (hyperbolic, ultra-hyperbolic, parabolic) with control applied on an interface between these dynamics. Classical prototypes for this type of models include structure-fluid interactions, structure-acoustic interactions, structure-thermal interactions.

Control problems to be considered include optimal control and related Riccati-Hamilton-Jacobi equations, stabilization and exact controllability. Particular emphasis will be paid to problems with "unbounded controls" such as point control and boundary control.

While control theory in the context of "single PDE's" has been extensively developed in the last 20 years or so — see [1], [2] and references therein, most of the results obtained do not apply or do not lead to good results for the coupled systems. This is due to the fact that the existing theory is very much dependent on the type of dynamics considered. For instance, analyticity of semigroups and related smoothing effect is a key factor in obtaining sharp results in optimal control theory of parabolic equations with boundary controls. Similarly, propagation of singularities and sharp trace theory for hyperbolic solutions is a key element in studying controllability, stabilizability and optimal control of hyperbolic equations.

Neither of these theories applies to coupled systems, where the interaction between two different types of dynamics is critical. This fact has provided a great stimulus for developing new tools in control of PDE's which are amenable to the study of interactions and interface — see [3] and references therein.

It turned out that the presence of an interface, if properly controlled, opens new possibilities in the control of PDE's. Components of the structure which were not stabilizable or not controllable become now controllable due to the effect of the interface. Indeed, the beneficial properties (like propagation of analyticity or propagation of singularities) can now be transferred via the interface onto the entire structure — see [4], [5]. For this to happen, one needs to understand well the nature of "propagations" and of intrinsic limitations of components interacting within a structure. This will determine an optimal design of appropriate control mechanism on the interface. It turns out that the geometry of the domain plays a critical role and as such can be considered as a control variable.

The mathematical analysis involved is technical and based on combination of techniques from microlocal PDE's, analytic semigroups, singular integrals, in addition to more traditional (in the field) control theoretic methods. However, during the talk, an effort will be made to present the material in an accessible and self-contained manner. Specific references to various books and papers containing technical details will be provided.

References

[1] A. Bensoussan, G. Da Prato, M. Delfour, and S. Mitter, "Representation and Control of Infinite Dimensional Systems", *Birkhäuser,* 1993.

[2] I. Lasiecka, R. Triggiani, "Control Theory of PDE's", *Cambridge University Press,* 2000.

[3] I. Lasiecka, "Mathematical Control Theory of Coupled PDE's", *NSF-CMBS-SIAM Lecture Notes,* SIAM, 2001.

[4] I. Lasiecka, "Uniform decay rates for full von Karman system of dynamic thermoelasticity", *Communications on PDE's,* vol. 24 (1999), pp. 1801 – 1849.

(Continued on the next page.)

[5] M. Eller, I. Chueshov, I. Lasiecka, "Global compact attractors in nonlinear waves with boundary dissipation", *Communications on PDE's,* to appear 2002.

Tid och plats: Tisdagen den 4 februari kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

PLURIKOMPLEXA SEMINARIET

Sebastian Sandberg:
A skew normal dilation on the numerical range of an operator

Abstract: Simple facts about the Poincaré-Neumann double layer potential are used in the construction of a normal dilation, on the numerical range of an arbitrary Hilbert space operator. Recent and old ideas in the theory of the numerical range are unified by this framework. A couple of mapping results for the numerical range are derived. This is joint work with Mihai Putinar.

Tid och plats: Tisdagen den 4 februari kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

MITTAG-LEFFLER SEMINAR

Jarmo Malinen:
When is a linear system conservative?

Abstract: We derive a number of equivalent conditions for a linear system to be energy preserving and hence, in particular, well-posed. Similarly, we derive equivalent conditions for a system to be conservative, which means that both the system and its dual are energy preserving. For systems whose control operator is one-to-one and whose observation operator has dense range, the equivalent conditions for being conservative become simpler, and reduce to three algebraic equations.

This is joint work with O. Staffans, Åbo Akademi, Finland, and George Weiss, Imperial College, London.

Tid och plats: Torsdagen den 6 februari kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINARIUM I TEORETISK DATALOGI

Viggo Kann och **Jonas Sjöbergh:**
Språkteknikforskning på Nada
eller Sagan om de fem oeniga taggarna

Sammanfattning: Första delen av seminariet kommer att ägnas åt en översikt över språkteknologiforskningen på Nada från 1990-talets rättstavningsprojekt till dagens forskning om informationssökning med matrismetoder och grammatikgranskning för andraspråkssvenska. Som en del i det senare projektet ingår konstruktion av en supertaggare som med hjälp av fem oeniga taggare kan märka orden i en svensk text med ordklass och böjningsform bättre än någon av de enskilda taggarna. Om detta, och skapandet av en "extra oenig" taggare, handlar andra delen av seminariet.

Tid och plats: Måndagen den 10 februari kl. 13.00 i rum 1537, Nada, KTH, Lindstedtsvägen 3, plan 5.

MITTAG-LEFFLER SEMINAR

Pirkko Kuusela:
Internet and control theory: What is the connection?

Abstract: Control theory has a long history of successful applications in engineering. Currently a field that would benefit from a control theoretic point of view is the communications engineering and networking, where typical research is simulation based.

The purpose of the talk is to discuss some aspects of computer networks and to illustrate why they are different from telecommunications networks that are quite well understood and predictable. The Internet traffic is statistically self-similar, long-range dependent, and consists of "mice" and "elephants". The majority of traffic in the Internet is carried by using Transmission Control Protocol (TCP), which has been demonstrated to give rise to chaotic behaviour. Lately several models for TCP dynamics have appeared; we review models that consist of delay differential equations, a hybrid model, and looking at TCP as a (max, plus) linear system.

A communication network is subject to large uncertainties, which calls for robust and possibly adaptive control techniques, in addition to the fact that the control has to be decentralized.

Tid och plats: Tisdagen den 4 februari kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

MITTAG-LEFFLER SEMINAR

Roberto Triggiani:
Carleman/observability estimates without lower order terms:
Global uniqueness and observability in one shot

Abstract: We shall present an approach that yields Carleman estimates and, as a consequence, continuous observability estimates, without lower order terms. This way one gets global uniqueness results as well as continuous observability/exact controllability results in one shot. So far this approach has been carried out successfully in the following cases: (i) second order hyperbolic equations with variable coefficients (in space) in the principal part and variable coefficients in time and space in the energy level terms, using Riemann geometry methods; (ii) Schrödinger equations, for now with constant coefficients in the principal part and variable coefficients in time and space in the energy level terms. The extension to variable coefficients in space in the principal part is expected again via Riemann geometry methods. The fully Neumann BC case (Neumann control on a part of the boundary and homogeneous Neumann BC in the remaining part of the boundary) is included.

Tid och plats: Torsdagen den 6 februari kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINARIUM I MATEMATISK STATISTIK

Niklas Norén: Monte Carlo methods
in Bayesian classification and dependency derivation

Abstract: The WHO Collaborating Centre, in Uppsala, holds one of the world's largest collections of spontaneous case reports on suspected adverse drug reactions (ADR's). At present, the database contains nearly 3 million reports, and the expected growth rate is several hundreds of thousand reports per year.

(Continued on the next page.)

Neurologic has been involved with the WHO centre since 1997, in a joint project to develop methods for automated data analysis. One of the main objectives is to find robust and efficient methods for automated highlighting of possible causal dependencies between drugs and ADR's. To this end, a method has been proposed that relies on estimated lower credibility interval limits for the Information Component (IC) — a mutual information related statistic. The credibility interval derivation is currently based on a normal approximation.

In this seminar I will discuss how the Bayesian bootstrap method (see Rubin, 1981) and similar Monte Carlo methods may be used to provide accurate credibility interval estimates for the IC, and argue that similar methods may be used to account for uncertainty in the probability parameter estimates on which Bayesian classification (e.g. the popular naïve Bayes classifier) is based. I will also propose computationally efficient ways to implement Monte Carlo based methods.

Tid och plats: Onsdagen den 5 februari kl. 15.15 i rum 306 (Cramérrummet), hus 6, Matematiska institutionen, SU, Kräftriket.

SEMINARIUM I MATEMATIK OCH FYSIK VID MÄLARDALENS HÖGSKOLA (VÄSTERÅS)

Kaj Børge Hansen:
New definitions of the recursive functions

Abstract: Recursive functions are the mathematical representations of the computable functions. I give four new definitions of the class of recursive functions. The first definition is obtained by taking the classical Herbrand-Gödel-Kleene definition as starting point. The minimization condition is replaced by a simpler graph condition which avoids the μ-operator. Kleene has shown how the class of recursive functions can be defined without taking primitive recursion as basic. The second definition is obtained by combining this idea of Kleene's with the introduction of the graph rule so that we get a definition of the recursive functions where neither primitive recursion nor μ-recursion are primitive. Using definition theory, we can see that the rule of definition by composition and the graph rule really are two special cases of the usual procedure for defining new function symbols. Therefore the rule of composition and the graph rule can be merged into one rule. Applying this idea to the first two definitions gives the third and the fourth definition of the recursive functions. An application to Horn clause computability is given of the first definition.

Tid och plats: Onsdagen den 5 februari kl. 15.15 – 16.00 i lektionssal R3-131, Mälardalens högskola, Västerås.

SEMINARIUM I ANALYS OCH DYNAMISKA SYSTEM

Per Sjölin:
A theorem of Antonov on convergence of Fourier series

Abstract: In 1996 N. Y. Antonov proved that the Fourier series of a function f converges almost everywhere if $f \in L \log L \log\log\log L$.

This improves a result from 1968. I will discuss Antonov's proof and some extensions and generalizations of it. In particular I will consider differentiation of integrals and convergence of Walsh-Fourier series. This is joint work with Fernando Soria.

Tid och plats: Onsdagen den 12 februari kl. 13.15 – 14.15 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

LOGIKSEMINARIET STOCKHOLM-UPPSALA

Erik Palmgren:
Constructive completions of ordered sets, groups and fields

Abstract: The constructive real numbers are known to verify only a weakened form of the axioms for total order. We examine two kinds of completions of such orders. For arbitrary dense orders these are Dedekind cuts. For (non-Archimedean) ordered groups and fields, we consider so-called Cauchy cuts. As always, there is the problem how to represent the collection of cuts as a set in type theory. We show how this can be done using provable choice principles, in particular a generalization of dependent choice.

Tid och plats: Onsdagen den 5 februari kl. 13.00 i rum 3513, Matematiska institutionen, Polacksbacken, Uppsala universitet.

ALGEBRA AND GEOMETRY SEMINAR

Roy Skjelnes:
On the good component of the Hilbert scheme

Abstract: The Hilbert scheme of points on a variety Y has several components. The good component has the set of distinct points on Y as a dense set. I want to report on an ongoing work with Dan Laksov, where we realize the good component as a blow-up of the symmetric product of Y. As a corollary we get a blow-up construction of the Hilbert scheme of points on a smooth surface.

Tid och plats: Onsdagen den 5 februari kl. 13.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

SEMINARIUM I FINANSIELL MATEMATIK

Martin Lundvall

presenterar sitt examensarbete:

On the Risk Management and Portfolio Analysis of Hedge Funds

Abstract: The hedge fund industry has expanded rapidly during the last decade, and today many institutional investors are beginning to show interest in the alternative investment hedge funds. In this thesis hedge funds and the risks regarding them are examined. It is shown that hedge funds can differ significantly from traditional investments like mutual funds, and consequently traditional performance measures may not be adequate. It is also shown that because of lack of data there is no point using advanced statistical analysis, instead most of the mathematical tools used are quite easy to understand. The main idea in this thesis is that the returns should be analysed the way they really are and not based on some misspecified assumption like the normal distribution. Many statistical estimates and plots are used to get a better idea of the true underlying distribution, and finally the mathematical investigation is complemented with a qualitative analysis. A risk management system for hedge funds is provided in this thesis as well as a discussion regarding the inclusion of hedge funds in traditional portfolios.

Tid och plats: Måndagen den 10 februari kl. 15.15 – 16.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINAR IN ANALYSIS AND ITS APPLICATIONS

Vladimir Tkachev: Lemniscates and Hamburger moments

Abstract: We study the metric and analytic properties of generalized lemniscates $E_t(f) = \{z \in \mathbb{C} : \ln|f(z)| = t\}$ where f is an analytic function. Our method involves the integral averages $W(t) = \int_{E_t(f)} |w(z)|^2 |dz|$ where $w(z)$ is a meromorphic function. The present basic result states that the length of the generalized lemniscates as a function of t is just the bilateral Laplace transform of a certain positive measure. It follows that $W(t)$ is a positive kernel, i.e. the Hankel matrix $\|W^{(i+j)}(x)\|_{i,j=0}^{\infty}$ is positively definite and the sequence $W^{(k)}(t)$, $k = 0, 1, \ldots$, forms a Hamburger moments sequence. As a consequence, we establish convexity of $\ln|E_t(f)|$ outside of the set of critical values of $\ln|f|$. In particular, in the polynomial case this implies various extensions of some results due to Eremenko, Hayman and Pommerenke concerning Erdös conjecture. As another application, we develop a method which gives explicit formulae for certain length functions. Some other applications to analysis on lemniscates are also discussed.

Tid och plats: Måndagen den 10 februari kl. 13.15 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

MONEY, JOBS

Columnist: Hans Rullgård, Department of Mathematics, SU. E-mail: hansr@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.
Unless stated otherwise, a given date is the last date (e.g. for applications), and the year is 2003. 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. C. F. Liljevalch J:ors resestipendier för studerande vid naturvetenskapliga fakulteten, Stockholms universitet. Stipendium kan tilldelas den som vid ansökningstidens utgång, 20 februari, inte har fyllt 35 år och som har studerat vid Stockholms universitet under minst två terminer. Ansökan skall ske på särskild blankett. Web-info: http://www.su.se/forskning/stipendier/stipendiatinfo_liljevalch.php3.

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12. Sweden-Japan Foundation (SJF) utlyser stipendier för studier, forskning samt examensarbete och praktik på högskolenivå i Japan. Stipendierna är främst avsedda för studier inom teknik, naturvetenskap, ekonomi, juridik, medicin och handel. Beslut fattas vid tre tillfällen per år. Sista ansökningsdagar är 1 mars, 1 september samt 1 december. Ansökan skall ske på särskild blankett. Info: 08-611 68 73, e-post info@swejap.a.se. Web-info: http://www.swejap.a.se.
13. Sigrid Arrhenius' stipendium ges som ekonomiskt stöd åt lovande forskare vid Stockholms universitets naturvetenskapliga fakultet, som skall avlägga doktorsexamen och bedriver avhandlingsarbete inom något av fysikens, kemins, matematikens, astronomins, geologins eller meteorologins ämnesområden. Avhandlingen skall avses bli framlagd under 2003 eller 2004. Sökande får inte ha disputerat vid ansökningstidens utgång, 14 februari. Ansökan skall ske på särskild blankett. Web-info: http://www.natvet.su.se/internt/anslag.html.

Old information

Money, to apply for

14. 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 till resor inom Norden beviljas i regel inte. Bidrag kan sökas när som helst under året. Info: Anette Nyström, 08-790 70 59. Web-info: se punkt 4 ovan.
15. Lennanders stiftelse ledigkungör stipendier för främjande av naturvetenskaplig och medicinsk forskning. I första hand delas stipendier ut till nydisputerade forskare som saknar försörjning eller doktorander som befinner sig i slutfasen av sin utbildning. Stiftelsens bestämmelser gör det möjligt att utdela understöd såväl för direkta kostnader i samband med forskning som för sökandens levnadsomkostnader under arbetet. Ansökan på särskild blankett skall ha inkommit till Stipendiekansliet, Box 256, 751 05 Uppsala, senast 31 januari. Info: Stipendiekansliet, Uppsala universitet, 018-471 17 12. Web-info: http://info.uu.se/fakta.nsf/sidor/lennanders.stiftelse.id11.html.
16. NorFA utlyser stöd till forskarutbildningskurser (sista ansökningsdag 2 maj), nätverkssamarbete (2 maj), gästprofessor (1 mars), mobilitetsstipendier (1 mars, 1 juni och 1 oktober) samt förprojekt och planeringsmöten (1 mars, 1 juni och 1 oktober). Web-info: Se punkt 9.
17. Wenner-Gren Stiftelserna utlyser resestipendier för korta studieresor (1–2 veckor) under tiden 1 juli – 31 december (sökande skall vara disputerad forskare under 40 år) samt anslag till anordnande av internationellt vetenskapligt symposium, 10 mars. Ansökningsblanketter och web-info: http://www.swgc.org/wenner.html.
18. Stiftelsen G. S. Magnussons fond utlyser stipendier och forskningsanslag för doktorander och disputerade forskare, 31 mars. Ansökan skall ske på särskild blankett. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=8.

Jobs, to apply for

19. Matematiska institutionen vid Lunds universitet söker en doktorand i matematik med inriktning mot datorseende, 12 februari. Info: Karl Åström, 046-222 45 48, e-post Karl.Astrom@math.lth.se. Web-info: http://personalserver.pers.lu.se/document/132.pdf.
20. Högskolan för lärande och kommunikation (HLK) i Jönköping söker till sektionen naturvetenskap, idrott och matematik (NIM) en universitetslektor i matematik med didaktisk inriktning med tillträde den 1 juli 2003. Ansökan skickas till Registrator, HLK, Box 1026, 551 11 Jönköping, senast 31 januari. Web-info: http://www.hlk.hj.se/hem_jobb_lektor200212.htm.
21. Högskolan Dalarna söker en universitetslektor i statistik (30 %), 31 januari. Info: Kenneth Carling, 023-77 89 67, e-post kca@du.se. Web-info: http://www2.du.se/information/ledigaplatser/annons.asp?ID=164.
22. Institutionen för teknik, avdelningen för matematik och fysik vid Högskolan i Kalmar söker en doktorand i matematik (differentialgeometri och global analys alternativt matematisk didaktik), 1 mars. Info: Valeri Marenitch, 0480-44 69 38, e-post valery.marenich@hik.se, Leif Eriksson, 0480-44 60 28, e-post leif.eriksson@hik.se. Web-info: http://www.hik.se/forskning/matematik.pdf.
23. Kansli DEF vid KTH utlyser postdoc-stipendier samt en doktorandanställning vid någon av institutionerna för fysik, matematik eller mekanik, finansierade av medel från Göran Gustafssons Stiftelse. Behörig till doktorandtjänsten är den som avlagt eller kommer att avlägga civilingenjörsexamen eller motsvarande under tiden 1 mars 2002 – 28 februari 2003. Sista ansökningsdag för postdoc-stipendierna via kontaktpersonerna på KTH är den 24 januari och för doktorandanställningen den 21 februari. Web-info: http://www.kth.se/student/def/.