BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 8 **FREDAGEN DEN 3 MARS 2000**

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 9 mars kl. 13.00.

S. Kovalevski symposium: Differential equations and applications

Detta kommer att äga rum i Stockholm den 19 – 22 juni 2000. Se sidan 7.

Money, jobs, conferences

Se sidorna 8 – 12.

SEMINARIER

Fr 03–03 kl. 9.00 – 10.00. Kollokvium i fysik. Professor Göran Marklund, Plasmafysik, KTH: *On the acceleration of auroral particles and the auroral current circuit.* Sal F01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v. Se sidan 8.

Fr 03–03 kl. 15.00 – 17.00. Learning Seminar on Conformal Probabilities. Dmitry Beliaev and **Stanislav Smirnov,** KTH: *Dyadic property of the Brownian motion and triple points for harmonic measure (after B. Tsirelson et al).* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 7 sidan 7.

Fr 03–03 kl. 15.15. Seminarium i matematisk statistik. *(Observera dagen och lokalen!)* **Professor Jim Lindsey:** *Some statistical heresies.* Sal 14, hus 5, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se Bråket nr 7 sidan 4.

Må 03–06 kl. 13.15 – 15.00. Algebra and Geometry Seminar. Jan-Erik Roos: *Homological properties of modules over exterior algebras and their quotients.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 4.

Må 03–06 kl. 15.15. Seminarium i matematisk statistik. Professor Allan Gut, Uppsala universitet: *Stoppade summor och följder.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 7 sidan 6.

Ti 03–07 kl. 10.15 – 12.00. Lectures on Quantum Chaos. Michael Benedicks håller det första föredraget i denna serie. Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 7 sidan 5.

Fortsättning på nästa sida.

Seminarier (fortsättning)

Ti 03–07 kl. 13.15 – 14.15. Seminarium i PDE och spektralteori. Luca Bugliaro, Regensburg University: *Stability of QED with non-relativistic matter and Lieb-Thirring estimates.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 4.

Ti 03–07 kl. 14.00 – 15.00. Mittag-Leffler Seminar. James Brennan, Lexington: *Weighted polynomial approximation, general quasianalyticity, and a problem of Beurling.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

Ti 03–07 kl. 15.15. PDC Science Seminar. Massimo Vergassola, CNRS, Nice: *Fronts in scalar turbulence.* Seminarierummet, PDC, NADA, KTH. Se sidan 7.

On 03–08 kl. 10.00 – 11.45. Logikseminariet Stockholm-Uppsala. Mats Öberg presenterar sitt examensarbete om *Algebraiska och topologiska hjul.* Sal 16, hus 5, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

On 03–08 kl. 10.15 – 12.00. Combinatorics Seminar. Christos Athanasiadis: *Recent progress in the generalized Baues problem.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 4.

On 03–08 kl. 10.30 – 11.30. Algebraic Geometry Seminar. Tomasz Szemberg, Krakow/Essen: *Seshadri constants of principally polarized abelian threefolds.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

On 03–08 kl. 10.30 – 11.30. Analysseminarium. Henk de Snoo, Groningen: *Rank one perturbations in Pontryagin spaces with one negative square.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 6.

On 03–08 kl. 13.00 – 15.00. Seminarium i statistik. Jonas Andersson, Uppsala: *The inverse Gaussian stochastic volatility model.* Rum B705, Statistiska institutionen, SU. Se sidan 5.

On 03–08 kl. 13.15. Dynamiska systemseminariet. Kurt Johansson: *Random growth and random matrices.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 6 sidan 4. Internet-adressen till information om seminariet är http://www.math.kth.se/math/research/dynsyst.

Observera att Kurt Johanssons seminarium äger rum den 8 mars. I Bråket nr 6 anges fel datum för hans seminarium.

On 03–08 kl. 14.00 – 16.00. Arbetsgrupp i komplex analys. Robert Juhlin, KTH: *Normal forms for real analytic hypersurfaces.* Rum 321, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

To 03–09 kl. 14.00 – 15.00. Informal seminar on A^1-homotopy theory of schemes. W. Chacholski. Sammanträdesrum 3548, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 5.

To 03–09 kl. 14.00 – 15.00. Mittag-Leffler Seminar. Britt-Marie Stocke, Umeå: *Smoothness and approximation properties of functions.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

To 03–09 kl. 15.30 – 16.30. Mittag-Leffler Seminar. Yuanji Cheng, Malmö: *On the Bolza problem.* Institut Mittag-Leffler, Auravägen 17, Djursholm.

Fortsättning på nästa sida.

Seminarier (fortsättning)

Fr 03–10 kl. 9.00 – 10.00. Kollokvium i fysik. Dr Suzanne Gieser, Institutionen för idé- och lärdomshistoria, Uppsala universitet: *The Copenhagen Spirit — colloquium on the philosophy and history of quantum mechanics.* Sal F 01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v.

Fr 03–10 kl. 11.00 – 12.00. Docentföreläsning i optimeringslära och systemteori. Yishao Zhou, SU: *Balanced parametrization of a class of positive real functions.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

Må 03–13 kl. 15.15. Seminarium i matematisk statistik. Anna Carlsund: *Övertäckningstider för en enkel slumpvandring med oberoende, exponentialfördelade uppehållstider.* (Fortsättning från seminariet den 28 februari.) Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 6 sidan 4.

On 03–15 kl. 10.15 – 12.00. Combinatorics Seminar. Jakob Jonsson: *Combinatorial methods in cryptology.* Sal 21, hus 5, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se Bråket nr 7 sidan 6.

Jakob Jonssons seminarium har flyttats till den 15 mars. I Bråket nr 7 anges fel dag för seminariet.

On 03–15 kl. 13.00 – 15.00. Uppsatsseminarium på fördjupningskursen i statistik. Charlotte Björkenstam och **Sara Brundell:** *Minns ni rätt? Minnesfel i retrospektiva statistiska individundersökningar.* Rum B705, Statistiska institutionen, SU.

On 03–15 kl. 13.15. Dynamiska systemseminariet. Stefan Rauch-Wojciechowski, Matematiska institutionen, Linköpings universitet: *Quasi-potential systems of Newton equations and a non-classical separability theory.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 6. Internet-adressen till information om seminariet är http://www.math.kth.se/math/research/dynsyst.

Fr 03–17 kl. 9.00 – 10.00. Kollokvium i fysik. Docent Mats Wallin, Teoretisk fysik, KTH: *Quantum phase transitions.* Sal F 01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v.

Fr 03–17 kl. 11.00 – 12.00. Optimization and Systems Theory Seminar. Universitetslektor Anders Hansson, Institutionen för signaler, sensorer och system, KTH: *A primal-dual interior-point method for robust optimal control of linear discrete-time systems.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 8.

ALGEBRA AND GEOMETRY SEMINAR

Jan-Erik Roos:
Homological properties of modules over exterior algebras and their quotients

Abstract: I will report about recent results of Avramov, Eisenbud, S. Popescu, F. Schreyer and myself about the subject of the title.

Tid och plats: Måndagen den 6 mars kl. 13.15 – 15.00 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

SEMINARIUM I PDE OCH SPEKTRALTEORI

Luca Bugliaro: Stability of QED with non-relativistic matter and Lieb-Thirring estimates

Abstract: We consider an arbitrary number of non-relativistic electrons and an arbitrary number of static nuclei. They all interact with each other through Coulomb forces and are exposed to a magnetic field. Stability of matter is concerned with the question whether the energy per particle in the system is bounded from below, uniformly in the magnetic field.

After a short review about stability of matter in external magnetic fields, we will investigate the situation where the electromagnetic field is second-quantized. This corresponds to the situation where the electrons interact with the photon field. Stability holds in this case also, and we will focus on magnetic Lieb-Thirring type estimates (estimates for the sum of the negative eigenvalues of a Pauli operator), since they represent one of the main tools which we use in the proof of our stability result.

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

COMBINATORICS SEMINAR

Christos Athanasiadis:
Recent progress in the generalized Baues problem

Abstract: The Baues poset of an affine projection $\pi : P \to Q$ of convex polytopes is a combinatorial model for the space of all continuous sections of π which lie in the boundary of P. Its elements can be described as polyhedral subdivisions of Q, whose cells are projections of faces of P and reduce to traditional objects in polyhedral combinatorics, such as monotone paths on polytopes, triangulations of point configurations, and zonotopal tilings in important special cases. The connectivity of the Baues poset, in a topological sense, is the subject of the generalized Baues problem, posed by Billera, Kapranov and Sturmfels. More specifically, the problem asks to determine whether the Baues poset has the homotopy type of a sphere. We present recent progress in this problem, including a new instance with an affirmative answer and the first results, since the work of Billera and Sturmfels, on the topology of the Baues poset valid for an arbitrary polytope projection. In particular, we show that this topology is always nontrivial (in part joint work with Francisco Santos).

Tid och plats: Onsdagen den 8 mars kl. 10.15 – 12.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

ALGEBRAIC GEOMETRY SEMINAR

Tomasz Szemberg:
Seshadri constants of principally polarized abelian threefolds

Abstract: Seshadri constants are invariants introduced by Demailly. They measure the local positivity of a line bundle. They are very hard to control in general. After giving an overview of their properties and recalling general results for abelian varieties, we show how to compute them in case of Jacobians of genus three curves. This is the first non-trivial case of higher-dimensional varieties for which their exact value was computed.

Presented results are joint work with Thomas Bauer.

Tid och plats: Onsdagen den 8 mars kl. 10.30 – 11.30 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I STATISTIK

Jonas Andersson:
The inverse Gaussian stochastic volatility model

Abstract: The normal inverse Gaussian stochastic volatility model of Barndorff-Nielsen (1997) is extended. The resulting model has a more flexible lag structure than the original one. It can be considered either as a GARCH model with non-normal errors or as a stochastic volatility model with an inverse Gaussian distributed conditional variance. A simulation study is made in order to investigate the performance of the ML estimator of the model. Finally, the model is applied to stock returns and exchange rate movements. Its fit to two stylized facts and its forecasting performance is compared with two other volatility models.

Tid och plats: Onsdagen den 8 mars kl. 13.00 – 15.00 i rum B705, Statistiska institutionen, SU.

DOCENTFÖRELÄSNING I OPTIMERINGSLÄRA OCH SYSTEMTEORI

Yishao Zhou:
Balanced parametrization of a class of positive real functions

Abstract: In this talk we concentrate on the parametrization of a class of positive real functions in connection to spectral factorization problems, partial realization problems, etc., using the polynomial model. We will show that the Kimura realization for the so-called "maximum entropy solution" is indeed a Riccati balanced parametrization of this class of positive real functions and the related realization of the minimum phase spectral factor, Lyapunov balanced. The talk will start with a general presentation of the polynomial model and orthogonal polynomials. Then we work out the Kimura realization through the shift operator using a set of orthonormal polynomials. Linear algebra is the main tool of our analysis.

Tid och plats: Fredagen den 10 mars kl. 11.00 – 12.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

ANALYSSEMINARIUM

Henk de Snoo: Rank one perturbations in Pontryagin spaces with one negative square

Abstract: Let $\mathbf{N}_1$ denote the class of generalized Nevanlinna functions with one negative square, and let $\mathbf{N}_{1,0}$ denote the subclass of functions $Q(z) \in \mathbf{N}_1$ with the additional properties that $\lim_{y\to\infty} Q(iy)/y = 0$ and $\limsup_{y\to\infty} y|\Im Q(iy)| < \infty$. These classes form an analytic framework for studying (generalized) rank one perturbations $A(\tau) = A + \tau[\cdot,\omega]\omega$ in a Pontryagin space setting. Many functions appearing in quantum mechanical models of point interactions, such as $-z\log(1-z)$ or $iz^{3/2}$, either belong to the subclass $\mathbf{N}_{1,0}$ or can be associated with the corresponding generalized Friedrichs extension. It is shown that a complete spectral theoretical analysis of the perturbations $A(\tau)$ and the associated Friedrichs extension is possible. Many results, such as the explicit characterizations for the critical eigenvalues of the perturbations $A(\tau)$, are based on a recent factorization result for generalized Nevanlinna functions.

This talk reports on joint work with Seppo Hassi (Helsinki) and Vladimir Derkach (Donetsk).

Tid och plats: Onsdagen den 8 mars kl. 10.30 – 11.30 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

DYNAMISKA SYSTEMSEMINARIET

Stefan Rauch-Wojciechowski: Quasi-potential systems of Newton equations and a non-classical separability theory

Abstract: The separability theory deals with determining separation variables for PDE's, so that in these variables the product solutions of the PDE's can be found by solving a system of decoupled ODE's. The classical results of Bôcher and Eisenhart about the Laplace equation $\Delta\psi(q) = 0$ and the Hemholtz equation $\Delta\psi(q) + V(q)\psi = 0$ distinguish the well-known systems of confocal quadrics and of fourth-order cyclids in three dimensions. The Hamilton-Jacobi equations for natural Hamiltonian systems $H = \frac{1}{2}p^2 + V(q)$ are separable in the same variables as the Hemholtz equation and so are the related potential Newton equations $\ddot{q} = -\nabla V(q)$.

In this lecture we develop a theory of quasi-potential Newton equations of the form $\ddot{q} = M(q) = -\frac{1}{2}A(q)^{-1}\nabla k(q)$, where $A(q)$ is a certain matrix depending quadratically on the position variables $q = (q_1, \ldots, q_n)$. These equations share certain similarities with the potential equations but have many new features which leads to interesting mathematics.

Most interesting are quasi-potential Newton equations admitting n integrals of motion which are quadratic in velocities; these equations are proved to be completely integrable in a somewhat non-standard sense (by embedding). All such equations are fully characterized by a certain Poisson pencil or, equivalently, by a set of second order linear partial differential equations called Fundamental Equations. A study of triangular systems $\ddot{q}_k = M(q_1, \ldots, q_k)$, $k = 1, \ldots, n$, leads to *a separable reduction principle.* Using this principle, one can completely solve triangular systems by quadratures by using a new type of (non-orthogonal) variables of separation, consisting of non-confocal quadric surfaces.

Tid och plats: Onsdagen den 15 mars kl. 13.15 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

PDC SCIENCE SEMINAR

Massimo Vergassola: Fronts in scalar turbulence

Abstract: A major property of scalar fields, such as e.g. temperature or pollutant concentration, transported by turbulent flows is the formation of fronts, where the scalar field varies abruptly across very short distances. Their mechanism of formation will be discussed, together with the consequences for the persistence of anisotropies and the intermittency of the scalar field.

Tid och plats: Tisdagen den 7 mars kl. 15.15 i seminarierummet, PDC, NADA, KTH.

S. Kovalevski symposium: Differential equations and applications

The symposium will be organized at Stockholm University from Monday, June 19, to Thursday, June 22, 2000.

The aim of the conference is to bring together scientists working in neighbouring areas of mathematics and physics. A special session in memory of Sonja Kovalevski (S. Kovalevskaya) — the first female professor in Scandinavia and a great mathematician — will be organized. The program of the conference contains a series of lectures by experts organized with a special aim to attract young scientists from Scandinavia, Russia and other countries to the modern progress in differential equations and their applications to fundamental problems of modern science. Experts in the field will give series of introductory lectures for junior scientists.

The key subjects of the conference are:

1. General theory of ordinary and partial differential equations.
2. Probabilistic methods and complex dynamics.
3. Operator theory, scattering theory, resonances.
4. Quantum few-body problems and design of quantum electronic devices.

Particular attention will be given to modern developments of mathematical methods elaborated by S. Kovalevski.

The tentative schedule includes 50 minutes lectures in the mornings and 30 minutes talks in the afternoons.

The participants are asked to fill out the registration form and to submit a one page abstract before April 1, 2000. A volume containing selected contributions is planned to be published after the conference. Details concerning the conference will be included in our second announcement.

Advisory board: S. Albeverio (Bonn), Yu. N. Demkov (St. Petersburg), M. Passare (Stockholm), B. Pavlov (Auckland).

Organizing committee: P. Kurasov (Stockholm) and N. Elander (Stockholm).

Information concerning the conference can be found on the web page http://www.matematik.su.se/events/koval-conf.

Address for correspondence is: Kovalevski symposium, c/o P. Kurasov, Department of Mathematics, Stockholm University, 106 91 Stockholm. Fax: 08-612 67 17. Telephone: 08-16 48 71. E-mail: koval-conf@matematik.su.se.

KOLLOKVIUM I FYSIK

Göran Marklund: On the acceleration of auroral particles and the auroral current circuit

Abstract: Electrons interacting with the Earth's atmosphere producing aurora are known to be accelerated within negative potential structures formed at about 6000 – 10000 km altitude. These particles, mainly electrons, carry an upward current being connected to an adjacent downward current for long believed to be carried by high fluxes of thermal electrons, evaporating from the almost infinite charge reservoir provided by the Earth's ionosphere.

Recent results by the Swedish satellite Freja have demonstrated that this is not the case. Because of plasma evacuation processes, upward acceleration of the ionospheric electrons are needed in order to maintain current continuity. These results point at a previously unknown symmetry between the two parts of the auroral current circuit and have contributed to a better understanding of the dynamic auroral phenomena.

Tid och plats: Fredagen den 3 mars kl. 9.00 – 10.00 i sal F 01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v.

OPTIMIZATION AND SYSTEMS THEORY SEMINAR

Anders Hansson: A primal-dual interior-point method for robust optimal control of linear discrete-time systems

Abstract: In this talk is described how to efficiently solve a robust optimal control problem using recently developed primal-dual interior-point methods. Among potential applications are model predictive control. The optimization problem considered consists of a worst case quadratic performance criterion over a finite set of linear discrete-time models, subject to inequality constraints on the states and control signals. The scheme has been prototyped in Matlab. To give a rough idea of the efficiencies obtained, it is possible to solve problems with more than 10000 primal variables and 40000 constraints on a workstation. The key to the efficient implementation is an iterative solver in conjunction with a Riccati-recursion invertible pre-conditioner for computing the search directions.

Tid och plats: Fredagen den 17 mars kl. 11.00 – 12.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

MONEY, JOBS, CONFERENCES

Columnist: Pär Holm, Department of Mathematics, SU. E-mail: pho@matematik.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 2000. A number without an explanation is a telephone number.

Standard information channels

1. A channel to information from TFR: http://www.tfr.se.
2. A channel to information from NFR: http://www.nfr.se.
3. A channel to information from the European Mathematical Society: http://www.emis.de.

(Continued on the next page.)

4. A channel to information from the American Mathematical Society: http://www.ams.org.
5. KTH site for information on funds, etc., weekly: http://www.admin.kth.se/info/kth-kalendern/stipendier.html.
6. Stockholm University site for information on funds: http://www.sb.su.se/stipendier/.
7. Umeå site for information on funds: http://www.umu.se/umu/veckoprogram/aktstip99.html.
8. Job announcement site: http://www.maths.lth.se/nordic/Euro-Math-Job.html. This is run by the European Mathematical Society.
9. KTH site for information on research: http://www.admin.kth.se/CA/extrel/index/forsk.html.

New information

Jobs, to apply for

10. Institutionen för matematik och systemteknik vid Växjö universitet söker doktorander i matematik/tillämpad matematik, 19 april. Info: Mathias Hedenborg, 0470-70 86 38, mathias.hedenborg@msi.vxu.se, eller Hans Frisk, 0470-70 84 01, hans.frisk@msi.vxu.se. Web-info: http://www.vxu.se/start/aktuellt/job/doktorander_matematik.html.

Old information

Money, to apply for

11. Wenner-Gren Stiftelserna utlyser resestipendier för kortare tids besök utomlands under perioden 1 juli – 31 december, t.ex. för deltagande i internationella kongresser eller symposier. Behörig att söka är svensk forskare som avlagt doktorsexamen och ej fyllt 40 år samt utländsk disputerad forskare under 40 år som vistats i Sverige mer än 1 år, 10 mars. Web-info: http://www.wenner-grenstift.a.se/.
12. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) utlyser stipendier för forskarstuderandes utlandsvistelse läsåret 2000/01. Stipendierna skall ge möjlighet för forskarstuderande vid svensk universitets- eller högskoleinstitution att tillbringa en termin (minst 4 månader) vid ett utländskt universitet eller forskningsinstitut, 31 mars. Web-info: http://www.stint.se/DPutlys.html.
13. Kungl. Vetenskapsakademien (KVA) utlyser stipendier och anslag inom matematik enligt följande: till doktorander utdelas stipendier med ett engångsbelopp på 7 000 kr och till disputerade forskare utdelas forskningsanslag med i normalfallet 30 000 kr (0 – 3 år efter disputation), respektive 50 000 kr (4 – 6 år efter disputation). Sökande skall vara registrerad doktorand eller ha avlagt doktorsexamen 1994 eller senare. Inom detta område finns även vissa medel avsedda speciellt för: stöd till doktorander, stöd till den som önskar ytterligare meritera sig efter doktorsexamen, stöd till svenska forskare för forskning hemma eller i utlandet samt för inbjudan av utländska gästforskare och bidrag för att kvarhålla forskare inom landet. 31 mars. Info: Sascha Lamm Edblad, Forskarutbytes- och stipendieenheten, Kungl. Vetenskapsakademien, Box 50005, 104 05 Stockholm, 08-673 95 00. Telefontid: måndagar – fredagar kl. 11.00 – 12.00, sascha@kva.se. Web-info: http://www.kva.se/sve/pg/stipendier/index.html.
14. Stiftelsen för strategisk forskning (SSF) utlyser tjugo anslag på tio miljoner kr vardera till yngre framstående forskare inom bl.a. tillämpad matematik. Anslaget är avsett att användas under normalt sex år för innovativ forskning vid svenska universitet eller högskolor, 2 maj. Web-info: http://www.stratresearch.se.
15. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) utlyser bidrag för kortare utlandsvistelser för lärare eller forskare vid svenskt universitet, högskola eller forskningsinstitut, dock ej doktorander. Ansökan kan inlämnas fortlöpande under året, dock senast 8 veckor före den dag då utlandsvistelsen avses påbörjas. Web-info: http://www.stint.se/KPutlys.html.
16. Anslag ställs, från Knut och Alice Wallenbergs Stiftelse, 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." Ansökan om resebidrag skall ställas till rektors kansli. Bidrag kan sökas när som helst under året. Info: se punkt 5 ovan.
17. Nordisk Forskerutdanningsakademi (NorFA) finansierar nordiskt samarbete inom forskning och forskarutbildning genom dels personliga stipendier (mobilitetsstipendier och för deltagande i nationella forskarutbildningskurser), dels anslag till institutioner (forskarutbildningskurser, nordiska nätverk, gästprofessurer och workshops). Info: http://www.norfa.no.
18. Svenska Institutet (SI) utlyser kontinuerligt stipendier och bidrag för studier och forskning utomlands: stipendier för Europastudier, internationella forskarstipendier, Östersjöstipendier, Visbyprogrammet, m.m. Aktuell information om SI:s samtliga stipendiemöjligheter och ansökningshandlingar finns på SI:s hemsida: http://www.si.se.

(Continued on the next page.)

19. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) utlyser medel för att främja samarbete med universitet och högskolor i Republiken Korea (Sydkorea), Taiwan, Hongkong, Indonesien och Egypten. Ansökningar skall inlämnas minst 6 – 8 veckor före verksamhetsstarten, och medlen kan sökas löpande under året. Info: STINT, Skeppargatan 8, 114 52 Stockholm, 08-662 76 90. Web-info: www.stint.se.
20. Wenner-Gren Stiftelserna utlyser gästföreläsaranslag för gästföreläsningar. Anslag sökes av svensk forskare som önskar inbjuda utländsk forskare. Ansökan kan inlämnas när som helst under året. Web-info: http://www.wenner-grenstift.a.se.
21. NUTEK stipends for stay in research institutions (not universities) in Japan. Short or long periods. For persons with or almost with doctoral degree. Info: Kurt Borgne, 08-681 92 65, kurt.borgne@nutek.se. You can apply any time.

Jobs, to apply for

22. Institutionen för matematik vid Luleå tekniska universitet söker en universitetslektor i matematik, 3 mars. Info: Thomas Gunnarsson, 0920-918 50, Thomas.Gunnarsson@sm.luth.se, Lars-Erik Persson, 0920-911 17, Lars-Erik.Persson@sm.luth.se, eller Håkan Ekblom, 0920-911 12, Hakan.Ekblom@sm.luth.se. Web-info: http://www.luth.se/new/vacancy/lektmattekn.html.
23. Institutionen för matematik vid Luleå tekniska universitet söker en universitetslektor i teknisk-vetenskapliga beräkningar, 3 mars. Info: Thomas Gunnarsson, 0920-918 50, Thomas.Gunnarsson@sm.luth.se, Lars-Erik Persson, 0920-911 17, Lars-Erik.Persson@sm.luth.se, eller Håkan Ekblom, 0920-911 12, Hakan.Ekblom@sm.luth.se. Web-info: http://www.luth.se/new/vacancy/lektmattekn.html.
24. Institutionen för matematik och naturvetenskap vid Högskolan i Kristianstad söker en universitetslektor i matematik/datalogi, 15 mars. Info: Magnus Thelaus, 044-20 34 01, Magnus.Thelaus@mna.hkr.se. Web-info: http://www.hkr.se/.
25. Matematikcentrum vid Lunds tekniska högskola söker en professor i numerisk beräkningsteknik, 19 april. Info: Klas Malmqvist, 046-222 76 84, Klas.Malmqvist@nuclear.lu.se, eller Gustaf Söderlind, 046-222 49 09, Gustaf.Soderlind@na.lu.se. Web-info: http://www2.lth.se/ledjobb/prof/index_e.asp.

Conferences, etc.

26. International Conference on Differential Geometry and Quantum Physics, March 6 – 10, Berlin, Germany. URL: http://www.math.TU-Berlin.DE/~bach/FSS.html.
27. Optimization, Statistics, Mathematical Economics and Algorithms IV, March 8 – 11, Habana, Cuba.
28. Geometry and Applications, March 13 – 16, Novosibirsk, Russia.
29. International Conference on Fundamental Sciences: Mathematics and Theoretical Physics, March 13 – 17, Singapore. URL: http://www.math.nus.edu.sg/icfs.
30. LMS/EPSRC short course on stochastic analysis, March 20 – 24, Oxford, Great Britain. URL: http://www.lms.ac.uk/activities/research_meet_com/short_course/march_00.html.
31. Seventh Rhine Workshop on Computer Algebra, March 22 – 24, Bregenz, Austria. URL: http://www.inf.ethz.ch/rwca00/.
32. Harmonic Maps and Curvature Properties of Submanifolds 2, April 11 – 14, University of Leeds, Great Britain. URL: http://www.amsta.leeds.ac.uk/pure/geometry/leeds2000.html.
33. Fractal 2000, "Complexity and Fractals in the Sciences", April 16 – 19, Singapore. URL: http://www.kingston.ac.uk/fractal/.
34. Spring School on Analysis, April 23 – 29, Paseky nad Jizerou, Czech Republic. URL: http://www.karlin.mff.cuni.cz/katedry/kma/ss.
35. International Conference dedicated to the 150th Birthday of Sofia Kovalevskaya: Theory of Partial Differential Equations and Special Topics of Theory of Ordinary Differential Equations, May 11 – 15, St. Petersburg, Russia. URL: http://www.pdmi.ras.ru/EIMI/2000/sofia/.
36. Representation Theory and Computational Algebra, May 15 – 18, University of Georgia, Athens, Georgia, USA. URL: http://www.math.uga.edu/~djb/conf2000.html.
37. Summer School on Stereology and Geometric Tomography, May 20 – 25, Sandbjerg Manor, Denmark. URL: http://www.maphysto.dk/events/S-and-GT2000/.
38. Millennial Conference on Number Theory, May 21 – 26, University of Illinois at Urbana-Champaign, USA. URL: http://www.math.uiuc.edu/nt2000/millennial/.

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39. Journées Complexes 2000, the 7th Edition of the International Meeting on Complex Analysis and Geometry, May 22 – 26, Institut Élie Cartan, Nancy, France. URL: http://www.iecn.u-nancy.fr/~jc2000/jc2000e.html.
40. International Conference on the Occasion of the 70th Birthday of Professor Anatolii Asirovich Goldberg: "Entire and Meromorphic Functions", May 23 – 25, Lviv, Ukraine. URL: http://www.franko.lviv.ua/faculty/mechmat/.
41. Some Recent Techniques in Harmonic Analysis, May 28 – June 3, Paseky nad Jizerou, Czech Republic. URL: http://www.karlin.mff.cuni.cz/katedry/kma/ss.
42. Groups and Group Rings, June 5 – 10, Wisla, Poland. URL: http://zeus.polsl.gliwice.pl/~groups/a2.html.
43. SIAM Conference on Discrete Mathematics, June 12 – 15, Radisson Hotel Metrodome, Minneapolis, Minnesota, USA. URL: siam.org/meetings/dm00/.
44. First AMS-Scandinavian International Mathematics Meeting. XXIII Scandinavian Congress of Mathematicians, June 13 – 16, Odense, Denmark. URL: http://www.imada.ou.dk/~hjm/AMS.Scand.2000.html.
45. 10th SEFI-MWG European Seminar on Mathematics in Engineering Education, June 14 – 16, Miskolc, Hungary. URL: http://www.uni-miskolc.hu/uni/dept/gepesz/matematika/sefi-seminar.
46. 2nd Croatian Mathematical Congress, June 15 – 17, University of Zagreb, Croatia. URL: http://www.math.hr/congress/.
47. Mathematical Analysis, June 17 – 22, Castelvecchio Pascoli, Italy. URL: http://www.esf.org/euresco/00/pc00094a.htm.
48. The Sixth International Symposium on Effective Methods in Algebraic Geometry (MEGA 2000), June 20 – 24, Bath University, United Kingdom. URL: http://www.maths.bath.ac.uk/CONFERENCES/mega2000/.
49. IMACS Conference on Applications of Computer Algebra (ACA'2000), June 25 – 28, St. Petersburg, Russia. URL: http://www.pdmi.ras.ru/EIMI/2000/imacs/.
50. The Third International Conference on Abstract Analysis in Africa (ICAA 2000), June 26 – 30, Berg-en-Dal, Kruger National Park, South Africa. URL: http://www.math.up.ac.za/icaa.
51. Fourth Siberian Congress on Industrial and Applied Mathematics, June 26 – July 1, Novosibirsk, Russia. URL: http://www.math.nsc.ru/conference.
52. 18th International Conference on Operator Theory, June 27 – July 1, University of the West, Timisoara, Romania. URL: http://www.imar.ro/conferences/conf.html.
53. Alhambra 2000, A Joint Mathematical European-Arabic Conference, July 3 – 7, Granada, Spain. URL: http://www.ugr.es/local/alhambra2000.
54. Functional Analysis Valencia 2000, July 3 – 7, Technical University of Valencia, Spain. URL: http://math-www.uni-paderborn.de/VLC2000.
55. Catop 2000, July 4 – 6, University of Fribourg, Switzerland. URL: http://www.unifr.ch/math/catop2000.
56 International Conference on Ordinal and Symbolic Data Analysis (OSDA 2000), July 5 – 8, Université Libre de Bruxelles, Belgium. URL: http://www.ulb.ac.be/sciences/ulbmath/osda2000/.
57. The Sixth Barcelona Logic Meeting (6BLM), July 6 – 8, Barcelona, Spain. URL: http://www.crm.es.
58. Third European Congress of Mathematics, July 10 – 14, Barcelona, Spain. URL: http://www.iec.es/3ecm/.
59. VI Workshop on Real and Complex Singularities, July 17 – 21, ICMC-USP, Sco Carlos, S.P. Brazil. URL: http://www.icmc.sc.usp.br/eventos.
60. I Colloquium on Lie Theory and Applications, July 17 – 22, Vigo, Spain. URL: http://www.dma.uvigo.es/~clieta/index.
61. EMS Summer School on New Analytic and Geometric Methods in Inverse Problems, July 24 – August 3, Edinburgh, Scotland.
62. Numerical Modelling in Continuum Mechanics, July 31 – August 4, Prague, Czech Republic. URL: http://www.karlin.mff.cuni.cz/katedry/knm/nmicm2000.
63. Workshop on PDE, Thermo & Visco & Elasticity, July 31 – August 4, Konstanz, Germany. URL: http://www.mathe.uni-konstanz.de/~racke/announ/ws2000.html.
64. Clifford Analysis, Its Applications and Related Topics, August 1 – 6, Beijing, People's Republic of China. URL: http://www.mathe.tu-freiberg.de/beijing2000.
65. International Symposium on Symbolic and Algebraic Computation (ISSAC 2000), August 6 – 9, St. Andrews University, Scotland. URL: http://www-gap.dcs.st-and.ac.uk/issac2000.

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66. Conference on Function Spaces, Interpolation Theory, and related topics in honour of Jaak Peetre on his 65th birthday, August 17 – 22, Lund University, Sweden. URL: http://www.maths.lth.se/conferences/peetre65.html.
67. EMS Summer School in Probability Theory, August 17 – September 3, Saint-Flour, Cantal, France.
68. IMACS 2000, August 21 – 25, EPFL, Lausanne, Switzerland. URL: http://imacs2000.epfl.ch.
69. 9th Summer St. Petersburg Meeting in Mathematical Analysis, August 28 – September 1, St. Petersburg, Russia. URL: http://www.pdmi.ras.ru/EIMI/2000/analysis9/.
70. International Conference on Topology and its Applications, September 2 – 9, Ohrid, Macedonia. URL: http://www.pmf.ukim.edu.mk/mathematics/icta2000.html.
71. Colloquium in honor of Michel Mendes, September 11 – 14, University of Bordeaux 1, France. URL: http://www.ufr-mi.u-bordeaux.fr/~stan/Colloque/MMF.html.
72. International Workshop on Operator Theory and Applications (IWOTA), September 12 – 15, Faro, Portugal. URL: http://www.ualg.pt/cma/iwota/.
73. IDA 2000: International Data Analysis Conference, September 18 – 22, Innsbruck, Austria. URL: http://www.statistik.tuwien.ac.at/ida2000/.
74. International Congress on Differential Geometry in memory of Alfred Gray (1939 – 1998), September 18 – 23, Bilbao, Spain. URL: http://www.ehu.es/Gray.
75. 8th Workshop on Stochastic and Related Fields, September 18 – 27, G. Magusa (Famagusta), Cyprus. URL: http://mozart.emu.edu.tr/workshop.
76. The Third International Workshop on Automated Deduction in Geometry (ADG), September 25 – 27, Zürich, Switzerland. URL: http://www-calfor.lip6.fr/~wang/ADG2000/index.html.