# BRÅKET

*Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet*

**NR 11** **FREDAGEN DEN 23 MARS 2007**



**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 29 mars kl. 13.00.


## SEMINARIER

**Fr 03–23 kl. 10.00. Licentiatseminarium i datalogi. Daniel Aarno** presenterar sin licentiatavhandling: *Intention Recognition in Human Machine Collaborative Systems.* Opponent: **Associate Professor Darius Burschka,** Technische Universität München. Sal D31, KTH, Lindstedtsvägen 17, b.v. Se Bråket nr 9 sidorna 9 – 10.

**Fr 03–23 kl. 10.15. Kombinatorikseminarium.** *(Observera dagen och lokalen!)* **Professor Christian Krattenthaler,** Universität Wien: *Growth diagrams, and increasing and decreasing chains in fillings of cell diagrams.* Sal D32, KTH, Lindstedtsvägen 5, b.v. Se Bråket nr 9 sidan 12.

*Professor Krattenthaler är opponent vid Jonas Sjöstrands disputation. Se Bråket nr 9 sidan 13.*

**Må 03–26 kl. 10.00 – 10.50. Seminar in PDE and Potential Theory. Tomas Sjödin,** University College Dublin: *On the exterior inverse problem of potential theory.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 8.

**Fortsättning på nästa sida.**

### Disputation i teoretisk fysik

*Marios Nikolaou* disputerar vid KTH på avhandlingen *A Matter of Disorder: Monte Carlo Simulations of Phase Transitions in Strongly Disordered Systems* fredagen den 30 mars kl. 10.15. Se sidan 7.

**Money, jobs:** Se sidorna 8 – 9.

### Disputation i matematik

*Jonas Sjöstrand* disputerar på avhandlingen *Enumerative combinatorics related to partition shapes* fredagen den 23 mars kl. 13.15 i sal F3, KTH, Lindstedtsvägen 26, b.v. Se Bråket nr 9 sidan 13.

### Disputation i matematik

*Tanja Bergkvist* disputerar på avhandlingen *Asymptotics of Eigenpolynomials of Exactly-Solvable Operators* fredagen den 30 mars kl. 13.00 i sal 14, hus 5, Matematiska institutionen, SU, Kräftriket. Se Bråket nr 10 sidan 7.

**Seminarier (fortsättning)**

**Må 03–26 kl. 11.00–11.50. Seminar in PDE and Potential Theory. Alexander Vasil'ev:** *Virasoro Algebra: integrability and sub-Riemannian geometry.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 8.

**Må 03–26 kl. 13.15–14.15. Graduate Student Seminar. Stephanie Yang,** Institut Mittag-Leffler: *Linear systems of plane curves.* Sal D3, KTH, Lindstedtsvägen 5, b.v. Se Bråket nr 10 sidan 5.

*Observera att dagen och lokalen för Stephanie Yangs seminarium har ändrats. I Bråket nr 9 och nr 10 anges fel dag och lokal för detta seminarium.*

**Må 03–26 kl. 13.20–14.10. Seminar in PDE and Potential Theory. Irina Markina:** *Two examples of sub-Riemannian and sub-Lorentzian geometries.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 8.

**Må 03–26 kl. 14.20–15.10. Seminar in PDE and Potential Theory. Boyan Sirakov:** *Title to be announced.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 8.

*Observera att tiderna för Irina Markinas och Boyan Sirakovs föredrag har ändrats. I Bråket nr 10 anges fel tider för dessa föredrag.*

**Må 03–26 kl. 15.15–17.00. Seminarium i matematisk statistik. Lars Holst:** *Om rekord i slumppermutationer och Pólyas urnmodell.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 5.

**Ti 03–27 kl. 9.15–10.00. Seminarium i finansiell matematik.** *(Observera dagen, tiden och lokalen!)* **Andreas Runnemo** presenterar sitt examensarbete: *A canonical optimal stopping problem under a double exponential jump diffusion.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

**Ti 03–27 kl. 10.15–11.00. Seminarium i finansiell matematik.** *(Observera dagen, tiden och lokalen!)* **Cecilia Wingren** presenterar sitt examensarbete: *On Modelling the Convenience Yield in the Futures Market with application to five Consumption Commodities.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 5.

**Ti 03–27 kl. 10.15. Plurikomplexa seminariet. Maria Roginskaya,** Göteborg: *Point spectra of partially power-bounded operators.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se sidan 4.

**Ti 03–27 kl. 14.00–15.00. Mittag-Leffler Seminar. Stefan Schröer,** Heinrich-Heine-Universität: *Azumaya algebras and Artin stacks.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 4.

**On 03–28 kl. 10.00–11.00. Presentation av examensarbete i matematik. Julia Tsygan:** *On the Use of History in Calculus Education.* Handledare: **Christian Gottlieb.** Sal 21, hus 5, Matematiska institutionen, SU, Kräftriket. Se sidan 4.

**On 03–28 kl. 10.15–12.00. Kombinatorikseminarium. Jakob Björnberg,** KTH och Cambridge: *Random Poisson flows on graphs.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 10 sidan 6.

**Fortsättning på nästa sida.**

**Seminarier (fortsättning)**

**On 03–28 kl. 10.30. Logikseminariet Stockholm-Uppsala. Olov Wilander:** *Proofs and Partiality.* (Fortsättning från seminariet den 21 mars.) Sal 11167, Ångströmlaboratoriet, Uppsala universitet. Se Bråket nr 10 sidan 5.

**On 03–28 kl. 11.00–12.00. Common SU KoF/KTH Theoretical Physics Seminar. George I. Japaridze,** Andronikashvili Institute of Physics, Tbilisi, Georgien: *Competing effects of interactions and spin-orbit coupling in a quantum wire.* Sal FA31, Roslagstullsbacken 21, AlbaNova universitetscentrum. Se Bråket nr 10 sidan 7.

**On 03–28 kl. 13.15–14.15. Seminarium i analys och dynamiska system. Alexandru Aleman,** Lund: *Volterra invariant subspaces of $H^p$ (joint work with Boris Korenblum).* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

**On 03–28 kl. 15.15–16.00. Seminarium i numerisk analys. Malin Ljungberg,** Uppsala universitet: *Design of high performance computing software for genericity and variability.* Rum 4523, KTH CSC, Lindstedtsvägen 5, plan 5. Se sidan 8.

**On 03–28 kl. 16.00–17.00. KTH/SU Mathematics Colloquium. Wojciech Chachólski,** KTH: *How to quantify complexity of fibrations of topological spaces.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Kaffe/te serveras kl. 15.30 i pausrummet, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 4. Se Bråket nr 10 sidan 8.

**To 03–29 kl. 10.15–12.00. Mini-Course in Mathematics. Anton Khoroshkin:** *Operad theory and Homological algebra (third and last lecture).* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket. Se Bråket nr 10 sidan 4.

**To 03–29 kl. 11.00–12.00. Mittag-Leffler Seminar. Manuel Blickle,** FB Mathematik, Essen: *Singularity invariants in positive characteristic (report on joint work with Mircea Mustata and Karen Smith).* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

**To 03–29 kl. 14.00–15.00. Mittag-Leffler Seminar. Lothar Göttsche,** Abdus Salam International Centre, Trieste: *A Riemann-Roch Theorem for virtually smooth varieties and applications (joint work with B. Fantechi).* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

**To 03–29 kl. 15.15–16.15. AlbaNova and Nordita Colloquium in Physics. Hans Ågren,** Teoretisk kemi, Institutionen för bioteknologi, KTH-AlbaNova: *Multiscale modeling of soft materials.* Oskar Kleins auditorium, Roslagstullsbacken 21, AlbaNova universitetscentrum.

**To 03–29 kl. 15.30–16.30. Mittag-Leffler Seminar. Nicolae Manolache,** Institute of Mathematics of the Roumanian Academy, Bucharest: *Gorenstein multiple structures on smooth support.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 7.

**Fr 03–30 kl. 13.15–14.15. Graduate Student Seminar. Yacin Ameur,** Matematik, KTH: *Interpolation av Hilbert-par.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 7.

**Fortsättning på nästa sida.**

**Seminarier (fortsättning)**

**On 04–04 kl. 11.00–12.00. Common SU KoF/KTH Theoretical Physics Seminar. Ansar Fayyazuddin,** CUNY, New York: *Calabi-Yau 3-folds from 2-folds with some applications to AdS/CFT.* Sal FB41, Roslagstullsbacken 21, AlbaNova universitetscentrum. Se sidan 7.

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## PLURIKOMPLEXA SEMINARIET

**Maria Roginskaya:**
**Point spectra of partially power-bounded operators**

*Abstract:* In this talk I will present some joint results with Thomas Ransford bringing some new light on an old theorem of Benton Jamison.

Let $T$ be an operator on a separable Banach space, and denote by $\sigma_p(T)$ its point spectrum. We show that, even though a number of previous related results suggested the opposite, it is possible that $\sigma_p(T) \cap \mathbb{T}$ is uncountable, and yet $\|T^n\| \not\to \infty$. We further investigate the relationship between the growth of sequences $(n_k)$ such that $\sup_k \|T^{n_k}\| < \infty$ and the possible size of $\sigma_p(T) \cap \mathbb{T}$.

*Tid och plats:* Tisdagen den 27 mars kl. 10.15 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket.

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## MITTAG-LEFFLER SEMINAR

**Stefan Schröer:**
**Azumaya algebras and Artin stacks**

*Abstract:* I discuss some applications of stack theory to questions on Azumaya algebras and Brauer groups.

*Tid och plats:* Tisdagen den 27 mars kl. 14.00–15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

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## PRESENTATION AV EXAMENSARBETE I MATEMATIK

**Julia Tsygan:**
**On the Use of History in Calculus Education**

*Handledare:* **Christian Gottlieb.**

*Abstract:* Mathematics has history, but mathematical concepts and methods are often taught as if they were eternal truths independent of people and culture. The purpose of this thesis is to show how calculus education can benefit with inspiration from the history of calculus. There are two main parts in this thesis. The first part deals with the history of calculus, starting with functions and continuing with limits and continuity, differentiation, and integration. In the second part I suggest some reasons and methods for, as well as problems with, integrating the history of calculus with education.

*Tid och plats:* Onsdagen den 28 mars kl. 10.00–11.00 i sal 21, hus 5, Matematiska institutionen, SU, Kräftriket.

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## SEMINARIUM I FINANSIELL MATEMATIK

**Andreas Runnemo**

presenterar sitt examensarbete:

### A canonical optimal stopping problem under a double exponential jump diffusion

*Abstract:* We investigate an approach for computing American option prices under jump diffusions. The model used for the jump diffusion process is based on the standard Merton framework. For modelling the jump part we use a double exponential distribution described by Ramezani and Zeng and by Kou. According to studies by Ramezani and Zeng the double exponential distribution agrees well with real data.

To compute the prices we first perform a space-time transformation reducing the optimal stopping problem to a standard Brownian motion in a way very similar to the method used by AitSahlia and Lai. In these new variables we then compute the prices using an extended Bernoulli random walk. We also show that this new optimal stopping boundary can be well approximated by piecewise linear splines.

*Tid och plats:* Tisdagen den 27 mars kl. 9.15 – 10.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

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## SEMINARIUM I FINANSIELL MATEMATIK

**Cecilia Wingren**

presenterar sitt examensarbete:

### On Modelling the Convenience Yield in the Futures Market with application to five Consumption Commodities

*Abstract:* We model the dynamics of futures prices and corresponding forward curves of five consumption commodities; aluminium, copper, crude oil, heating oil, and natural gas. We implement two models that both introduce the concept of the convenience yield, i.e. the premium the user is willing to pay of having direct access to the commodity minus the storage cost.

The first model is the Gibson & Schwartz two-factor model, with the spot price and the convenience yield as coupled stochastic processes. The parameters of the model, obtained by using the Kalman filter, are unstable and yield a model that lacks in prediction capacity. However, the parameters provide us with a good intuition of what the characteristics of the forward curve evolution are.

A more direct approach of modelling the term structure is also studied, where the seasonal variations in the forward curve are estimated. The convenience yield is estimated through the assumption that it is deterministic. After this extraction has been made, seasonal variations of the spot price and convenience yield are analysed. For some commodities we find strong evidence of that the level and volatility of these processes are seasonality dependent.

Both models show evidence of Keynes's theory of normal backwardation. When it comes to prediction capacity, the seasonal model seems superior. The results from prediction of random samples, taken from our collection of data, show that the two-factor model yields a significantly larger Root Mean Square Error for all commodities under study.

*Tid och plats:* Tisdagen den 27 mars kl. 10.15 – 11.00 i seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

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**MITTAG-LEFFLER SEMINAR**

**Manuel Blickle:**
**Singularity invariants in positive characteristic**
**(report on joint work with Mircea Mustata and Karen Smith)**

*Abstract:* The birational classification of algebraic varieties has long been an important and inspiring challange in algebraic geometry. Through the work of Mori it became apparent that singular varieties need to be included in the quest for finding a suitable minimal model in a given birational equivalence class. Therefore it is important to obtain ways of measuring the "badness" of a singularity in concrete terms. One such measure is the "log canonical threshold". Its understanding lies at the heart of the solution of the Minimal Model Program, as through Shokurov's ACC conjecture it is linked to the termination of flips. In this talk I will slightly touch upon these points as a motivation to introduce a family of invariants, the so-called F-thresholds. These are positive characteristic counterparts to (generalizations of) the log canonical threshold in characteristic zero. I will show some of their properties and, as the main technical point, show that they form a discrete family of rational numbers. Finally I will address some strange behaviour of these invariants in the hypersurface case, leading to a discussion of a possible (though still unlikely) connection with Shokurov's ACC conjecture.

*Tid och plats:* Torsdagen den 29 mars kl. 11.00 – 12.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

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**MITTAG-LEFFLER SEMINAR**

**Lothar Göttsche:**
**A Riemann-Roch Theorem**
**for virtually smooth varieties and applications**
**(joint work with B. Fantechi)**

*Abstract:* Moduli spaces often are not smooth and they often do not have the dimension one would expect, however, often they carry a 1-perfect obstruction theory, which allows to construct a virtual fundamental class of the expected dimension, and to construct invariants of moduli spaces as intersection numbers. One can also use it to construct a virtual structure sheaf, which allows to define virtual holomorphic Euler characteristics of vector bundles.

These behave in many ways as if they were the fundamental class and the structure sheaf of a smooth variety of the expected dimension. Thus we want to view a variety with a 1-perfect obstruction theory as "virtually smooth".

We prove a Riemann-Roch Theorem for the virtual holomorphic Euler characteristic of vector bundles on a virtually smooth proper variety. The formulation is identical to the case of smooth varieties, replacing every term by its virtual counterpart.

As an application we introduce and study virtual $\chi_y$-genus, virtual Euler number and virtual elliptic genus of virtually smooth varieties and show that they satisfy the usual properties.

*Tid och plats:* Torsdagen den 29 mars kl. 14.00 – 15.00 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

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## MITTAG-LEFFLER SEMINAR

**Nicolae Manolache:**
**Gorenstein multiple structures on smooth support**

*Abstract:* Given a smooth variety $X$ over an algebraically closed field $k$, one wants to construct (and classify) "good" (i.e. Cohen-Macaulay or Gorenstein or locally complete intersection) schemes $Y$ such that $Y_{\text{red}} = X$. There are three canonical filtrations of $Y$ such that the successive quotients of the corresponding ideals are $\mathcal{O}_X$-modules. In this talk the aim is to characterize the Gorenstein property of $Y$ in terms of these filtrations.

*Tid och plats:* Torsdagen den 29 mars kl. 15.30 – 16.30 vid Institut Mittag-Leffler, Auravägen 17, Djursholm.

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## DISPUTATION I TEORETISK FYSIK

**Marios Nikolaou**

disputerar på avhandlingen

**A Matter of Disorder: Monte Carlo Simulations**
**of Phase Transitions in Strongly Disordered Systems**

fredagen den 30 mars 2007 kl. 10.15 i Svedbergsalen, AlbaNova universitetscentrum, Roslagstullsbacken 21, Stockholm. Till opponent har utsetts *professor Asle Sudbø,* Institutt for fysikk, Norges teknisk-naturvitenskapelige universitet, Trondheim.

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## GRADUATE STUDENT SEMINAR

**Yacin Ameur:**
**Interpolation av Hilbert-par**

*Sammanfattning:* Det har varit ett öppet problem att karakterisera samtliga (Banach-) interpolationsrum mellan två Hilbertrum. Jag skall översiktligt tala om lösningen till detta problem och några av dess konsekvenser (t.ex. ett enkelt bevis av Loewners sats om matrismonotona funktioner).

Inga kunskaper i interpolationsteori krävs för att man skall kunna ta del av materialet.

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

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## COMMON SU KOF/
## KTH THEORETICAL PHYSICS SEMINAR

**Ansar Fayyazuddin:**
**Calabi-Yau 3-folds from 2-folds with some applications to AdS/CFT**

*Abstract:* I will present some recent work on the supergravity description of D6-branes wrapped on 2-cycles in Calabi-Yau 2-folds and the lift of these solutions to Calabi-Yau 3-folds. I will discuss some applications of these ideas to AdS/CFT for 4d and 5d gauge theories.

*Tid och plats:* Onsdagen den 4 april kl. 11.00 – 12.00 i sal FB41, Roslagstullsbacken 21, AlbaNova universitetscentrum.

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## SEMINARIUM I NUMERISK ANALYS

### Malin Ljungberg: Design of high performance computing software for genericity and variability

*Abstract:* Computer simulations have emerged as a cost efficient complement to laboratory experiments, as computers have become increasingly powerful. The aim of the present work is to explore the ideas of some state of the art software development practices, and ways in which these can be useful for developing high performance research codes. The introduction of these practices, and the modular designs that they give rise to, raise issues regarding a potential conflict between runtime efficiency on one hand and development efficiency on the other. Flexible software modules, based on mathematical abstractions, will provide support for convenient implementation and modification of numerical operators. Questions still remain about whether such modules will provide the efficiency which is required for high performance applications.

To answer these questions, we have performed investigations within two different problem domains. The first domain consisted of modular frameworks for the numerical solution of Partial Differential Equations. Such frameworks proved a suitable setting, since several of my research questions revolved around the issue of modularity.

The second problem domain was that of symmetry exploiting algorithms. These algorithms are based on group theory, and make ample use of mathematical abstractions from that field. The domain of symmetry exploiting algorithms gave us opportunities to investigate difficulties in combining modularity based on high level abstractions with low level optimizations using data layout and parallelization.

In conclusion, our investigation of software development practices for the area of high performance computing has proved very fruitful indeed. We find that none of the concerns that were raised should lead us to refrain from the use of the practices that we have considered. On the contrary, in the two case studies presented here, these practices lead to designs that perform well in terms of usability as well as runtime efficiency.

*Tid och plats:* Onsdagen den 28 mars kl. 15.15 – 16.00 i rum 4523, KTH CSC, Lindstedtsvägen 5, plan 5.

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## 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 2007. 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.

(Continued on the next page.)

7. Job announcement site: http://www.maths.lth.se/nordic/Euro-Math-Job.html. This is run by the European Mathematical Society.
8. Stiftelsen för internationalisering av högre utbildning och forskning (STINT) site for information on funds: http://www.stint.se.
9. Nordisk Forskerutdanningsakademi (NorFA) site for information on funds: http://www.norfa.no.
10. Svenska institutet (SI) site for information on funds: http://www.si.se.

## New information

*Jobs to apply for*

11. SU söker en doktorand i matematik inom ämnesområdet komplex geometri. Sista ansökningsdag är den 16 april. Web-info: http://www.math.su.se/matematik/jobb/doktorand07.pdf.
12. Lunds universitet söker en biträdande universitetslektor i matematisk statistik med inriktning mot finansiell statistik. Sista ansökningsdag är den 5 april. Web-info: http://www3.lu.se/info/lediga/admin/document/PA%202007-910.pdf.
13. Lunds universitet söker även en universitetslektor i matematisk statistik. Sista ansökningsdag är den 25 april. Web-info: http://www3.lu.se/info/lediga/admin/document/PA%202007-909.pdf.

### Old information

*Money to apply for*

14. Letterstedtska föreningen utdelar anslag för att befordra gemenskapen mellan de fem nordiska länderna på industrins, vetenskapens och konstens områden. Ansökan om anslag skall insändas före den 15 september. Web-info: http://www.letterstedtska.org/.
15. Stiftelsen G. S. Magnusons fond delar ut stipendier och anslag inom ämnesområdet matematik för följande ändamål: Stöd till doktorander, stöd till den som önskar ytterligare meritera sig efter doktorsexamem, stöd till svenska forskare för forskning hemma eller i utlandet samt för inbjudan av utländska gästforskare, bidrag för att kvarhålla forskare inom Sverige, samt stöd till den som inom sin verksamhet utnyttjar matematik och som önskar bidrag till vetenskaplig förkovran inom ämnet. Sista ansökningsdag är den 31 mars. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=45.
16. Kungl. Vetenskapsakademien har avtal om postdoc-stipendier omfattande 15 dagar till 11 månaders vistelse i Japan för forskning inom naturvetenskap, matematik och medicin. Resekostnader och kostnader under vistelsen täcks av The Japan Society for the Promotion of Science (JSPS). Dessa stipendier kommer att utlysas en eller två gånger per år. Sista ansökningsdag är den 2 april. Web-info: http://www.kva.se/KVA_Root/swe/awards/scholarships/detail_scholarships.asp?grantsId=41.
17. Sweden-Japan Foundation utlyser stipendier för studier, forskning samt examensarbete och praktik på högskolenivå i Japan. Ansökningsdagar är den 1 mars och den 1 oktober. Web-info: http://www.swejap.a.se/.
18. Wenner-Gren Stiftelserna delar ut stipendier för att möjliggöra för svenska disputerade forskare att verka vid utländsk vetenskaplig institution. Sista ansökningsdag är den 1 oktober. Stipendierna beviljas för en tid av lägst 1 och högst 12 månader med möjlighet till förlängning till högst 24 månader. Web-info: http://www.swgc.org/index.aspx?pageID=14.
19. Ångpanneföreningens Forskningsstiftelse har till ändamål att verka för forskning och utveckling, främst inom områdena energi, miljö och säkerhet. Stiftelsen beviljar anslag för forskning inom sina ändamålsområden samt delar ut stipendier för examensarbeten utomlands eller för presentation av forskningsresultat vid internationella konferenser. Sista ansökningsdag för anslag är den 31 mars. För stipendier är den 31 mars och den 30 september sista ansökningsdagar. Web-info: http://www.aforsk.se/.

*Jobs to apply for*

20. SU söker en forskarassistent i matematisk statistik. Sista ansökningsdag är den 16 april. Se Bråket nr 9 sidan 12. Web-info: http://www.math.su.se/matstat/jobb/07/foass.pdf.
21. Umeå universitet söker doktorander i matematik och matematisk statistik. Sista ansökningsdag är den 15 april. Web-info: http://www.math.umu.se/Aktuellt/Vacancies/AnnonsDoktorander0702_2EngMSBer.pdf.