BRÅKET

Information om seminarier och högre undervisning i matematiska ämnen i Stockholmsområdet

NR 7 **FREDAGEN DEN 16 FEBRUARI 2001**

BRÅKET

Veckobladet från Institutionen för matematik vid Kungl Tekniska Högskolan och Matematiska institutionen vid Stockholms universitet

Redaktör: Gunnar Karlsson

Telefon: 08-790 84 79

Adress för e-post: gunnark@math.kth.se

Bråket på Internet: http://www.math.kth.se/braaket.html eller http://www.math.kth.se/braket/

Postadress:
Red. för Bråket
Institutionen för matematik
KTH
100 44 Stockholm

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Sista manustid för nästa nummer:
Torsdagen den 22 februari kl. 13.00.

SEMINARIER

Fr 02–16 kl. 9.00 – 10.00. Kollokvium i fysik. Professor Waclaw Gudowski, Kärn- och reaktorfysik, KTH: *Accelerator-driven transmutation of waste — principles and possible impact on acceptance of nuclear power.* Sal F01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v. Se sidorna 9 – 10.

Fr 02–16 kl. 15.15 – 17.00. Noncommutative Geometry and Applications to Quantum Field Theory. Samuel Rydh: *An introduction to Hopf algebras.* Seminarierummet, Teoretisk fysik, KTH, Osquldas väg 6, plan 4. Se sidan 4.

Fr 02–16 kl. 15.15. Matematiska institutionens kollokvium (Uppsala). Professor Jan-Olov Strömberg, KTH: *Wavelets with applications.* Rum 2247, Matematiska institutionen, Polacksbacken, Uppsala universitet. Institutionen bjuder på kaffe, te och kakor kl. 14.45 i personalrummet. Se Bråket nr 6 sidan 3.

Må 02–19 kl. 13.15 – 15.00. Algebra and Geometry Seminar. Jan-Erik Roos: *Periods — a new class of numbers.* Rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 4.

Må 02–19 kl. 15.15 – 17.00. Seminar in Mathematical Physics. Sergei Silvestrov, Lund: *Hilbert space representations and classification of generalized Lie algebras and of their q-deformations.* Seminarierummet, Teoretisk fysik, KTH, Osquldas väg 6, plan 4. Se sidan 7.

Fortsättning på nästa sida.

Disputation i optimeringslära och systemteori

Camilla Landén disputerar på avhandlingen *On the term structure of forwards, futures and interest rates* fredagen den 16 februari kl. 10.00 i Kollegiesalen, Administrationsbyggnaden, KTH, Valhallavägen 79. Se Bråket nr 4 sidan 6.

Noncommutative Geometry and Applications to Quantum Field Theory

Seminarierna i denna serie startar den 16 februari. Se sidan 4.

Money, jobs: Se sidorna 10 – 11.

Potentialanalysseminarier

Seminarierna i denna serie startar den 23 februari. Se sidan 6.

Seminarier (fortsättning)

Ti 02–20 kl. 10.15. Plurikomplexa seminariet. Ola Weistrand, Uppsala: *Shape description of discrete three-dimensional objects, with applications in image analysis.* Sal MIC 2215, Matematiska institutionen, Polacksbacken, Uppsala universitet. Se sidan 5.

Ti 02–20 kl. 13.15–14.15. Seminarium i PDE och spektralteori. Dr Shao-Ming Fei, Bonn University: *An introduction to quantum information and computing.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 6 sidan 3.

Ti 02–20 kl. 13.30. Plurikomplexa seminariet. Björn Ivarsson, Uppsala: *On the behaviour of strictly plurisubharmonic functions near real hypersurfaces.* Sal MIC 2215, Matematiska institutionen, Polacksbacken, Uppsala universitet. Se sidan 5.

Ti 02–20 kl. 14.00–15.00. Mittag-Leffler Seminar. Michael Rathjen, Leeds: *More about* Π^1_2 *comprehension.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 6.

On 02–21 kl. 10.15. Seminar in Mathematical Physics. Professor Daniel Sternheimer, CNRS and Université de Bourgogne, Dijon, France: *A few interrelated aspects of a century in fundamental physics and mathematics: From quantization and deformations to deformation quantization and its latest developments.* Seminarierummet, Teoretisk fysik, KTH, Osquldas väg 6, plan 4. Se sidan 8.

On 02–21 kl. 13.00. Seminarium i statistik. Olivier Guilbaud, AstraZeneca, Södertälje: *Exact comparisons of means and within-subject variances in* 2×2 *crossover trials.* Rum B705, Statistiska institutionen, SU.

On 02–21 kl. 13.15–15.00. Seminarium i analys och dynamiska system. Yehuda Pinchover, Technion — Israel Institute of Technology: *Liouville theorems and integral representations for periodic elliptic equations.* Seminarierum 3721, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se Bråket nr 6 sidan 7.

On 02–21 kl. 14.00–15.00. Mittag-Leffler Seminar. Peter Johnstone, Cambridge: *Open/compact duality in locale theory and topos theory.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 4.

On 02–21 kl. 15.15. Doktorandseminarium. Pär Holm: *Rings of differential operators.* Rum 16, hus 5, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 6.

On 02–21 kl. 15.15. Seminarium i matematisk statistik. Niclas Sjögren, SU: *Bioekvivalens — en översikt.* Rum 306, Cramérrummet, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 5.

On 02–21 kl. 15.15–16.00. Seminarium i matematik och fysik vid Mälardalens högskola (Västerås). Yelena Strigun, Mälardalens högskola: *About 16th Hilbert problem.* Lektionssal N16, Mälardalens högskola, Västerås. Internet-adressen till information om seminariet är http://www.ima.mdh.se/seminarier/index.e.shtml.

On 02–21 kl. 15.15–17.00. KTH Learning Lab inbjuder till seminarium. Professor Mats Hanson, KTH Learning Lab: *KTH Learning Lab — Call for participation!* Sal D2, KTH, Lindstedtsvägen 5, b.v. Se Bråket nr 6 sidan 6. *Observera att förhandsanmälan krävs.*

Fortsättning på nästa sida.

Seminarier (fortsättning)

On 02–21 kl. 15.30–16.30. Mittag-Leffler Seminar. Toshiyasu Arai, Hiroshima: *Two results in proof theory.* Institut Mittag-Leffler, Auravägen 17, Djursholm. Se sidan 7.

To 02–22 kl. 15.00–17.00. KTH Learning Lab inbjuder till seminarium. Rektor Anders Fransson: *Redovisning av slutrapport: Pedagogisk förnyelse i högskolan.* Sal E1, KTH, Lindstedtsvägen 3, b.v. Se Bråket nr 6 sidan 7. *Observera att förhandsanmälan krävs.*

To 02–22 kl. 15.15–16.00. Seminarium i matematik och fysik vid Mälardalens högskola (Eskilstuna). Lars Alexandersson, Linköpings universitet: *En ny förberedande kurs i matematik för nybörjare — Upplägg, innehåll och erfarenheter.* Lektionssal B315, Mälardalens högskola, Eskilstuna. Internet-adressen till information om seminariet är http://www.ima.mdh.se/seminarier/index.e.shtml.

Fr 02–23 kl. 15.15–17.00. Potentialanalysseminarium. Harold Shapiro: *Spectral theory of Bergman's integral operator.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 6.

Må 02–26 kl. 15.15–16.00. Seminarium i finansiell matematik. David Stillberger presenterar sitt examensarbete: *On pricing weather derivatives.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 7.

Må 02–26 kl. 16.15–17.00. Seminarium i finansiell matematik. Jens Carlsson presenterar sitt examensarbete: *An approximation formula for an Asian option on a foreign equity basket.* Seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Se sidan 9.

Ti 02–27 kl. 16.30. Doktorandseminarium i matematisk statistik. Per Hallberg, KTH: *Perkolationsfenomen i Ising- och beachmodellen.* Rum 333 (kafferummet på avdelningen för matematisk statistik), hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

On 02–28 kl. 15.15. Seminarium i matematisk statistik. Marianne Månsson, Chalmers tekniska högskola, Göteborg: *On the occurrence of fixed words in random strings.* Rum 306, Cramérrummet, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101. Se sidan 5.

On 02–28 kl. 15.15–16.00. Seminarium i matematik och fysik vid Mälardalens högskola (Västerås). Jakob von Döbeln, KTH: *Integer partitions in statistical mechanics.* Lektionssal N16, Mälardalens högskola, Västerås. Se sidan 9. Internet-adressen till information om seminariet är http://www.ima.mdh.se/seminarier/index.e.shtml.

Fr 03–02 kl. 9.00–10.00. Kollokvium i fysik. Professor Lars Kloo, Oorganisk kemi, KTH: *Inorganic molecular clusters and polymers — a route to low-dimensional materials.* Sal F01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v.

NONCOMMUTATIVE GEOMETRY AND APPLICATIONS TO QUANTUM FIELD THEORY

We start a series of seminars on Noncommutative Geometry and Applications to Quantum Field Theory. The seminar is intended for PhD students and all others interested in the subject.

The first meeting of the seminar is on Friday, February 16th, at 15.15 – 17.00. We are intending to continue once a week on Fridays.

Location: The seminar room, Theoretical Physics, KTH, Osquldas väg 6, floor 4.

The first speaker is *Samuel Rydh* and he will give an introduction to Hopf algebras. Later, *Edwin Langmann* will speak about Hopf algebras and renormalization in perturbative QFT.

Welcome!
Jouko Mickelsson

ALGEBRA AND GEOMETRY SEMINAR

Jan-Erik Roos:
Periods — a new class of numbers

Abstract: Periods is a new class of numbers that has recently been introduced and studied by Maxim Kontsevich and Don Zagier. The definition of periods is easy: real periods are e.g. the values of absolutely convergent integrals of rational functions with rational coefficients over domains in $\mathbf{R}^n$ defined by inequalities of polynomials having rational coefficients. However, many questions about periods are unsolved. One can e.g. show that sums and products of periods are periods, that π is a period, that $\zeta(3)$ is a period (recall that Apéry proved that $\zeta(3)$ was irrational). But it is an unsolved problem whether $1/\pi$ or e are periods. Furthermore the periods are countable, but one can (for the moment) not describe *any* explicit transcendental number which is *not* a period. I will give a survey of this theory and its relations to other parts of mathematics.

Tid och plats: Måndagen den 19 februari kl. 13.15 – 15.00 i rum 306, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

MITTAG-LEFFLER SEMINAR

Peter Johnstone:
Open/compact duality in locale theory and topos theory

Abstract: The traditional duality between open and closed sets in topology fails to extend nicely to maps between spaces: instead one has a duality between open and compact (i.e. proper) maps. The intention of this talk is to give a survey of the algebraic and logical structure underlying this duality, first at the level of maps of locales (i.e. formal spaces) and then (if time permits) at the level of toposes. The (partly realized) aim is to develop a more or less automatic "translation" whereby theorems about open maps can be turned into theorems about proper maps, and vice versa.

The talk is dedicated to the memory of Japie Vermeulen (died February 11, 2001), who was the first person to understand the true nature of this duality.

Tid och plats: Onsdagen den 21 februari kl. 14.00 – 15.00 i Institut Mittag-Leffler, Auravägen 17, Djursholm.

PLURIKOMPLEXA SEMINARIET

Ola Weistrand:
Shape description of discrete three-dimensional objects, with applications in image analysis

Abstract: Methods for compact approximate representation of the shape of discrete objects is important in the field of Image Analysis. In this talk I will give a short introduction to Image Analysis and present a method for shape approximation of a limited class of objects called starshaped. Possible generalizations will also be discussed.

Tid och plats: Tisdagen den 20 februari kl. 10.15 i sal MIC 2215, Matematiska institutionen, Polacksbacken, Uppsala universitet.

PLURIKOMPLEXA SEMINARIET

Björn Ivarsson:
On the behaviour of strictly plurisubharmonic functions near real hypersurfaces

Abstract: For a smooth plurisubharmonic function u let Mu be the product of the eigenvalues of the complex Hessian. Assume that S is a smooth real hypersurface in $\mathbb{C}^n$ such that the Levi form is positive semidefinite. We show that if there is a smooth plurisubharmonic function u defined on a one-sided neighbourhood U of S such that $Mu \geq 1$, $\lim_{z \to z_0 \in S} u(z) = 0$ and u is Lipschitz on the closure of U, then the Levi form of S is positive definite.

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

SEMINARIUM I MATEMATISK STATISTIK

Niclas Sjögren:
Bioekvivalens — en översikt

Sammanfattning: Bioekvivalensstudier görs för att testa om ett generiskt preparat har samma effekt som det traditionella läkemedlet. Seminariet ger förutom en översikt till ämnet även en beskrivning av egen forskning med både lösta och olösta problem.

Tid och plats: Onsdagen den 21 februari kl. 15.15 i rum 306, Cramérrummet, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

SEMINARIUM I MATEMATISK STATISTIK

Marianne Månsson:
On the occurrence of fixed words in random strings

Abstract: Consider a random string of independent and uniformly distributed letters over a finite alphabet A. The talk will concern how the probability that a fixed word occurs in the string depends on the periodicity of the word.

Tid och plats: Onsdagen den 28 februari kl. 15.15 i rum 306, Cramérrummet, hus 6, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

MITTAG-LEFFLER SEMINAR

Michael Rathjen:
More about Π^1_2 comprehension

Abstract: The idea is to provide more details about the ordinal representation system for Π^1_2-CA and the cut elimination procedure.

Tid och plats: Tisdagen den 20 februari kl. 14.00 – 15.00 i Institut Mittag-Leffler, Auravägen 17, Djursholm.

DOKTORANDSEMINARIUM

Pär Holm: Rings of differential operators

Abstract: We will define the ring of differential operators on a commutative k-algebra A, where k is a field of characteristic 0, and talk about some of the basic properties of such rings. In particular the case when A is a quotient of a polynomial ring will be considered.

Tid och plats: Onsdagen den 21 februari kl. 15.15 i rum 16, hus 5, Matematiska institutionen, SU, Kräftriket, Roslagsvägen 101.

POTENTIALANALYSSEMINARIER

Seminarierna i denna serie kommer under vårterminen 2001 att äga rum på fredagar kl. 15.15 – 17.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7. Seminarieledare är Björn Gustafsson och Harold Shapiro. Det första seminariet i serien är följande:

Harold Shapiro:
Spectral theory of Bergman's integral operator

Résumé: Suppose D is a plane domain, and G is a subdomain whose closure lies in D. If $K(z, w)$ denotes the Bergman kernel function of D (it is a sesquianalytic function on $D \times D$), a very interesting compact self-adjoint integral operator on the Hilbert space of square integrable analytic functions on G (the "Bergman space" of G) is gotten by restricting K to $G \times G$. This operator was probably first studied by Stefan Bergman, who observed that its eigenfunctions are mutually orthogonal not only in the Bergman space of G, but in that of D as well. However, essentially nothing more specific was known until very recently about these eigenfunctions. For the analogous framework with the Szegö kernel instead of the Bergman kernel, Fisher and Micchelli showed in the 1980's that (when D and G are Jordan domains) the eigenvalues are all simple and the eigenfunction of rank n has exactly n zeros in D. Such a result seems not to hold in full generality for the Bergman eigenfunctions, but we shall show that it does when G is "well within" D. The methods required for this seem to be of interest in their own right, involving among other things a new kind of balayage. Another very interesting, unsolved problem is the inverse spectral one: How far is G determined knowing D and the Bergman eigenvalues? Although I can report no progress on this, I shall show some equivalent forms of the question, which lead to interesting considerations concerning a complete set of invariants for rigid motion in hyperbolic geometry.

Tid och plats: Fredagen den 23 februari kl. 15.15 – 17.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINAR IN MATHEMATICAL PHYSICS

Sergei Silvestrov:
Hilbert space representations and classification of generalized Lie algebras and of their q-deformations

Abstract: This lecture will be devoted to classification, involutions, and representations of low-dimensional generalized Lie algebras and of their q-deformations by bounded and unbounded operators on a Hilbert space. No special knowledge on the subject will be needed in order to follow the lecture.

The lecture will be based on a number of articles. See http://www.theophys.kth.se/mathphys/seminars.html for information.

Tid och plats: Måndagen den 19 februari kl. 15.15 – 17.00 i seminarierummet, Teoretisk fysik, KTH, Osquldas väg 6, plan 4.

MITTAG-LEFFLER SEMINAR

Toshiyasu Arai: Two results in proof theory

Abstract: First we establish a relationship between a fast growing function h and a function which is defined from the inverse h^{-1} by norm bounded recursion. This is inspired from A. Weiermann's recent work.

Secondly we formulate an epsilon substitution method for theories of jump hierarchies, and give a sketch of termination proof of the H-process by extending Ackermann. Here an ordinal interpretation is involved. This reminds us of an isomorphism which calculates the order type of notation systems without addition $+$.

Finally we discuss the phenomenon that eliminating $+$ corresponds to stepping down the projective hierarchy by one.

Tid och plats: Onsdagen den 21 februari kl. 15.30 – 16.30 i Institut Mittag-Leffler, Auravägen 17, Djursholm.

SEMINARIUM I FINANSIELL MATEMATIK

David Stillberger

presenterar sitt examensarbete:

On pricing weather derivatives

Abstract: The main objective of this thesis is to find a pricing model for temperature based weather derivatives. The approach we use is to first find a stochastic process that describes the evolution of the temperature. The unknown parameters in the model are estimated using historical temperature data. Since temperature is not tradable, the market for weather derivatives is incomplete. Thus we have to consider the market price of risk to be able to compute unique prices of the contracts. Numerical examples of prices of some contracts are presented, using an approximation formula as well as Monte Carlo simulations.

Tid och plats: Måndagen den 26 februari kl. 15.15 – 16.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINAR IN MATHEMATICAL PHYSICS

Daniel Sternheimer: A few interrelated aspects of a century in fundamental physics and mathematics: From quantization and deformations to deformation quantization and its latest developments

Presentation: Towards the end of the 19th century, physics seemed to have achieved our understanding of the world, with classical mechanics for the motion of rigid bodies, electromagnetism for waves and the Lorentz force to describe their interactions. It was only a plateau, because then the "deformation daemon" started to hit, in 1887 when two American physicists discovered that the speed of light is a limit, and when (in 1900) Planck came to his quanta hypothesis. In 1905, Einstein solved the first riddle when he showed (among others, and in our terminology) that the Galilei invariance group of Newtonian mechanics has to be *deformed* into the Poincaré group of relativistic mechanics and contributed to the solution of the second by his theory of the photoelectric effect. The latter eventually led (in 1925) Louis de Broglie to his duality between waves and particles and what he called "mécanique ondulatoire", which several German and Austrian physicists (Weyl, Heisenberg, and Schrödinger) transformed into quantum mechanics, based on operators in Hilbert spaces and the "Copenhagen" (Bohr) probabilistic interpretation which Einstein and de Broglie hated. Around 1960 mathematicians (Kodaira-Spencer and Gerstenhaber) developed a theory of deformations, and others introduced pseudodifferential operators. Around 1974, Moshé Flato came to the conclusion that physics evolves in stages (when it hits a paradox), the passage from one level of scales (e.g. velocities and distances) to another being mathematically described by a deformation, in an appropriate category. This led us to the formulation of quantum mechanics (and quantum theories) on the same observables as classical mechanics (functions on a phase space) but with a deformed composition law, a star product, quantization being understood as a deformation — what is now called deformation quantization and in effect reconciles Einstein and de Broglie with Bohr.

It turned out that mathematicians had introduced such a deformed law with the composition of symbols of pseudodifferential operators in connection with index theorems, that quantum groups are in fact an avatar of star products (in the Hopf algebra category) and that physicists and mathematicians were around deformation quantization since a long time, but nobody dared (or could) look at the deformation aspect. Taking that aspect seriously on the symmetry group level led also to star representations of Lie groups. Deforming the Poincaré group to the anti De Sitter group by the introduction of a tiny negative curvature, we started with Frønsdal and are developing a theory of 'elementary' particles (massless in the beginning) as composed of two Dirac singletons (massless particles in a $2+1$ Minkowski space), which can describe quantum electrodynamics and (in three flavours) could explain e.g. neutrino oscillations. In 1997 Maxim Kontsevich put what seemed at first the frosting on the cake that we had cooked by proving his formality conjecture and giving a complete solution to deformation quantization on general Poisson manifolds, which he very recently extended from the differential geometry context to algebraic geometry. It now appears that this has roots going very deep into modern mathematics, using in part methods (e.g. graphical) inspired by physics and extending, in particular via deformations of algebras over operads, far into seemingly unrelated notions like operads, Feynman path integrals, periods, and Grothendieck's unfinished symphony of algebraic geometry. All this will develop well into the 21st century.

Tid och plats: Onsdagen den 21 februari kl. 10.15 i seminarierummet, Teoretisk fysik, KTH, Osquldas väg 6, plan 4.

SEMINARIUM I FINANSIELL MATEMATIK

Jens Carlsson

presenterar sitt examensarbete:

An approximation formula for an Asian option on a foreign equity basket

Abstract: We suggest an approximation formula for an Asian option on a foreign equity basket. The underlying basket is a weighted sum of stocks noted in different currencies. Floating exchange rates are used to value the basket. The stocks pay absolute and discrete dividends at known times. The results are compared to Monte Carlo simulations.

Tid och plats: Måndagen den 26 februari kl. 16.15 – 17.00 i seminarierum 3733, Institutionen för matematik, KTH, Lindstedtsvägen 25, plan 7.

SEMINARIUM I MATEMATIK OCH FYSIK VID MÄLARDALENS HÖGSKOLA (VÄSTERÅS)

Jakob von Döbeln:
Integer partitions in statistical mechanics

Abstract: The most famous identity in the theory of integer partitions is the Rogers-Ramanujan identity from the beginning of the 20th century. The identity itself can be explained to children, but it is notoriously hard to prove. I will speak about the identity and discuss how interest in it was reawakened when it turned out to be important in statistical mechanics.

Tid och plats: Onsdagen den 28 februari kl. 15.15 – 16.00 i lektionssal N16, Mälardalens högskola, Västerås.

KOLLOKVIUM I FYSIK

Waclaw Gudowski:
Accelerator-driven transmutation of waste — principles and possible impact on acceptance of nuclear power

Abstract: The concept of accelerator-driven transmutation of waste (ATW) couples a particle accelerator with a subcritical nuclear reactor core through neutrons generated in a spallation process. A high-intensity particle beam (proton in most concepts), impinged into a spallation target of a heavy metal, produces an intense source of spallation neutrons, which drive a subcritical reactor core, which is in principle very similar to that of a critical nuclear reactor.

Accelerator-driven transmutation systems operate in a subcritical mode and stay subcritical, regardless of the beam being on or off, so they can in principle address the safety issues associated with criticality particularly for advanced fuel containing a high fraction of minor actinides. Subcriticality can also improve the controllability of this nuclear system through a simple electronic control of the accelerator. Furthermore, subcriticality provides substantial flexibility in fuel processing and managing.

Accelerator-driven transmutation systems can accept such fuels that would be impossible or difficult to use in critical reactors, and can extend their cycle length improving significantly the transmutation performance. Moreover, an advanced subcritical core design can also address some concerns of decay heat management.

(Continued on the next page.)

ATW research has been under a very dynamical development during the last few years in many countries. A short review of the major ATW projects will be presented. Research projects conducted at KTH will also be presented in this international context.

Tid och plats: Fredagen den 16 februari kl. 9.00 – 10.00 i sal F 01, Fysiska institutionen, KTH, Lindstedtsvägen 24, b.v.

MONEY, JOBS

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 2001. A number without an explanation is a telephone number.

Standard information channels

1. A channel to information from Vetenskapsrådet: http://www.vr.se/NaturTeknik/naturvetenskap.htm.
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://apple.datakom.su.se/stipendier.
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. Stiftelsen Anna-Greta och Holger Crafoords fond utdelar forskningsanslag till enskilda personer eller institutioner för grundforskning inom matematik, ämnesområdet icke-kommutativ algebra och geometri, 31 mars. Web-info: http://www.kva.se/sve/pg/stipendier/var/crafans.asp.

Jobs, to apply for

12. Institutionen för teknik, avdelningen för matematik och fysik vid Högskolan i Kalmar utlyser en doktorandtjänst i matematik, 1 mars. Info: Torsten Lindström, 0480-44 69 33, torsten.lindstrom@te.hik.se. Web-info: http://www.hik.se/jobb/main.html#forsk_matte.
13. Matematiska institutionen vid Linköpings universitet utlyser en doktorandtjänst i statistik, 1 mars. Info: Stig Danielsson, 013-28 14 46, stdan@mai.liu.se, Gösta Forsman, 013-28 14 34, gosfor@mai.liu.se, eller Inga-Britt Hofstam, 013-28 14 01, inhof@mai.liu.se. Web-info: http://www.liu.se/jobbdb/show.html?141.
14. Högskolan på Gotland söker en högskolelektor i matematik, 12 mars. Info: Anita Kullström, 0498-29 99 70, eller Inger Österholm, 0498-29 99 32. Web-info: http://www2.hgo.se.
15. KTH utlyser upp till sex centrala doktorandanställningar (s.k. excellenstjänster), 22 mars. Info: Barbro Eriksson, bareri@admin.kth.se. Web-info: http://web.kth.se/aktuellt/tjanster/Anst/Extj.html.

(Continued on the next page.)

Old information

Money, to apply for

16. Wenner-Gren Stiftelserna utlyser resestipendier för korta studieresor under tiden 1 juli – 31 december. Sökande skall vara disputerad forskare under 40 år, 12 mars. Web-info: http://www.swgc.org.
17. Wenner-Gren Stiftelserna utlyser anslag till anordnande av internationellt vetenskapligt symposium, ej konferens, med högst 50 000 kr per symposium, 12 mars. Web-info: http://www.swgc.org.
18. Svenska matematikersamfundet utlyser medel ur Knut och Alice Wallenbergs Stiftelses resestipendier avsedda att utnyttjas som delfinansiering för konferensresor för ej disputerade forskare, 31 mars. Info: Ari Laptev, laptev@math.kth.se.
19. Kungl. Vetenskapsakademien (KVA) utlyser medel från stiftelsen G. S. Magnusons fond; till doktorander utdelas stipendier med ett engångsbelopp på normalt 7 000 kr, och till forskare som avlagt doktorsexamen 1995 eller senare utdelas forskningsanslag med i normalfallet 30 000 kr (0 – 3 år efter disputation), respektive 50 000 kr (4 – 6 år efter disputation). Utöver detta finns även medel avsedda speciellt för stöd till svenska forskare för forskning hemma eller i utlandet samt för inbjudan av utländska gästforskare samt bidrag för att kvarhålla forskare inom landet. Sista ansökningsdag är 31 mars. Info: Sascha Edblad, Monica Rosengren eller Sophia Westlund, 08-673 95 00, stipendier@kva.se. Web-info: http://www.kva.se/sve/pg/stipendier/var/matteans.asp.
20. Knut och Alice Wallenbergs Stiftelse utlyser stipendier för nydisputerade kvinnliga forskare. Behöriga för stipendiet är kvinnliga forskare födda 1958 eller senare som avlagt doktorsexamen under 1999 eller senare, 1 juni. Web-info: http://wallenberg.org/kaw.
21. 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 4 ovan.
22. Wenner-Gren Stiftelserna utlyser gästföreläsaranslag, avsedda att möjliggöra för svenska forskare eller institutioner att inbjuda utländska gästföreläsare. Anslag sökes av den inbjudande forskaren eller institutionen. Ansökan kan inlämnas när som helst under året. Web-info: http://www.swgc.org/.
23. NUTEK stipends for stay in research institutions (not universities) in Japan. Short or long periods. For persons with or almost with doctoral degree. You can apply at any time. Info: Kurt Borgne, 08-681 92 65, kurt.borgne@nutek.se. Web-info: http://www.nutek.se/teknik2/intfou/bilateralt/stipendie.html.

Jobs, to apply for

24. Området för teknik och samhälle vid Malmö högskola söker en professor i tillämpad matematik med inriktning mot matematisk modellering, 16 februari. Info: Stefan Diehl, 040-665 76 17, Stefan.Diehl@ts.mah.se, eller Zoltan Blum, 040-665 76 08, Zoltan.Blum@ts.mah.se. Web-info: http://www.mah.se/platsann.asp?DNR=272.
25. Institutionen för matematik vid Chalmers tekniska högskola/Göteborgs universitet utlyser doktorandtjänster i matematik, 1 mars. Web-info: http://www.md.chalmers.se/Jobs/PhD/phd-01-en.thtml.
26. Matematiska institutionerna vid SU och Chalmers tekniska högskola/Göteborgs universitet utlyser doktorandtjänster i matematik med inriktning mot matematikdidaktik, i första hand ämnade för gymnasielärare i matematik som är intresserade av att vidareutbilda sig i matematik och matematikdidaktik, 15 mars. Info: SU: Mikael Passare, 08-16 45 46, passare@matematik.su.se. Web-info: http://www.matematik.su.se/matematik/forskning/forskarskola/index.html. Chalmers tekniska högskola/Göteborgs universitet: Mats Andersson, 031-772 35 71, matsa@math.chalmers.se. Web-info: http://www.math.chalmers.se/Resurscentrum/Forskarskola/.