



# INFOMAT

August 2008

## *Kjære leser!*

*Det er travle dager i forbindelse med semesterstart ved våre universiteter og høyskoler. Derfor kommer også INFOMAT med et litt forsinket augustnummer. Redaksjonen ber om tilgivelse for det.*

*Samtidig ber redaksjonen alle der ut om å komme med bidrag til meldingsbladet. Nyansettelser, gjester, konferanser, avlagte doktorgrader, meninger, alt har interesse. Plassmangel har vi aldri, vi bare hiver på flere sider.*

*Matematisk institutt i Oslo går spennende dager i møte. Midt i september går søknadsfristen for instituttlederjobben ut. Samtidig er det ledig to faste stillinger og tre postdok ved MI/CMA. Slikt lyser enda mer opp en ellers lys hverdag!*

*Redaksjonen ønsker alle et godt og utviklende høstsemester.*

*hilsen Arne B.*



## **HENRI CARTAN 1904-2008**

En av de aller største matematikere i forrige århundre, Henri Cartan døde 13. august, 104 år gammel. (se notis side 4)

*(Foto: Gerd Fischer 1985)*

INFOMAT kommer ut med 11 nummer i året og gis ut av Norsk Matematisk Forening. Deadline for neste utgave er alltid den 10. i neste måned. Stoff til INFOMAT sendes til

**infomat at math.ntnu.no**

Foreningen har hjemmeside <http://www.matematikkforeningen.no/INFOMAT>

Ansvarlig redaktør er Arne B. Sletsjøe, Universitetet i Oslo.

# NOTISER

## Nyansatte:

Stipendiat **Torgunn Karoline Moe.**



UNIVERSITETET  
I OSLO

## Nyansatte:

Postdoktor **Tormod Bjøntegaard,** stipendiat **Kjersti Solberg**



NTNU

**Eikrem,** stipendiat **Jens Lohne Eftang,** stipendiat **Tore Forbregd,** stipendiat **Nils Melvær Nornes,** stipendiat **Tron Ånen Omland,** stipendiat **Øystein Tråsdahl,** stipendiat **Martin Kristen Reed Wanvik.**

## Gjester:

**Alfons van Daele** er gjest hos professor Magnus Landstad i august og september.

**Hugh Thomas** er gjest hos førsteamanuensis Aslak Bakke Buan og professor Idun Reiten i august og september. Idun Reiten har i september også besøk av **Osamu Lyama.**

**Finn Lundgren** gjester professor Håvard Rue i august og september.

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## Matematisk kalender

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### 2008

#### August:

**28.-29. BIT Circus 2008,** Holmen, Asker

#### September:

**19. Financial Risk,** 15th Workshop in Mathematics & Economics, Oslo

**25.-27. Årsmøte, Norsk Matematikkråd,** Halden

#### Oktober:

**30.-31. Nasjonalt algebramøte,** Oslo.

### 2009

#### Juni:

**1.-4. Abelsymposiet, Combinatorial aspects of commutative algebra and algebraic geometry,** Voss

**8.-11. Britisk-Nordisk Matematikerkonf.,** Oslo

#### Oktober:

**12.-17. An international Conference on Stochastic Analysis and Applications,** Hammamet, Tunisia (CMA).

## ABELSYMPOSIUM 2010

Frist for presøknad er **15. september 2008.** Se webside: <http://abelsymposium.no/>

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## FINANCIAL RISK

### 15th Workshop in Mathematics & Economics

This year's workshop in Mathematics & Economics will focus on modelling and analysis of risk in financial markets, and thus has the title "Financial Risk". Then presentations will cover topics from credit and carbon markets to more general themes on risk measurement and analysis.

Time and place: Friday September 19, 2008, University of Oslo, Niels H. Abel hus - seminar room B1036

Speakers:

**Ruediger Kiesel** (Ulm, Germany), **Luca Taschini** (Zurich, Switzerland), **Andre Damsiora** (Statkraft, Norway), **Valeri Zakamouline** (UiA, Norway), **Pål N. Henriksen** (UiO, Norway), **Yeliz Okur** (CMA, Norway)

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## ABELSTIPEND FOR 2008/2009

**Sigrid Grepstad** får 50.000 og **Torleif Veen** 20.000 kroner i Abelstipend, opplyser Brynjulf Owren, leder av Norsk matematisk forening. Sigrid Grepstad går i 3. klasse på programmet "Industriell matematikk" ved Institutt for matematiske fag, NTNU. Hun skal bruke Abelstipendet til et års studieopphold ved University of California, Santa Barbara, USA.

Torleif Veen er i masterprogrammet i matematikk ved Matematisk institutt, Universitetet i Bergen. Han skal bruke stipendet i forbindelse med en måneds opphold ved Universitetet i Bonn, Tyskland.

Neste søknadsfrist vil normalt være **15. april 2009.** Abelstipendene har som formål å stimulere lovende studenter til videre studier og forskning i matematiske fag.

# LEDIGE STILLINGER

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## 3 STILLINGER SOM POSTDOKTOR, CMA, Oslo

Søkerne vil bli vurdert i forhold til senterets forskningsplan. De som tilsettes må dokumentere vitenskapelig kompetanse innen matematikk eller et tilgrensende anvendt fagområde. For en mer detaljert beskrivelse av den faglige profilen til senteret viser vi til forskningsplanen som finnes på <http://www.cma.uio.no/>

En av stillingene er knyttet til førsteamanuensis Snorre Christiansens EURYI-prosjekt *Numerical Analysis and Simulation of geometric Wave Equations*. For denne stillingen ser vi etter en kandidat interessert i matematiske og/eller praktiske sider ved simulering av partielle differentiallikninger fra generell relativitet. En bakgrunn fra numerisk analyse, eventuelt numerisk fysikk, foretrekkes. For de 2 øvrige stillingene finnes ingen slike føringer utover de generelle som senterets forskningsplan gir.

Søknadsfrist: **31. august 2008**

Stillingene er ledig fra 01.10.08, for en periode på inntil 2 år, og med mulighet for ytterligere ett års forlengelse.

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## FØRSTEAMANUENSIS I MATEMATIKK, Matematisk institutt, UiO

Den som tilsettes må være førsteamanuensis-kompetent med stort potensiale som forsker og må kunne dokumentere vitenskapelige kvalifikasjoner innenfor et eller flere fagfelt som forskningsaktiviteten ved avdelingen omfatter. Instituttet ønsker å prioritere forskningsområdene algebra/algebraisk geometri og topologi/geometri, men ikke mer enn at klart bedre søkere fra et annet av fagområdene ved avdelingen kan settes foran. Ved vurdering av søkerne vil det bli tatt hensyn til innenfor hvilke områder de har sine kvalifikasjoner.

Søknadsfrist: **15. september 2008**

## FØRSTEAMANUENSIS I MATEMATIKK, CMA, Oslo

Den som tilsettes i stillingen må kunne dokumentere vitenskapelig kompetanse innen matematikk, og må arbeide innen et av de hovedområder som er overlappende mellom Matematisk institutt og CMA, dvs. geometri, stokastisk analyse eller differensialligninger.

Søknadsfrist: **15. september 2008**

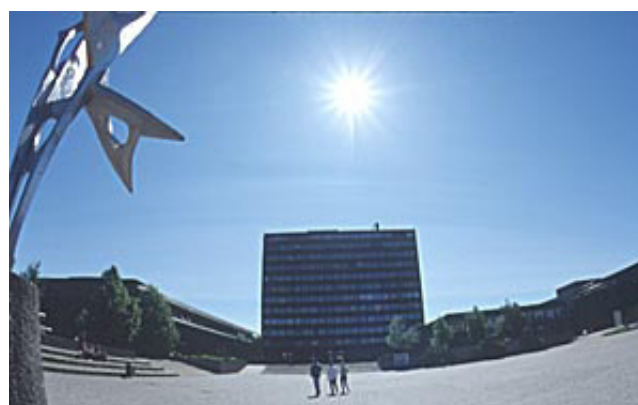
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## INSTITUTTLEDER, Matematisk institutt, UiO

Matematisk institutt ved UiO har 10 forskergrupper innenfor matematikk, mekanikk og statistikk, og 80 ansatte. Matematisk institutt har fra 01.01.05 hatt en ny ledelsesmodell, med åremålstilsatt instituttleder og instituttstyre. Instituttleder leder instituttets virksomhet innenfor rammer satt av universitetsstyret, fakultetets planer og instruksjoner fra dekan. Den som tilsettes må være en internasjonalt anerkjent forsker innenfor matematikk, mekanikk eller statistikk. Instituttlederen bør ha professorkompetanse. Den som tilsettes forventes å inneha betydelige evner til å kommunisere, motivere og utøve lederskap. Det vil bli lagt til rette for at instituttleder kan drive egen forskningsvirksomhet. Tilsetning skjer på åremål for inntil fire år fra tiltredelse, med adgang til forlengelse for en periode. Stillingen er ledig fra 1. januar 2009.

Søknadsfrist: **10. september 2008.**

Se <http://www.uio.no/>



# NOTISER



## GULL TIL RENNEMO I MATEMATIK- KOLYMPIADEN

Jørgen Vold Rennemo fra Lillehammer kom på delt 12. plass under matematikkolympiaden i Spania i sommer.

Han fikk 35 poeng av 42 mulige. Kun tre deltakere skåret fullt hus. Sivert Bocianowski fikk hederlig omtale etter å ha skåret 7 av 7 poeng på en av oppgavene.

## HENRI CARTAN 1904-2008

Henri Cartan, one of the outstanding mathematicians of the twentieth century, died August 13 at the age of 104. Cartan, the son of mathematician Élie Cartan, was one of the founding members of the Bourbaki group and made important contributions to many areas of mathematics, including complex analysis, algebraic topology, and homological algebra. He co-authored Homological Algebra with Samuel Eilenberg and ran the Séminaire Cartan in Paris from 1948 to 1964. Cartan was elected to more than a dozen academies in Europe, the U.S., and Japan, and received the Wolf Prize in 1980. In addition to his work in mathematics, he is also known for his efforts to promote human rights and for restoring relations between mathematicians in France and Germany after World War II.

*(Fra AMS News)*



## EMS-PRISER UTDELT I SOMMER

The European Mathematical Society (EMS) awarded its prizes, including the Felix Klein Prize, at the 5th European Congress of Mathematics, held in Amsterdam (The Netherlands). The EMS prizes are awarded to young researchers not older than 35 years, in recognition of distinguished contributions in mathematics, and are presented every four years at the European Congress of Mathematics. The prizewinners (listed with their current affiliations) are:

**Artur Avila** (Clay Mathematics Institute, Université Paris 6, France, and IMPA, Rio De Janeiro, Brazil), for his many important results in dynamical systems, especially in the theory of iterated rational maps and the Teichmüller geodesic flow;

**Alexei Borodin** (CalTech), for his substantial contributions to: the representation theory of “big” groups, combinatorics, interacting particle systems, and random matrix theory;

**Ben Green** (University of Cambridge, England), for his celebrated result with Terence Tao that there exist arbitrarily long arithmetic progressions of primes;

**Olga Holtz** (Technische Universität Berlin, Germany, and University of California, Berkeley), for her substantial contributions to several mathematical areas including algebra, numerical linear algebra, approximation theory, theoretical computer science, and numerical analysis;

**Bo’az Klartag** (Clay Mathematics Institute and Princeton University), for his achievements in asymptotic geometric analysis;

**Alexander Kuznetsov** (Steklov Mathematical Institute, Moscow, Russia), for his fundamental contributions to birational projective geometry, representation theory, mathematical physics, homological algebra, and noncommutative geometry;

**Assaf Naor** (Courant Institute, New York), for his groundbreaking contributions to functional analysis, the theory of algorithms, and combinatorics;

**Laure Saint-Raymond** (ENS, Paris), for her outstanding results in nonlinear partial differential equations in the dynamics of gases and plasmas, and also in fluid dynamics;



**Agata Smoktunowicz** (University of Edinburgh, Scotland, and Institute of Mathematics of the Polish Academy of Sciences), for solving a number of outstanding problems in noncommutative algebra; and

**Cédric Villani** (ENS, Lyon, France), for his contributions to the theory of non-equilibrium statistical mechanics, in particular in connection with the Boltzmann equation and the Landau equation in plasma physics.

The Felix Klein Prize, awarded to young scientists “for using sophisticated methods to give an outstanding solution to a concrete and difficult industrial problem,” is awarded to **Josselin Garnier** (Université Paris 7, France). Garnier’s research is at the interface of stochastics and applied analysis, and is applied to optics, wave propagation and plasma physics. The prize citation notes that Garnier “is a leading scientist dealing with probabilistic aspects in the framework of partial differential equations, and has shown his ability to apply powerful theoretical tools to deal with real industrial problems.” Each prizewinner will receive 5,000 Euro. For more information on the prize and prizewinners see the 2008 EMS Prize Booklet and the website of the 5th European Congress of Mathematics.

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## MELDINGER FRA EMS

Vi bringer to meldinger fra EMS som presidenten ber om at blir gjort kjent for medlemmene i de enkelte lands nasjonale foreninger.

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## EUROPEAN MATHEMATICAL SOCIETY

The European Mathematical Society is increasing its activities and its membership. We are working harder than ever to make sure that mathematics is represented properly when funding decisions are taken at a European level, and this is beginning to bear fruit. An example is the recent call by the European Science Foundation for proposals for research conferences in mathematics

<http://www.esf.org/index.php?id=4602>

Also, we now have 56 national member societies from all over Europe, which brings huge opportunities for collaborative work of all kinds.

We would like to increase our individual membership, which now comes with free access to Zentralblatt

<http://www.zentralblatt-math.org/portal/en/>

as well as our superb Newsletter

<http://www.ems-ph.org/journals/journal.php?jrn=news>

and many other benefits, as you can see from our new web site

<http://www.euro-math-soc.eu/>

Membership is not expensive, and joining is easy: you can do it either through the London Mathematical Society or on the EMS web page.

Ari Laptev, President

Pavel Exner, Vice-President

Helge Holden, Vice-President

Stephen Huggett, Secretary

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## THE ERC IN ITS SECOND YEAR

About a year and a half ago I described in these pages the principles of the newly created European Research Council and its aims. Time is flying fast and it is appropriate to recall briefly what was achieved during the opening period of the ERC and what are the challenges and dangers ahead.

The first Starting Grant call showed that the need for such an all-European basic research agency was strong. To be frank, the flood of applications – in total we received more than nine thousands of them - almost crushed the system, and we have to thank many distinguished colleagues who were able at a rather short notice to come to rescue and help us with the evaluations. In mathematics alone there were 472 applications, scores of them of a really exceptional quality.

Being well aware that the budget does not allow us to accept many good projects, the panels selected about five hundred “semifinalists” who were invited to Brussels for interviews. Everyone who saw there the parade of bright young men and women probably got a more than small

dose of optimism about the future of European science. About three hundreds of them were finally awarded the first Starting Grants and at present they are signing the grant agreements. The heavy thoughts about financial restrictions are relieved a bit by generous offers by some national science foundations to step in and support those left “under the line”; more on that can found at the ERC page, <http://erc.europa.eu/>

Twenty three young mathematicians won the Starting Grants; their names are mentioned at another place in this issue. It is not necessary to stress that the European mathematical community is proud of them and wishes them great results.

At the same time we progress with our main programme called Advanced Grants which targets great ideas without any age or other restrictions; our budget for the first AdG call is slightly over 500 million €. This time the deadlines were spread between February and April for the three topical domains. We are naturally learning on the way, and with the last year experience in mind we made the project requirements stricter; as a result we have received a smaller number of applications, in total something over two thousand. Of these 135 came from mathematicians, the largest number among all the disciplines.

The panels did most part of their work already and the results will be announced soon; the information I have shows that the level of the projects likely to be chosen in most panels, including mathematics, is again very good.

Comparing to the Starting Grants, the maximum size of a grant was enlarged to 2.5 million € over five years, in exceptional cases to 3.5 million €. It applies, however, to projects with costly experimental equipment; mathematical grants are expected to be closer to the lower bound of 100 thousand € yearly. It is also worth mentioning that 13% of the budget for the Advanced Grants is reserved for interdisciplinary projects.

All this are achieved through dedicated efforts of many people. This includes panel members who play the most responsible role by evaluating the projects, as well the external referees. No less one has to appreciate the work

of our administrative staff which according to our hope will be the flesh and blood of the crystallizing ERC Executive Agency. In short, everybody who contributes to making the ERC a well functioning organism deserves hearty thanks.

Unfortunately, there are also things which inspire a less optimistic point of view. The mentioned transformation of our temporary administrative structure functioning under the aegis of the European Commission into a full-fledged executive agency, supposed to be completed by the time of the midterm evaluation prescribed by the 7th Framework Programme, in about a year from now, does not proceed satisfactorily.

It includes numerous administrative acts which have to be processed by the Commission apparatus. The agency needs a new director and a staff, naturally more numerous than the provisional one we had so far – a common sense suggests to use as much as possible people who already proved themselves dedicated and efficient. Also the facilities we use and our software equipment need an upgrade. The pace at which these transformations proceed now does not guarantee that we will be able to fulfil our next goal to run in 2009 both the Starting and Advanced Grant calls.

A moral support from our colleagues is in this situation more important than ever. If you agree that our programmes are going in the needed direction, please, do not stay silent. European politicians must hear loud and clear from the community that a proper functioning of the ERC is vital for a future flourishing of European science.

Pavel Exner  
EMS Vice President and an  
ERC Scientific Council Member

