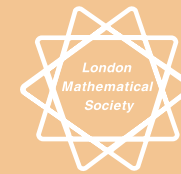


THE LONDON MATHEMATICAL SOCIETY



NEWSLETTER

No. 331 November 2004

Forthcoming Society Meetings

2004

**Friday 12 November
London**

I.M. Singer
W. Lueck

**Friday 19 November
London**

Annual General
Meeting
D. Olive
P. Goddard
(Presidential Address)
[page 3]

2005

**Friday 25 February
London**

S. Lauritzen
E. Thompson
(Mary Cartwright
Lecture)
[page 18]

**Wednesday 18 May
Birmingham**

Midlands Regional
Meeting

**Friday 17 June
London**

R. Jozsa
(Naylor Lecture)

HONORARY MEMBERSHIP FOR I.M. SINGER

On Friday 12 November at Imperial College London there will be an ordinary meeting of the Society during which Professor I.M. Singer (MIT) and Professor W. Lueck (Münster) will give lectures, and Professor Singer will be admitted as an honorary member of the Society. The details will appear on the Society website (www.lms.ac.uk) as soon as they are known.

WHAT HAPPENS AT YOUR AGM?

The Annual General Meeting of the London Mathematical Society will take place on Friday 19 November 2004 at 3.15 pm in the Chemistry Auditorium, University College London. At the AGM the following events will happen:

Members bringing their ballot papers will have a last opportunity to vote.

The Society's Treasurer, Dr N.M.J. Woodhouse, will present his report on the past year and invite questions.

A list of nominations for election to membership to the Society will be submitted for approval by the meeting.

Any member present who has

paid their first subscription and not yet been admitted to the Society will have the opportunity to sign the Membership Book which dates back to the origin of the Society in 1865.

The LMS President, Professor F.C. Kirwan, will present certificates to the 2004 Prizewinners. The Society 2004 Prizewinners were announced at the June Society meeting and published in the *July Newsletter*.

Next Professor D.I. Olive (Swansea), the first of two speakers at the Society Meeting, will give a talk on *Unified theories and the increasing synergy between mathematics and physics*.

After the adjournment for tea, scrutineer Dr D.J. Collins will declare the results of the ballot.

This will be followed by Professor P. Goddard (IAS), President 2002–03, giving his Presidential Address entitled *Infinite dimensional symmetry*.

The AGM will be followed by a reception at De Morgan House for those members attending the Annual Dinner at The Bonnington Hotel at 7.30. The cost of the Annual Dinner is £35.00 per person and members may book places for guests. The booking form, enclosed with the October *Newsletter*, should be returned together with payment to the London Mathematical Society office by **Monday 15 November**.

CHANGES TO LMS GRANT SCHEMES

Scheme 1

The Committee agreed that £4000 (typically £2000 for speakers, £1000 for scheme 5 participants, and £1000 for research students) should be the normal maximum for the current year with awards of £5000 being possible but exceptional.

Programme Committee tends to give priority to the support of meetings where an LMS grant can be expected to make a significant contribution to the viability and success of the meeting. Support of larger meetings of high quality is not ruled out but for such meetings an LMS grant will normally cover only a modest part of the total cost.

Scheme 2

It was agreed to restrict Scheme 2 support to a maximum of 14 days.

Scheme 4

The Committee agreed that it would in future make awards for UK to UK collaborations involving multiple short visits unless the applicants could reasonably be part of a Scheme 3 group. A question will

be inserted on the application form asking why departmental funds were not available for the proposed collaboration and why it could not form part of a Scheme 3 group.

Also, the Committee agreed (and Council has confirmed) that Scheme 4 should no longer be restricted to LMS members. Applicants who were not members would have to have their form countersigned by a member, and would be invited to apply for membership of the Society.

Scheme 5

The Committee agreed that support under Scheme 5 would be focused on Africa, or countries in which mathematics is in a similar position. The Committee noted that this is a significant change to the scheme, which was originally set up to support mathematicians from the former Soviet Union, but that on the other hand almost all fSU applications have been funded under Scheme 2 in recent years.

This change affects Scheme 1: the Committee agreed to continue to make £1000 available (as part of Scheme 1 grants) to support participants from the fSU, and to

LONDON MATHEMATICAL SOCIETY

Annual General Meeting

Friday 19 November 2004

University College London

3.15 – 3.30 Annual General Meeting

3.30 – 4.30 Professor D.I. Olive (Swansea)
*Unified theories and the increasing synergy
between mathematics and physics*

4.30 – 5.00 Tea

5.00 – 6.00 Professor P. Goddard (IAS)
Presidential Address
Infinite dimensional symmetry

The meeting will be held in the Chemistry Auditorium, Christopher Ingold Building, University College London, 20 Gordon Street, London WC1. Please note early start.

There are limited funds available to contribute in part to the expenses of members of the Society or research students to attend the meeting. Requests for support, including an estimate of expenses, may be addressed to the Programme Secretary at the Society (web: www.lms.ac.uk; email: grants@lms.ac.uk).

The meeting will be followed by the Annual Dinner. For further details see the announcement in this *Newsletter*. All enquiries may be addressed to Susan Oakes (tel: 020 7637 3686, email: oakes@lms.ac.uk).

LMS Newsletter

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email: oakes@lms.ac.uk, web: www.lms.ac.uk)

Designed by CHP Design (tel: 020 7240 0466, email: info@chpdesign.com, web: www.chpdesign.com)

Publication dates and deadlines: published monthly, except August.

Items and advertisements by first day of the month prior to publication.

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Charity registration number: 252660.

change the wording to read 'Scheme 5 or former Soviet Union countries' in the Scheme 1 guidelines and application form.

Queries regarding applications can be addressed to Sylvia Daly (tel: 020 7291 9971 email: grants@lms.ac.uk) or the Programme Secretary, Stephen Huggett (email: s.huggett@plymouth.ac.uk, tel: 01752 232710), who will be pleased to discuss proposals informally with potential applicants and give advice on the submission of an application.

Applicants are urged to familiarise themselves with the guidelines which are provided on the LMS website (www.lms.ac.uk/). Please follow the links on this page for Further Notes for Guidance and information on the individual schemes or to download application forms. The website will be updated, as soon as possible, with the above changes to the schemes.

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EPSRC-FUNDED STUDENTS AND LMS MEMBERSHIP

The LMS is one of several learned societies that are taking part in a scheme with EPSRC to offer 'free' membership to EPSRC-funded students. Under this scheme EPSRC will meet the costs of students' subscriptions (but not journals) for up to five years.

Students will benefit from free membership of the Society and consequently enjoy access to a range of services that will benefit their further professional development. In particular, participation in events (conferences, networks, etc) and keeping more closely in touch with activities in the mathematics community.

The EPSRC hopes this will strengthen links with the students it sponsors and enable it to conduct a long-term evaluation of how its students have developed their careers beyond their first destinations. The LMS and EPSRC will also benefit from closer collaboration.

cont'd

LMS PROGRAMME AND CONFERENCE FUND

Programme Committee has awarded grants to support the following conferences and meetings. These are open to all members. If you wish to attend, or would like more information, please contact the organiser.

Date/ Venue	Title	Organiser/email
10–14 January 2005 Manchester	4th Symposium on Levy processes: theory and applications	R. Doney rad@maths.man.ac.uk
13–14 January 2005 INI, Cambridge	Conference in honour of John Coates on the occasion of his 60th birthday	I. Fesenko ibf@maths.nott.ac.uk
2 February 2005 University College London	One-day meeting in combinatorics	A.D. Scott scott@math.ucl.ac.uk
21–23 March 2005 Oxford	16th postgraduate conference in combinatorics	D. Amato amato@maths.ox.ac.uk
27 June–1 July 2005 ICMS, Edinburgh	The algebraic K- and L- theory of infinite groups	A.A. Ranicki a.ranicki@ed.ac.uk

Math-and-more books from *Springer*



B. B. Mandelbrot
Fractals and Chaos
The Mandelbrot Set and Beyond

From the reviews: "Mandelbrot brings together 25 papers from the past 25 years. Many of them are related in one way or another to the famous inkblot figure to which Mandelbrot's name is now firmly affixed. Of historical interest are some early images of this fractal object, produced with a crude dot-matrix printer..." American Scientist

2004. XII, 308 p. Hardcover € 49,95; £ 38,50 ISBN 0-387-20158-0



H.-O. Peitgen, H. Jürgens, D. Saupe
Chaos and Fractals
New Frontiers of Science

From the reviews: "This book ... contains all one ever wanted to know about fractals, and more. Written by – next to Mandelbrot – the greatest popularizer of the concept of fractal geometry ... it contains a wealth of information on nearly every angle of the topic..." ZentrBl. Math.

2nd ed. 2004. XIII, 864 p. 606 illus., 40 in color. Hardcover € 69,95; £ 54,00 ISBN 0-387-20229-3



L. Berggren, J. Borwein P. Borwein
Pi: A Source Book

From the reviews: "Full of useful formulas and ideas, it is a vast source of inspiration to any mathematician, A level and upwards a necessity in any maths library." New Scientist

3rd ed. 2004. XIX, 797 p. Hardcover € 79,95; £ 61,50 ISBN 0-387-20571-3



M. Georgiadou
Constantin Carathéodory
Mathematics and Politics in Turbulent Times

With breathtaking detail, Maria Georgiadou sheds light on the work and life of Constantin Carathéodory, who until now has been ignored by historians. Georgiadou maps out the mathematician's oeuvre, life and turbulent historical surroundings.

2004. XXVIII, 651 p. Softcover € 39,95; £ 30,50 ISBN 3-540-20352-4



L. Russo, S. Levy
The Forgotten Revolution
How Science Was Born in 300 BC and Why it Had to Be Reborn

From the reviews: "A comprehensive and in-depth review of Hellenistic science..." Notices of the AMS

2004. IX, 487 p. Softcover € 29,95; £ 19,50 ISBN 3-540-20396-6

M. Emmer (Ed.)
Mathematics and Culture II
Visual Perfection: Mathematics and Creativity

This volume stresses the strong links between mathematics, culture and creativity in architecture, contemporary art, geometry, computer graphics, literature, theatre and cinema. It is designed not only for mathematicians but for all the people who have an interest in the various aspects of culture, both scientific and literary.

2005. Approx. 250 p. Hardcover € 79,95; £ 61,50 ISBN 3-540-21368-6

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All Euro and GBP prices are net prices subject to local VAT, e.g. in Germany 7% VAT for books and 16% VAT for electronic products. Prices and other details are subject to change without notice. 089 - 811146

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Positions in Discrete Mathematics

Following the appointment of Professor Ben Green to a Chair in Pure Mathematics, the University of Bristol is significantly expanding the research group in Discrete Mathematics based in the Department of Mathematics. The University invites applications from candidates who have an outstanding record of research, or outstanding research potential, in any area of discrete mathematics (this will be interpreted broadly, to include related areas of Pure Mathematics such as number theory) for a number of permanent positions, either Lectureships or, for suitably qualified candidates, Readerships.

The Department is one of the leading centres for research and teaching in mathematics in the UK: Applied Mathematics and Statistics both carry the very highest research rating (5*(A)) and Pure Mathematics is rated as internationally excellent.

The appointments will complement the creation of a major new research institute in discrete mathematics in Bristol. This institute, to be called the Heilbronn Institute, will organise a co-ordinated series of research programmes, conferences and workshops and is expected to be one of the foremost focal points of activity in the subject. See links from www.maths.bristol.ac.uk for further details. Interviews will take place in early January 2005. For informal discussion please contact Prof JP Keating on (0117) 928 7975 or e-mail j.p.keating@bristol.ac.uk

Further details and an application form can be found at www.bristol.ac.uk/vacancies. Alternatively you can telephone (0117) 954 6947, minicom (0117) 928 8894 or e-mail recruitment@bristol.ac.uk (stating postal address ONLY) quoting reference number 10730.

The closing date for applications is 9.00am, 01 December 2004.

www.bristol.ac.uk

EXCELLENCE THROUGH DIVERSITY

LEARNING • DISCOVERY • ENTERPRISE

Further details of the scheme are available on the EPSRC website (www.epsrc.ac.uk). The membership application form for the Society has been amended to obtain the additional information required, and you should find a copy sent to you with this *Newsletter*. Copies can also be downloaded from the LMS website (www.lms.ac.uk/contact/membership.html).

Members are encouraged to make their students aware of, and sign up, for this scheme. Enquiries should be directed to Peter Cooper at the Society (cooper@lms.ac.uk).

MATHEMATICS POLICY

Celia Hoyles appointed new Chief Advisor for Mathematics

Professor Celia Hoyles OBE has been appointed as the Government's Chief Advisor for Mathematics by the Department for Education and Skills (DfES). The announcement of the appointment was made by Education and Skills Secretary, Charles Clarke, in September.

Professor Hoyles' new role will be to champion mathematics education at all levels, to lead the development of the Mathematics Strategy and to help implement the commitments made in the Government's response to *Making Mathematics Count*, the report of the Inquiry into post-14 Mathematics Education by Professor Adrian Smith FRS.

As a key advisor to Adrian Smith during the Inquiry and a former member of the Advisory Committee on Mathematics Education (ACME), Celia Hoyles is an excellent appointment for the role of Chief Advisor, and is warmly welcomed and congratulated by the London Mathematical Society.

Celia Hoyles replaces Anita Straker, the Interim Chief Adviser for Mathematics, and has been gradually taking up her post since October. She joins the DfES on secondment from her role as Dean of Research and Consultancy at the Institute of Education, University of London, for a period of two years.

Sir Peter Williams to become new ACME Chair

Sir Peter Williams FRS will replace Sir Chris Llewellyn Smith FRS as chair of the Advisory Committee on Mathematics Education (ACME) from December 2004. Sir Chris Llewellyn Smith, Director of UKAEA Culham Division, will step down as ACME chair after three years of invaluable service to the Committee.

Sir Peter Williams is Chairman of the UK's Engineering and Technology Board, and of the National Physical Laboratory. He has previously held the posts of Master of St. Catherine's College, Oxford, Chairman of the Board of Trustees of the National Museum of Science & Industry, President of the Institute of Physics and President of the British Association for the Advancement of Science. He is currently joint Patron of WISE (Women into Science and Engineering) and President of the Association for Science Education.

Nigel Hitchin appointed Chair of Panel F for RAE 2008

Professor Nigel Hitchin of the University of Oxford has been appointed Chair of the Mathematics Panel (Panel F) for the next Research Assessment Exercise, due to take place in 2008. The appointment of Chairs for the 15 Main RAE Panels was announced by the four UK higher education funding bodies in September.

The 15 new panels are part of a new two-tier panel structure for the 2008 exercise. Each Main Panel will work with a group of Sub-Panels, which together cover the full range of academic research in the related subject areas. Panel F covers Sub-Panels in Pure Mathematics, Applied Mathematics, Statistics and Operational Research, Computer Science and Informatics. The LMS has put forward nominations for membership of the Pure and Applied Sub-Panels.

The composition of the main and sub-panels will be announced in December 2004, with the first panel meetings scheduled for early 2005.

Schwartz review into Fair Admissions published

The final report of the review into fair admissions to higher education, conducted by Professor Steven Schwartz, has been published. The report was issued to the Secretary of State for Education and Skills Charles Clarke in September.

The final report is the outcome of a request made by Charles Clarke for Professor Schwartz, Vice-Chancellor of Brunel University, to conduct an independent review of the options which English institutions providing higher education should consider in assessing the merit of applicants for their courses. The review followed a two-stage consultation process with universities and the wider public between September 2003 and May 2004 on the key issues and recommendations underlying admissions to higher education.

The full report, entitled *Fair Admissions to Higher Education: Recommendations for Good Practice*, can be viewed and downloaded online at www.admissions-review.org.uk.

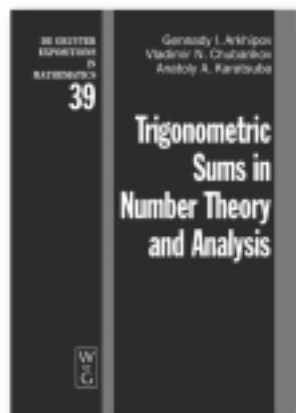
MATHSCAREERS WEBSITE LAUNCH

A new Maths Careers website, a Council for the Mathematical Science (CMS) initiative, funded by the Department of Education and Skills (DfES), will be officially launched on Wednesday 24 November at the Royal Statistical Society's Headquarters in Errol Street, London.

The Maths Careers website will provide a unique resource for adults and children of all ages and all stages of their education who are interested in finding out about the careers and opportunities that an education in mathematics can present.

The launch event will take place throughout the afternoon, coinciding with the launch of a new Royal Statistical Society careers video. There will be demonstrations and screenings of the website and video, followed by a formal launch and reception. The website will 'go live' from this time, and can

NEW RELEASE



Gennady I. Arkhipov /
Vladimir N. Chubarikov /
Anatoly A. Karatsuba

■ Trigonometric Sums in Number Theory and Analysis

November 2004.
Approx. X, 554 pages. Cloth.
€ 128.00 [D] / sFr 205.00 /
for USA, Canada, Mexico US\$ 128.95
ISBN 3-11-016266-0

WWW.DEGRUYTER.DE

The book presents the theory of multiple trigonometric sums constructed by the authors.

Following a unified approach, the authors obtain estimates for these sums similar to the classical I. M. Vinogradov's estimates and use them to solve several problems in analytic number theory. They investigate trigonometric integrals, which are often encountered in physics, mathematical statistics, and analysis, and present purely arithmetic results concerning the solvability of equations in integers.



Prices are subject to change.

be viewed after 24 November at www.maths.careers.org.uk.

If you are interested in attending the launch event, please contact Jennifer Pollard, Maths Promotion & Policy Assistant on 020 7927 0803 or email pollard@lms.ac.uk.

EPSRC IRM ACTION PLAN

In December 2003 the Council for the Mathematical Sciences (CMS) and the EPSRC jointly organized an international review of mathematics research in the UK. The review, carried out by a panel of international mathematicians under the chairmanship of Professor Martin Taylor, was the sixth in a series undertaken by EPSRC in collaboration with the relevant subject societies. An initial EPSRC action plan in response to the review is now available at www.epsrc.ac.uk/ResearchFunding/Programmes/MathematicalSciences/.

EPSRC CALLS FOR PROPOSALS

Mathematical Sciences/Computer Science Interface

The EPSRC Discipline Hopping awards competition at the Mathematical Sciences and Computer Science interface is being jointly run by the Council's Mathematical Sciences and Information and Communications Technologies (ICT) Programmes. The deadline for this year's applications is **14 December 2004**.

The Discipline Hopping Awards provide short-term support to pump prime new collaborations between Mathematical Scientists and Computer Scientists, with the aim of fostering long-term interaction. This scheme allows researchers who have a track record in their own field in the mathematical sciences to apply for funding to investigate and develop ideas, skills and collaborations in the areas of computer science. Alternatively, Computer Science researchers can apply for funding to develop ideas, skills and collaborations in the area of mathematical science.

For further information please see www.epsrc.ac.uk/Content/CallsForProposals/.

Mathematical Sciences CASE Projects

The EPSRC Mathematical Sciences Programme is inviting applications for collaborative PhD studentship projects in mathematics, statistics and operational research, which will provide the student with good training in the mathematical sciences. The closing date for this call is **1 December 2004**. For further information please see www.epsrc.ac.uk/Content/CallsForProposals/.

EPSRC MATHEMATICS E-NEWSLETTER

The EPSRC Mathematical Sciences Programme is planning to trial an e-mail newsletter to inform the Mathematical Sciences community of EPSRC activities. The newsletter will enable the Mathematical Sciences Programme to update Universities on:

- New calls for proposals of interest to the Mathematical Sciences
- Internal and external policy changes
- Other relevant information that may be of interest

If you would like to receive an email newsletter you should register by sending an email to the following address: Maths@epsrc.ac.uk.

BALZAN PRIZE 2004

Professor Pierre Deligne (Institute for Advanced Study, Princeton, USA), an Honorary Member of the London Mathematical Society, has been awarded the 2004 Balzan Prize in Mathematics for major contributions to several important domains of mathematics (algebraic geometry, algebraic and analytic number theory, group theory, topology, Grothendieck theory of motives), enriching them with new and powerful tools and with magnificent results such as his spectacular proof of the 'Riemann hypothesis over finite fields' (Weil conjectures).

LONDON MATHEMATICAL SOCIETY

INVITED LECTURES SERIES

The Society's Invited Lectures series consists of meetings at which a single speaker gives a course of about ten expository lectures, examining some subject in depth, over a five day period (Monday to Friday) during a University vacation. The meetings are residential and open to all interested. It is intended that the texts of the lectures given in the series shall be published. In addition to full expenses, the lecturer is offered a fee of £1,250 for giving the course and a further fee of £1,500 on delivery of the text in a form suitable for publication.

Previous lecturers in the series have been

1990	R. Melrose	<i>Spectral and inverse spectral theory of the Dirichlet problem in a planar domain</i>
1991	J.E. Marsden	<i>Mechanics and symmetry</i>
1992	P.J. Olver	<i>Symmetry and equivalence of differential equations</i>
1993	L. De Branges	<i>Factorization and invariant subspaces</i>
1994	J. Madore	<i>Matrix geometry and physics</i>
1995	P.F. Baum	<i>Trees, buildings, symmetric spaces and K-theory for group C*-algebras</i>
1996	F.J. Almgren	<i>Geometric measure theory and the calculus of variations</i>
1997	J.L. Alperin	<i>Characters, subgroups and modules</i>
1998	D. Zagier	<i>Aspects of $SL(2, \mathbb{Z})$: binary quadratic forms and modular forms</i>
1999	A. Mielke	<i>Reduction methods for differential equations</i>
2000	B. Dubrovin	<i>The geometry of isomonodromic deformations</i>
2001	T. Goodwillie	<i>Calculus of functors</i>
2002	P. van Moerbeke	<i>Random matrices, random permutations and integrable lattices</i>
2003	M. Fukushima	<i>Dirichlet forms and related stochastic analysis</i>
2004	M.W. Davis	<i>The geometry and topology of Coxeter groups</i>

For the 2005 meeting, proposals are now invited from any member who, in addition to suggesting a topic and lecturer, would be prepared to organize the meeting at the member's own institution or a suitable conference centre. A grant is given to the host department to support attendance at the lectures. Enquiries about this series should be directed to the Programme Secretary at the Society (grants@lms.ac.uk).

SHAW PRIZE IN MATHEMATICAL SCIENCES 2004

Professor Shiing-Shen Chern (Nankai University), an Honorary Member of the London Mathematical Society, has been awarded the Shaw Prize in Mathematical Sciences. The Shaw Prize was established under the auspices of Mr Run Shaw in November 2002, to honour scientists, regardless of race, nationality and religious belief, who have achieved significant breakthrough in academic and scientific research or application, and whose work has resulted in a positive and profound impact on mankind. The Shaw Prize consists of three annual prizes: Astronomy, Life Science and Medicine, and Mathematical Sciences, each prize bearing a monetary award of one million US dollars. This is the first year the Prize is awarded.

RAMANUJAN PRIZE 2005 Call for Nominations

The founding has been announced of the Ramanujan Prize for Young Mathematicians from Developing Countries by the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, in cooperation with International Mathematical Union, and with support from the Niels Henrik Abel Memorial Fund, Norway. The Prize will be awarded annually for the highest mathematical achievement by young researchers from developing countries, who conduct their research in a developing country. The recipient must be less than 45 years old. Work in any branch of the mathematical sciences is eligible for the prize. The Prize amount will be \$10,000. The goal is to make the selection of the first Prize winner in 2005. Further information will appear on the IMU and ICTP websites (www.mathunion.org, www.ictp.it).

THE ABEL PRIZE 2005

Call for Nominations

The Norwegian Academy of Science and Letters is calling for nominations of candidates for the Abel Prize 2005. The Abel Prize, which was awarded for the first time in 2003, amounts to NOK 6 million (approximately €750,000). It is an international prize for outstanding scientific work in the field of mathematics, including mathematical aspects of computer science, mathematical physics, probability, numerical analysis and scientific computing, statistics, and also applications of mathematics in the sciences.

The prize is to recognize contributions to mathematics and its applications of extraordinary depth and influence. Such work may have resolved fundamental problems, created powerful new techniques, introduced unifying principles or opened up major new areas. The intent is to award prizes over the course of time in a wide range of areas of mathematics and its applications.

The Abel Committee will submit a recommendation of a candidate for the Abel Prize to the Norwegian Academy of Science and Letters, which will select the Abel laureate on the basis of this recommendation. King Harald of Norway will present the Abel Prize for 2005 to the winner on 24 May 2005 in the Aula of the University of Oslo.

The deadline for nominating candidates is **15 November 2004**. Nomination letters should contain a CV and a description of the candidate's work, together with names of distinguished specialists in the field of the nominee who can be contacted for independent opinion. The letter should be marked 'Abel Prize Nomination' and addressed to The Norwegian Academy of Science and Letters, Drammensveien 78, NO-0271 Oslo, Norway. For further information please visit www.abelprisen.no.

LMS TRIANGLE

Group Theory and its Applications is an LMS joint research group funded by a scheme 3 grant, MIMS and the University of Birmingham. The organisers are Charles Eaton, Chris Parker and Alexander Ivanov. There will be four meetings in the year 2004–2005, with scope the entire range of group theory and its neighbours. There will be a strong emphasis on postgraduate education and collaboration between the various disciplines of group theory.

The first meeting on 13 November will be held at the University of Birmingham. Confirmed speakers are Linus Kramer (Darmstadt) *Groups, buildings, and some of their uses* and Richard Weiss (Tufts) *Exceptional buildings and related non-associative algebras*. For further details contact Chris Parker (c.w.parker@bham.ac.uk) or consult the website at <http://personalpages.umist.ac.uk/staff/Charles.Eaton/BMI.html>.

UK-JAPAN WINTER SCHOOL

The UK-Japan Winter Schools have been held since 1999. Every year the focus is on a special topic. For the next Winter School the topic will be *Geometric, spectral, and stochastic analysis*. The aim of the School is to bring together Japanese and UK scientists, in particular also young researchers and students from mathematics and mathematical physics, in a relaxing and stimulating atmosphere. It will be held from 9–12 January 2005 at the BBC Centre, Evesham. Lecture series will be given by Ulrika Magnea, Karl-Theodor Sturm, Toshikazu Sunada and Peter Topping.

For further information contact John Bolton, Department of Mathematical Sciences, University of Durham (john.bolton@durham.ac.uk) or David Elworthy, University of Warwick (kde@maths.warwick.ac.uk) or visit the website <http://euclid.ucc.ie/pages/staff/berndt/ws2005home.html>.

STELLAR DYNAMOS

A satellite meeting on Stellar Dynamos will be held at the University of Leeds from 13–17 December. This meeting, which is part of the current programme at the Isaac Newton Institute on the Magnetohydrodynamics of Stellar Interiors, will concentrate on the theoretical aspects of the mechanism by which astrophysical magnetic fields are generated – the dynamo problem. Invited speakers will cover recent observations of cosmic magnetic fields, together with the latest theoretical and computational advances in mean field electrodynamics, fast dynamo theory, MHD turbulence, differential rotation, and the relation between different cosmic dynamo processes.

Confirmed invited speakers are: Steve Childress (New York), Jean-François Donati (Toulouse), Annick Pouquet (Boulder), Karl-Heinz Rädler (Potsdam), Günther Rüdiger (Potsdam), Michael Stix (Freiburg), Jeff Valenti (STScI), Ellen Zweibel (Madison). Further details, together with the registration form, can be found at www.newton.cam.ac.uk/programmes/. Further information may be obtained from the local organisers, David Hughes (dwh@maths.leeds.ac.uk) and Steve Tobias (smt@maths.leeds.ac.uk). The meeting is supported by an LMS conference grant.

REPORT ON THE 13TH SCOTTISH COMPUTATIONAL MATHEMATICS SYMPOSIUM

The Scottish Computational Mathematics Symposium (SCMS) has been held every year since 1992, with the aim of bringing together mathematicians and others who develop computer algorithms to solve mathematical problems. Each meeting features invited speakers from across the spectrum of theoretical and practical numerical analysis.

The 13th meeting, held in September 2004 at the University of Strathclyde under the title Numerical Analysis of Differential Equations, was used as an opportunity to mark the retirement of Professor David Sloan from the 1825 Chair of Mathematics after 39 years of service to Strathclyde. David Sloan has contributed to the numerical analysis and applied mathematics communities in the UK and beyond in a number of ways: through high-quality research, supervision of PhD students and guidance of younger researchers, co-organisation of the SCMS, and his service on many external committees, including numerous roles for the EPSRC and panel membership of the 2001 RAE.

The meeting focused on areas of strength of the UK numerical differential equations community, with invited presentations by

leaders in the field. Key themes of the meeting were adaptivity and structure preservation for nonlinear problems. A packed programme of 12 high-quality, topical talks in a day and a half produced an intensive but friendly scientific gathering. Over 60 participants attended, including 14 postgraduate students, with many others joining in the conference dinner. Funding, including support for postgraduate attendees, was provided by EPSRC, The ICIAM '99 Fund, The Glasgow Mathematical Journal Trust Fund, The Edinburgh Mathematical Society and The London Mathematical Society. A full report on the conference, including descriptions of the talks, can be found at www.maths.strath.ac.uk/research/.

Des Higham
Strathclyde University

BCME 6
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A Combined Conference
University Warwick
30 March - 2 April 2005

Opening Lecture
Celia Hoyles

In 2005 all the leading UK mathematical organisations unite in a single conference; dedicated to mathematics and mathematics education, it will offer delegates a rich and rewarding experience.

Closing Lecture
Mike Askew

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Association of Teachers of Mathematics
British Society for Research in Learning Mathematics
British Society for the History of Mathematics
Higher Education Academy
Institute of Mathematics and its Applications
Joint Mathematical Council
London Mathematical Society
Mathematics, Statistics and Operational Research Network
National Association of Numeracy and Mathematics in Colleges
National Association of Mathematics Advisers
The Mathematical Association
The Royal Statistical Society

British Congress of Mathematics Education

Brochure and booking form available from BCME Delegate Team c/o The Mathematical Association, 299 London Road Leicester LE2 3JH
Email delegates@bcme.org Website www.bcme.org

LANCASTER UNIVERSITY

CHAIR IN PURE MATHEMATICS

The Department of Mathematics and Statistics is seeking to appoint a Chair in Pure Mathematics to strengthen further the Analysis Group in the Department, building upon two recent Lectureship appointments in the area. The position is tenable from 1 April 2005 or such later date as may be arranged. The successful applicant will have an international reputation based on outstanding achievements in an area of pure mathematics. He/she will be expected to provide enthusiastic leadership within the Mathematics Section, to take an active role in securing research grants, and to contribute to the teaching and development of courses in pure mathematics.

The current professorial salary minimum is £43,513.

For further particulars and details of how to apply please write to Personnel Services, Lancaster University, Bailrigg, Lancaster LA1 4YW, UK, or consult the Personnel Services web pages for online application at www.lancs.ac.uk/depts/personnel/.

The closing date for applications is **7 January 2005**.

14

LONDON MATHEMATICAL SOCIETY

in association with the Isaac Newton Institute for Mathematical Sciences

Spitalfields Day

Monday 6 December 2004

Magnetic Fields in Plasmas, Stars and Galaxies

Organisers: David Hughes (University of Leeds), Robert Rosner (University of Chicago) and Nigel Weiss (University of Cambridge)

10:30 – 11:00	Coffee
11:00 – 11:45	S.C. Cowley (University of California, Los Angeles) <i>Plasmas in the laboratory and in astrophysics</i>
12:00 – 12:45	D.O. Gough (IoA, University of Cambridge) <i>Helioseismology, rotation and magnetic fields in the sun</i>
13:00 – 14:00	Lunch
14:30 – 15:15	J.H. Thomas (University of Rochester, NY) <i>The strange properties of sunspots</i>
15:30 – 16:15	P.S. Cally (Monash University, Melbourne) <i>Magneto-shear instabilities in stars</i>
16:15 – 16:45	Tea
16:45 – 17:30	A. Shukurov (University of Newcastle) <i>Magnetic fields in galaxies</i>
17:30 – 18:30	Wine and Beer Reception

The London Mathematical Society Spitalfields Days are an opportunity for recent developments in specialist topics to be made known to the general mathematical community. This Spitalfields Day is concerned with modelling the complex behaviour of magnetic fields in ionized gases (or plasmas), whether in laboratory experiments, or in the interior and at the surface of stars like the Sun, or in galaxies like our own Milky Way.

These lectures are linked to the Isaac Newton Institute programme on *Magnetohydrodynamics of Stellar Interiors* (6 September – 17 December). Anyone interested is welcome to attend; talks will be aimed at a general mathematical audience. Please let Tracey Andrew at the Institute know by **19 November** if you intend to come, to help us plan for lunch (tel: 01223 335984; fax: 01223 330508; email: t.andrew@newton.cam.ac.uk).

There are limited funds available to assist research students to attend, please apply by **19 November 2004** to Tracey Andrew by email or post at the Newton Institute, 20 Clarkson Road, Cambridge CB3 0EH. Scientific enquiries may be addressed to Nigel Weiss (now@damtp.cam.ac.uk).

15

School of Mathematics

3 Lectureships in Management Mathematics

(Mathematics of Operational Research and Stochastic Operational Research)

The University invites applications for three lectureships in Management Mathematics. Applications from researchers actively working in mathematics of operational research or in stochastic operational research are encouraged. Areas particularly welcome are discrete, non-linear or multicriteria optimisation, heuristic and stochastic methods, but successful applicants may work in any area of mathematics of operational research or in stochastic operational research. Strong commitment to research and enthusiasm for supervising undergraduate as well as postgraduate students is required.

Starting salary on scale £23,643–£35,883 a year depending on experience and qualifications.

Informal enquiries can be made to Dr P. Butkovic
(tel: +44 (0)121 414 6600), email: p.butkovic@bham.ac.uk).

Application forms (returnable by 19 November 2004) and details from Personnel Services, The University of Birmingham, Edgbaston, Birmingham B15 2TT, UK tel: 44 (0)121 414 6486, www.bham.ac.uk/personnel. Please quote reference S36823

Working towards equal opportunities



THE UNIVERSITY
OF BIRMINGHAM

REPORT ON SPITALFIELDS DAY

Moonshine – The First Quarter Century and Beyond

This Spitalfields Day was held in Edinburgh on 10 July 2004 as part of the ICMS-run programme *Moonshine - the first quarter century and beyond*. A workshop on the *moonshine conjectures and vertex algebras*. The talks were given by participants in the workshop, all of whom have played major roles in the first quarter century of active development of the subject area which involves a wide range of mathematical disciplines as well as theoretical physics. The well-received talks were all of high quality and complemented the workshop and each other.

- Robert Wilson (Rutgers) *Explaining the moonshine recursions: vertex algebras and free Lie algebras*.
- Geoffrey Mason (Santa Cruz) *Vertex operators and arithmetic: how a single photon illuminates number theory*.
- John Conway (Princeton) *Symmetry in space*.

Professor Wilson gave an exposition of an important part of the verification of the Moonshine Conjectures, relating to Lie algebra theory and the more recently discovered vertex algebras. Professor Mason discussed connections between the algebra of vertex algebras and number theoretic functions. Finally, Professor Conway gave an extremely entertaining and energetic talk on symmetry groups, an old topic on which he shed new light. Some photographs by Chris Eilbeck can be found at www.ma.hw.ac.uk/~chris/icms/moonshine.

The attendance of workshop participants was augmented by about 25 other participants from Edinburgh and elsewhere. The Spitalfields Day provided an opportunity for some aspects of the intensive activity of the workshop to be communicated to the wider mathematical community.

Andrew Baker
University of Glasgow

BRITISH WOMEN IN MATHEMATICS DAY

On Tuesday 28 September the London Mathematical Society held a one day conference specifically aimed at (young) female mathematicians – all the speakers and the majority of the audience were female (men were of course not excluded, but were unlikely to attend). Why should the Society put on such an event since, after all, no such event is held for male mathematicians? But that is missing the point as virtually all mathematical conferences are essentially male events, with just a few women here and there, trying to blend in. And there's the rub: the percentage of women in University Mathematical positions in the UK (and around the world) is woeful.

Why this is the situation is often discussed, but there is no clear answer, as it is probable that many factors work together. There has been some success (which we should probably attribute to schools): the number of female undergraduate mathematicians has risen steeply over the last 10 years. But how do we keep these able female mathematicians in the business? As you look at each step a professional academic must take – PhD, post-doc, permanent position – the percentage of women dropping out increases.

The special meeting organised by the LMS addressed this issue. The day was aimed at PhD students, in particular third years who will shortly have to decide whether to stay within academia or to apply their knowledge in other ways. The morning consisted of talks given by female academics working in the UK and in the afternoon a selection of the students had the opportunity to talk about their work in a serious but friendly and supportive environment. These events are held every 18 months and have proved to be incredibly popular; *inspiring* is a word often used by the attendees to describe the day.

Another of the LMS's highly successful events is the Mary Cartwright lecture, an



The participants, deep in concentration (above) and relaxing over lunch (below)



annual lecture given in the UK by a prominent female mathematician (often from outside the UK). The next Mary Cartwright lecture will be given on Friday 25 February 2005 at University College London by Professor Elizabeth Thompson of the University of Washington (see page 18). The Mary Cartwright lecture naturally attracts a mixed audience and in many ways it is no different from some of the other annual lectures organised by the LMS. The only difference is that the lecturer must be female. This forces the organisers to think 'out of the box' and gives female mathematicians in the audience a chance to imagine themselves on 'the platform'.

There is clearly a lack of female representation within the UK (world) mathematical community and you could imagine that the Women in Mathematics Committee of the LMS meets regularly to whinge about the problems that being in such a minority creates. But we do not; we recognise that we are part of a dynamic and exciting communi-

ty, doing what we love best. The events we organise are aimed at drawing female mathematicians together so that, once in a while, they can enjoy their maths in a more female environment.

A big thank you to this year's organisers Gwyneth Stallard and Isabelle Robinson, to the speakers Susan Howson, Helen Byrne and Jackie Stedall, and to the postgraduate speakers Jasmina Panovska, Claire Irving, Maha Rahrouh, Susha Parameswaran, Katrin Gahles and Apala Majumdar.

Rachel Camina
University of Cambridge

A postgraduate's perspective

The morning started with Susan Howson and what seemed to be a very abstract topic, but one which actually has very modern applications: Elliptic Curves. Susan explained that these curves not only lie in several different areas in mathematics (analysis and complex function theory, geometry, algebraic geometry, number theory) but also have a lot to do

with secure transfer of data and cryptography. Still within the field of applications, Helen Byrne showed us how mathematical modelling has been applied to study the not-very-jolly subject (in her own words) of Tumour Development. She described two models, one of early stages of breast cancer and one on how capsules surrounding benign tumours may be formed.

After that, Jackie Stedall told us some stories of mathematics, including her own story (about her non-standard academic career), how she got involved with History of Mathematics and how several of the symbols (like \div) that we currently use were introduced by British Mathematicians. As promised, she finished just in time for lunch. The lunchtime atmosphere was very relaxing, and gave us the chance to talk to both the morning speakers and the afternoon speakers: the PhD students.

The afternoon session was very well presented and professional. It started from the impressive work of Jasmina Panovska (Oxford), who is doing Modelling of Angiogenesis, the stage of cancer where blood vessels have been already formed to feed the tumour. Next was Claire Irving (Leicester), the winner of the Mary Bradburn Scholarship, awarded by the British Federation of Women Graduates. She talked about quasiperiodic patterns and their applications in physics (the positions of atoms in a solid for example). Although these patterns are non-periodic they still have some sort of structured order and have quite strange physical properties. Then Maha Rahrouh (from Syria but working in Durham now) told us about her research on Bayesian Reliability Demonstration testing. What's that? Well, it seems that she is interested in optimal testing of a technical system, and its reliability when it is used in a process. From that, there was a huge jump to Susha Parameswaran (Cambridge), and her talk about string theory, a quite recent area that has come from theoretical physics. Next,

Katrin Gehles (Glasgow) talked about Algebra Representations and again an application, but in this case to Geometry. Last, but by no means least, Apala Majumdar (Bristol) told us about her research. This was motivated in part by problems in liquid crystal display design, and she is actually working in a joint project with Hewlett Packard, analysing configurations of liquid crystal in polyhedral geometries. This will ultimately offer the possibility of higher resolution combined with reduced power consumption.

So, the day finished as it started, with a very abstract subject that ended up having very powerful and new applications to a whole range of different areas (including other areas of mathematics), as is the case of many areas of the modern mathematics. This variety of topics reflects how broad, intriguing and diverse the field of knowledge that we all work in is, and that at the end of the day it is the same subject. As Michael Atiyah said, it is not the Mathematics but the Mathematic, because it is just one.

Judith Perez-Velazquez
University of Nottingham

LONDON MATHEMATICAL SOCIETY

MARY CARTWRIGHT LECTURE

Friday 25 February 2005 at 3.30

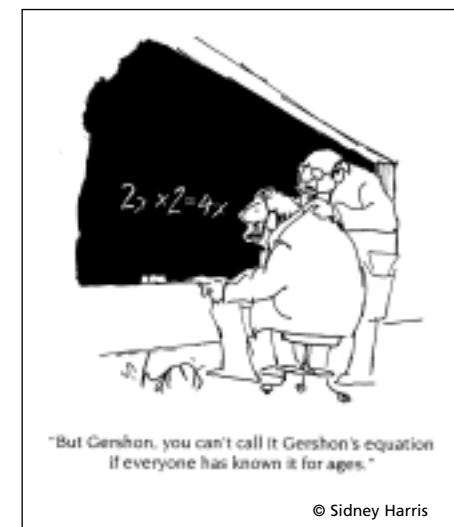
Chemistry Auditorium, Christopher Ingold Building,
University College London, 20 Gordon Street, London WC1

Professor Steffen Lauritzen (Oxford University)

Mary Cartwright Lecture

Professor Elizabeth Thompson (University of Washington, Seattle)

There are limited funds available to contribute in part to the expenses of members of the Society or research students to attend the Society meeting. Requests for support, including an estimate of expenses, may be addressed to the Programme Secretary at the Society (web: www.lms.ac.uk; email: grants@lms.ac.uk).





UNIVERSITY OF
CAMBRIDGE

THE HERCHEL SMITH PROFESSORSHIP OF PURE MATHEMATICS

The Board of Electors to the Herchel Smith Professorship of Pure Mathematics invite applications for this Professorship to take up appointment on 1 August 2005 or as soon as possible thereafter.

Applications are welcome from individuals active in any area of Pure Mathematics. Preference will be given to persons whose work falls within the field of Mathematical Analysis.

Further information may be obtained from the Academic Secretary, University Offices, The Old Schools, Cambridge CB2 1TT, UK., (email: ibise@admin.cam.ac.uk), to whom a letter of application, marked 'Confidential', including details of current and future research plans, a *curriculum vitae* and a publications list should be sent, together with Form PD18 indicating the names of two referees, so as to reach him not later than **10 December 2004**.

Informal enquiries may be made to Professor Geoffrey Grimmett, Head of the Department of Pure Mathematics and Mathematical Statistics, tel: +44 1223 337995, email: g.r.grimmett@statslab.cam.ac.uk.

Further details of the post and the Department may be found at www.dpmms.cam.ac.uk.

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INSTITUT DES HAUTES ÉTUDES SCIENTIFIQUES

The Institut des Hautes Études Scientifiques, located in Bures-sur-Yvette, France, welcomes 200 to 250 mathematicians and theoretical physicists from all over the world each year, for periods of two to three weeks up to one or two years.

Created in 1958, IHÉS is a private foundation of international standing with the purpose of supporting and developing theoretical research in pure mathematics, theoretical physics and more recently, molecular biology. IHÉS is financed by the French Ministère de la Recherche; some European research agencies such as the EPSRC in the UK; the US National Science Foundation; the EU, and several French and foreign foundations and companies. In June 2004, the European Commission recognised IHÉS' *European Visitors Programme* under the *European Research Area* (ERA) Project.

Director:	Jean-Pierre Bourguignon
Permanent Professors:	Thibault Damour, Mikhael Gromov, Maxim Kontsevich, Laurent Lafforgue, Nikita Nekrasov
Honorary Professor:	David Ruelle
Léon Motchane Chair:	Alain Connes
Louis Michel Chairs:	Michael Douglas, Jürg Fröhlich, Samson Shatashvili
Long term CNRS visitors:	Christophe Breuil, Ofer Gabber, Dirk Kreimer, Christophe Soulé
External Members of the Scientific Committee:	Alain Connes, Curtis Callan, Michael Green, Stanislas Leibler, George Papanicolaou

WILLIAM HODGE FELLOWSHIPS: 2005/2006

The EPSRC has now been supporting IHÉS for a number of years and decided, in 2000, to foster closer links between British Institutions and French mathematical research centres of excellence. British mathematicians and theoretical physicists are invited to apply to IHÉS to visit research groups in the Paris region. More information is given on the IHÉS website. In addition, the EPSRC and IHÉS are offering two 1-year fellowships, annually, under the name of Sir William Hodge; the eminent British mathematician whose main interests were in algebraic and differential geometry. The fellowships will enable outstanding young mathematicians and theoretical physicists to spend time at IHÉS.

Conditions for application

PhD in Mathematics or Theoretical Physics obtained in 2002 or later. One of the two grants will be exclusively awarded to an applicant who has received his/her PhD from a UK University or has spent the last year in a UK university.

Selection of Applicants

Applications will be reviewed and selection made based only on the criterion of excellence by IHÉS Scientific Committee on 18 December 2004. This Committee consists of the permanent professors, the Director, and some external members (names are listed above).

Starting date of the fellowships

Autumn 2005.

How to apply

Applications should be sent through the IHÉS website (www.ihes.fr) and should include: a covering letter; CV; a list of publications; a research project, and two or three letters of recommendation. The deadline for applications is **1 December 2004**.

Further information can be obtained by contacting:

IHÉS, 35, route de Chartres, F-91440 Bures-sur-Yvette, France (tel: +33 1 6092 6668; fax: +33 1 6092 6669; email: hodge@ihes.fr; website: www.ihes.fr).

EPSRC

Mathematical Biology

LMS/EPSRC Short Course



University of Manchester, 9–14 January 2005

Organiser: Dr Matthias Heil

Over the past decades, mathematics has increasingly (and successfully) been used for the modelling and analysis of biological and physiological problems. Mathematical Biology has thus developed into an active, varied and inherently interdisciplinary field of research. Major advances have been made, for example, in the modelling of disease spreading and tumour growth, in the analysis of biological pattern formation and in physiological fluid mechanics. The complexity of biological and physiological systems makes them a rich source of challenging problems whose analysis often stimulates the development of novel mathematical techniques.

This short course is aimed at postgraduate students in Mathematics and will provide an introduction to four main research areas in Mathematical Biology.

Opening Lecture:	<i>Bioconvection</i> Professor Nick Hill (University of Glasgow)
Course I:	<i>Modelling biological pattern formation</i> Professor Philip Maini (University of Oxford)
Course II:	<i>Biological fluid mechanics</i> Dr Matthias Heil (University of Manchester)
Course III:	<i>Modelling solid tumour growth</i> Professor Helen Byrne (University of Nottingham)

The material presented will be accessible to first year research students. All courses will be supplemented by tutorials and discussions. Further information may be found at the organiser's course website: www.ma.man.ac.uk/~mheil/BioMaths/index.html.

The registration fee is £100. The accommodation and subsistence costs for all UK-based research students are covered by EPSRC. Participants must pay their own travel costs. EPSRC-supported students can expect that their registration fees and travel costs will be met by their departments from the EPSRC Doctoral Training Grant that is paid to universities with each studentship award. The cost for non-UK students, including registration, accommodation and subsistence, will be £475.

Application forms may be obtained from Isabelle Robinson, Administrative Officer, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HS (email: robinson@lms.ac.uk, fax: 020 7291 9978) or from the LMS website (www.lms.ac.uk/activities/research_meet_com/short_course22_app.html).

Numbers will be limited and those interested are advised to make an early application. The closing date for applications is **Friday 12 November 2004**. Completed forms should be returned to the Administrative Officer by email, fax or post (details above). All applicants will be contacted by the London Mathematical Society approximately two weeks after this deadline; we will not be able to give information about individual applications before then. Please do not send any money until we ask.



- | | |
|--|---|
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| 2 Alastair King | 20 Ben Hambly |
| 3 Fran Burstall (co-Editor Journal) | 21 Peter Topping |
| 4 Chris Mitchell | 22 Marcus du Sautoy |
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| 17 Glyn Harman | 35 Ulrike Tillmann |
| 18 Charles Batty | 36 Michael Singer |

MEETING OF THE EDITORIAL ADVISORY BOARD OF THE LMS

The Editorial Advisory Board of the London Mathematical Society met at De Morgan House on 23 and 24 September. Almost all of the 33 members of the board and five of the six editors of the *Bulletin*, *Journal* and *Proceedings* were present. Also taking part were Publications Secretary Jim Howie, and Publisher Susan Hezlet, along with other members of her publications team. Proceedings kicked off on Thursday evening with a drink at De Morgan House, followed by a convivial meal at an Italian restaurant in Soho. On Friday we heard reports from the editors of the three journals, and had long discussions on some topics of current concern for the Society's journal publishing activities.

This was the first meeting of this sort for three years, so many of us were meeting face

to face for the first time. In any long-term academic enterprise it is very valuable to reinforce the network of electronic links with personal connections, and for many of us I think this was the most important outcome of the meeting. Let it not be thought, however, that we did not work for our pasta and vino tinto – much time was spent on the nitty-gritty detail of the procedures by which papers are processed, while amongst the more strategic questions which got an airing were: the size and geographic spread of the Advisory Board (yes to spreading the net beyond the UK and Ireland), whether to increase the number of pages of any of our journals, and retrodigitisation and who should pay for it (see Susan Hezlet's article in the September *Newsletter* for details).

Finally, determined not to let our beautiful new relationships fade, we agreed to meet again two years from now.

Ken Brown
University of Glasgow



Editorial Advisory Board Meeting, September 2004



10–14 April 2005
University of Warwick, UK
www.physics2005.iop.org

A physics conference with a difference

A large fraction of modern physics can be traced back to the three seminal papers on Special Relativity, Brownian Motion and the Photoelectric Effect published in 1905 by Albert Einstein in *Annalen der Physik*. A hundred years later, our conference, Physics, a century after Einstein will be a forward-looking conference highlighting developments at the leading edge of the subject.

Physics 2005 is centred on four themes, cutting across traditional disciplines. These are:

- Relativity and Cosmology
- Physics in Biology
- Light and Matter
- Quantum Physics

The themes run in parallel over all four days. Each is split into seven symposia emphasising emerging areas of physics. There will be seven invited plenary lectures, over 100 invited talks in the symposia, and contributed poster sessions.

Plenary Speakers
Steven Chu, Stanford
David DiVincenzo, IBM Research Yorktown
Michael Green, Cambridge
Lene Hau, Harvard
James Hough, Glasgow
Anthony Leggett, Illinois
Stanislas Leibler, Rockefeller

Contributed Posters
Poster contributions will be welcome as an integral part of this conference with emphasis on the four themes which will be interpreted broadly. Details on how to submit a poster are available on-line at <http://www.physics2005.iop.org>

Enquiries
For further information please visit the web site at <http://www.physics2005.iop.org> or email physics2005@iop.org.

The Einstein Lecture
John Stachel, Centre for Einstein Studies, Boston University

We extend a warm welcome to our friends in the Mathematics Community

Institute of Physics

CALENDAR OF EVENTS

This calendar lists Society meetings and other events publicised in the *Newsletter*. Further information can be obtained from the appropriate LMS *Newsletter* whose number is given in brackets. A fuller list of meetings and events is given on the Society's website (www.lms.ac.uk/meetings/calendar.html).

NOVEMBER 2004

- 9 David Fowler Memorial Symposium, Warwick University (330)
- 12 LMS Meeting, Imperial College London (331)
- 12 Edinburgh Society Meeting, Strathclyde University (330)
- 13 Group Theory & its Applications Meeting, Birmingham University (331)
- 19 LMS Annual General Meeting, London (331)
- 25 Mathematical Biology Conference, Glasgow University (329)
- 20 Belfast Functional Analysis Day 2004, Queen's University, Belfast (330)

DECEMBER 2004

- 6 Magnetic Fields in Plasmas, Stars & Galaxies, LMS Spitalfields Day, INI, Cambridge (331)
- 10 Edinburgh Mathematical Society Meeting, Napier University (330)
- 13-17 Stellar Dynamos Meeting, Leeds University (331)
- 14-16 Mathematics in Signal Processing VI, IMA Conference, Cirencester (319)
- 15 The History of Statistics, 1900 ± 30 Conference, Open University, Milton Keynes (330)

JANUARY 2005

- 9-12 Geometric, Spectral & Stochastic Analysis UK-Japan Winter School, Evesham (331)
- 9-14 Mathematical Biology LMS/EPSC Short Course, Manchester University (331)
- 10-14 Twistor String Theory Workshop,

- Oxford University (329)
- 10-14 Lévy Processes Symposium, Manchester University (329)
- 21 Edinburgh Mathematical Society Meeting, Edinburgh University (330)

FEBRUARY 2005

- 18 Edinburgh Mathematical Society Meeting, Edinburgh University (330)
- 25 LMS Mary Cartwright Lecture, London (331)

MARCH 2005

- 7-9 Research Trends in Science and Technology Conference, American University, Lebanon (330)
- 18 Edinburgh Mathematical Society Meeting, Aberdeen University (330)
- 29-8 Apr Introduction to Recent Applications of Model Theory Conference, INI, Cambridge (330)

APRIL 2005

- 4-7 Mathematics 2005, Liverpool University
- 29 Edinburgh Mathematical Society Meeting, Stirling University (330)

MAY 2005

- 18 LMS Midlands Regional Meeting, Birmingham University
- 20 Edinburgh Mathematical Society Meeting, St Andrews University (330)

JUNE 2005

- 17 LMS Meeting, London

JULY 2005

- 8 LMS Northern Regional Meeting, York
- 10-14 Mathematical Modelling and Applications International Conference (ICTMA12), City University, London (321)
- 10-15 British Combinatorial Conference, Durham University (329)
- 11-15 Inverse Problems in Engineering Conference: Theory & Practice, Cambridge University (320)

**SYDNEY CHAPMAN
DE MORGAN MEDALLIST
1944**



Professor Chapman received the De Morgan Medal on 16 November 1944. At the time of the award he had published about 200 of his over 400 papers on geomagnetism (a name which he coined), the kinetic theory of gases, atmospheric tides and ionospheric

problems. His influential book *The Mathematical Theory of Non-Uniform Gases*, written in collaboration with T.G. Cowling, was published in 1939 and he had published two other books (in 1936 and 1940) on geomagnetism.