

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 310

December 2002

FORTHCOMING SOCIETY MEETINGS

Friday 28 February 2003 - Edinburgh

Mary Cartwright Lecture

B. Bollobas, J. Chayes

Tuesday 11 March 2003 - Manchester

Northern Regional Meeting

Geometric Representation Theory

Wednesday 14 May 2003 - Coventry

Midlands Regional Meeting

Uncertainty Modelling

COUNCIL DIARY 25 October 2002

One of the first items of business at the October Council meeting was the enjoyable one of sorting out the details of the new biennial Fröhlich prize, funded by a generous donation by Professor Fröhlich's widow. Professor Fröhlich proposed the prize a few months before his death in November 2001; an enthusiastic supporter of the LMS, he was keen to reward extremely innovative work by a young mathematician with a major prize. In accordance with his wishes, part of the donation will fund a biennial Fröhlich lecture, which will be given in the years between the award of the Fröhlich prize. Later in the meeting, Council agreed the regulations for the joint LMS-IMA David Crighton medal, for which the first award is expected to be made in 2003.

Terry Lyons reported on the IMU General Assembly which had preceded this year's ICM; he had led the UK delegation. Council welcomed the election of John Ball as the new President of the Union, and learned details of the new

Abel prize for mathematics, which the Norwegian government is funding as a mathematical equivalent to a Nobel prize. Chris Lance, who had been another member of the delegation, reported on the work of the Committee on Electronic Information and Communications. He described progress on digitisation of the mathematics literature, and on the Math-Net project, which will provide a standard for mathematicians' web pages in order to enable sophisticated searching.

HEFCE had issued a consultation document outlining its framework and remit for a review of research assessment. Terry Lyons would co-ordinate an LMS response, possibly as part of a joint CMS response; the CMS was to meet on 1 November. At that same meeting Peter Cooper, the Executive Secretary, would present an outline programme of activities aimed at raising the awareness of policy-makers of the rôle and importance of mathematics; Council agreed that this type of programme was appropriate and

supported the proposals in principle.

The Presidents and Executive Secretaries of the LMS and IMA were preparing to meet Sir Howard Newby at HEFCE later in the year to discuss their concerns at the problems facing mathematics teaching at Universities, termed the 'Erosion of the mathematics base'. Council members were invited to give input, and responded keenly. The Education Secretary, in consultation with his Committee, had already produced a detailed paper on these issues. Peter Cooper reported on a Science Council-ACME colloquium entitled 'Growing mathematics students' aspirations', which had been organised by the LMS and IMA at the Royal Society three days earlier. The President and he had both attended, together with the Education Secretary. They agreed that the meeting had usefully aired the many issues in the area of mathematical education and the transition to university. The Education Committee had also been working hard to respond thoroughly and quickly to the consultation document issued by the QCA on the subject criteria for AS and A-

level mathematics courses. Council studied and supported the detailed response.

Sarah Rees

WORK IN PROGRESS: WATCH THIS SPACE

The plans for giving the Newsletter a substantial makeover in the near future have been encouraged by positive feedback received from readers: please continue to let us have any ideas and suggestions for future form and/or content. All constructive responses will be taken into consideration by the Editorial Board.

David Chillingworth

BERNHARD NEUMANN

Professor Bernhard H. Neumann, FRS, who was elected a member of the London Mathematical Society on 10 December 1936, died on 21 October 2002, aged 93. Professor Neumann served as a Vice-President of the London Mathematical Society from 1957-59 and as an Editor of the LMS *Proceedings* from 1959-61.

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2003 LONDON MATHEMATICAL SOCIETY PRIZES Announcement and Call for Nominations

A Prizes Committee has now been appointed for 2003. The membership is:

Dr K.M. Buzzard	k.buzzard@ic.ac.uk
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In 2003, Council expects to award the Polya Prize, the Senior Whitehead Prize, the Berwick Prize, and up to four Whitehead Prizes.

Members are invited to submit their views on possible candidates for the award of the prizes listed below, to the President, Professor P. Goddard, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HS or to any other member of the Prizes Committee by **17 January 2003**. Nominations should contain explicit reference to the grounds on which the nomination is based. Brief descriptions of the criteria for each Prize are given below. Council reserves the right not to make an award of any particular Prize in the event that no candidate of sufficient merit is recommended by the Prizes Committee.

Details of the regulations and the procedure for awarding the Prizes may be obtained from Isabelle Robinson at the Society (<http://www.lms.ac.uk> email: robinson@lms.ac.uk).

The Polya Prize is awarded in recognition of outstanding creativity in, imaginative use of, or distinguished contribution to, mathematics within the United Kingdom. It may not be awarded to any person who has previously received the De Morgan Medal.

The Senior Whitehead Prize is awarded in memory of Professor J.H.C. Whitehead, a former President of the Society. The Senior Whitehead Prize for 2003 can be awarded only to a mathematician who is normally resident in the

United Kingdom on 1 January 2003. The grounds for the award may include work in, influence on or service to mathematics, or recognition of lecturing gifts in the field of mathematics; the Senior Whitehead prize may not be awarded to any person who has previously received the De Morgan Medal, Polya Prize, Senior Berwick Prize or the Naylor Prize.

The Berwick Prize, is named after Professor W.E.H. Berwick. It can be awarded only to a mathematician who, on 1 January 2003, is a member of the Society, is under the age of forty years (except that this age restriction may be relaxed when it appears desirable to do so in order to take fair account of broken career patterns), and is not already a Fellow of the Royal Society; it is awarded in recognition of an outstanding piece of mathematical research actually published by the Society during the eight years ending on 31 December 2002; and it may not be awarded to any person who has previously received the De Morgan Medal, the Polya Prize, the Senior Berwick Prize, the Senior Whitehead Prize, the Naylor Prize or a Whitehead Prize.

The Whitehead Prizes are awarded to mathematicians who on 1 January 2003 are normally resident in the United Kingdom or members of the Society mainly educated in the United Kingdom, who are not already Fellows of the Royal Society, and who are under the age of forty years (except that this age restriction may be relaxed when it appears desirable to do so in order to take fair account of broken career patterns).

Grounds for the award may include work in and influence on mathematics. This Prize may not be awarded to anyone who has won any of the Society's other Prizes. Members are reminded that the scope of the Whitehead Prizes includes all aspects of mathematics, and Council has emphasised that this includes applied mathematics, mathematical physics and mathematical aspects of computer science.

EPSRC-FUNDED STUDENTS AND LMS MEMBERSHIP

The LMS is one of several learned societies that are taking part in a pilot 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.

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).

RENÉ THOM

René Thom, of the IHES in Paris, and Honorary Member of the LMS, died peacefully in his sleep at Bures-sur-Yvette on 25 October 2002, aged 79. I represented the Society at his funeral on 30 October.

Thom was awarded a Fields Medal in 1958 for his creation of codimension theory and his classification of generic singularities of smooth maps. In 1962 he was appointed to a chair at the IHES, where he remained for the rest of his life. He said that the Fields Medal had given him the freedom to choose what research he wanted to do; so besides making major contributions to differential topology and dynamical systems he took the whole of science as his canvas. He was not a theoretical scientist, in the sense of designing experiments and predicting results, but rather a philosopher of science, writing not about the past but about the future, and envisaging the long-term developments that should and would occur in science.

In particular he created catastrophe theory, and I was one of many who were inspired by his genius. In 1972 he published his remarkable book "Structural Stability and Morphogenesis", and it is perhaps appropriate to finish by quoting the last sentence of that book: "At a time when so many scholars in the world are calculating, is it not desirable that some, who can, dream?".

Christopher Zeeman

DIFFERENTIAL EQUATIONS CONFERENCE

The 5th Dublin Differential Equations Conference will take place at Dublin City University, from 10 - 14 June 2003. Further information is available from the website (<http://www.deconf.dcu.ie/>).

VISIT OF PROFESSOR M. SKOVIERA

Professor Martin Skoviera (Comenius University, Bratislava) will visit the Open University and the University of Southampton from 13 - 31 January 2003. He will speak at the Open University Winter Combinatorics meeting on 22 January. For further information contact Fred Holroyd (F.C.Holroyd@open.ac.uk). The visit is supported by an LMS Scheme 5 grant.

VISIT OF PROFESSOR G.E. KARADZHOV

Professor G.E. Karadzhov (Institute of Mathematics and Informatics, Sofia) will visit the School of Mathematical Sciences at the University of Sussex from 6 January 2002 to 3 February 2003. For further information contact Professor D.E. Edmunds (tel: 01273 678481, email: d.e.edmunds@sussex.ac.uk). The visit is supported by an LMS Scheme 5 grant.

VISIT OF DR G-S. CHEON

Dr Gi-Sang Cheon (Daejin University, South Korea) will be visiting the UK during January, supported by an LMS Scheme 5 grant. For more details, contact Dr Ian Wanless (tel: 01865 276124, email: wanless@maths.ox.ac.uk).

SECANTS

SECANTS (South of England Computational and Algorithmic Number Theory Seminars) will hold its nineteenth meeting in Oxford on Saturday 7 December 2002. The speakers will include Ki Hyoung Ko (KAIST, Korea), Daniel Shiu (Cheltenham) and Christine Swart (Royal Holloway). For more details of the programme and venue, as well as general information about SECANTS, and how to be put on the email mailing list, visit the website (<http://www.maths.nott.ac.uk/personal/jec/secants/secants19.html>). SECANTS is funded by an LMS Scheme 3 grant.

LONDON MATHEMATICAL SOCIETY

MARY CARTWRIGHT LECTURE

National e-Science Centre, Edinburgh
Friday 28 February 2003

**Speakers: Bela Bollobas and
Jennifer Chayes, who will give the Mary Cartwright Lecture**

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 may be addressed to the Programme Secretary at the Society (<http://www.lms.ac.uk>; email: grants@lms.ac.uk). Requests should include an estimate of expenses and a very brief *curriculum vitae*; research students should include brief letters of endorsement from their supervisors.

ROYAL COMMISSION FOR THE EXHIBITION OF 1851 Research Fellowships in Science or Engineering

The scheme of 1851 Research Fellowships is intended to give a few young scientists or engineers of exceptional promise the opportunity for conducting research for a further period of two years. Approximately six awards are made each year. The Fellowships are open to candidates in any of the physical or biological sciences, in mathematics, in applied science, or in any branch of engineering.

Candidates must be in possession of a PhD degree (or in the final stages of their PhD studies), a British or a citizen of the British Commonwealth or of the Republics of Ireland or Pakistan, and should preferably be less than thirty years old. The Fellowship stipend payable in 2003 is £19,000 for the first year, and £20,000 for the second year. In addition a London Weighting of £2,134 per annum is payable in appropriate cases.

Candidates must be recommended by Professors or Heads of Departments of Universities or other Institutions of equivalent status in the United Kingdom. Recommendations must be received by **28 February 2003** and appointments will be made during June 2003. Further details and downloadable application forms can be found on the web (<http://www.royalcommission1851.org.uk/research.html>).

ADVANCES IN THEORETICAL SCIENCES CONFERENCE

The Theoretical Sciences Laboratory, Institute of Advanced Technology, Universiti Putra, Malaysia, is organising a conference on Advances in Theoretical Sciences on 13-14 May 2003 in Putra Jaya. The conference will be the first of its kind in Malaysia, gathering theoretical scientists of all disciplines within the Southeast Asia region. Details of the conference can be found on the web (<http://www.itma.upm.edu.my/atc2003.htm>).

THE KOLMOGOROV LECTURE

Royal Holloway, University of London, The Computer Learning Research Centre and Department of Computer Science are proud to present The Kolmogorov Lecture, a new University of London annual series, celebrating the life and work of Andrei Kolmogorov. Professor Ray Solomonoff will speak on 'A General System for Incremental Learning' on Thursday 27 February 2003 in the Main Lecture Theatre at Royal Holloway.

Further information, including a full abstract of the talk, is available on the web (<http://www.clrc.rhul.ac.uk/KL.html>). The lecture is free and open to all, but to reserve a seat in advance, please contact Luke Slater (email: l.Slater@cs.rhul.ac.uk, tel: 01784 414024).

ICMS NEWS

Call for proposals

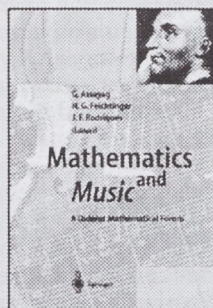
Proposals are invited for research programmes, workshops and courses on any topic in the mathematical sciences. Whilst all new ideas are welcome, and will be developed, we are particularly eager to have suggestions for meetings (of various types, sizes and duration) in numerical analysis, PDEs, financial mathematics and robotics. Proposals of an interdisciplinary nature are particularly encouraged. Proposals are welcome at all times. The Programme Committee meets twice a year, in winter and in summer, and will consider proposals received to date at each meeting.

ICMS News 2001/2002 Issue No 11

Issue 11 of the ICMS annual print newsletter was recently released. A web version will shortly be available at <http://www.ma.hw.ac.uk/icms/publications> where you will also find links to issues 4-10 and information on other publications handled by ICMS.

For further details of any of these items see the ICMS website (<http://www.ma.hw.ac.uk/icms/>).

General reading titles from *Springer*



G. Assayag, H.-G. Feichtinger, J. F. Rodrigues (Eds.)

Mathematics and Music

A Diderot Mathematical Forum

This book offers a journey into recent work relating music and mathematics. It contains a large variety of articles, covering the historical aspects, the influence of logic and mathematical thought in composition, perception and understanding of music and the computational aspects of musical sound processing.

2002. XVIII, 288 p. Hardcover € 64.95, £ 45.50, sFr 108.00
ISBN 3-540-43727-4

A. Stubhaug

The Mathematician Sophus Lie

It was the Audacity of My Thinking

In his comprehensive biography the author let us come close to both the person Sophus Lie and his time. We follow him through childhood at the vicarage in Nodfjordeid, his growing up in Moss, school and studying in Christiania, travelling in Europe and his contacts with the leading mathematicians of his time.

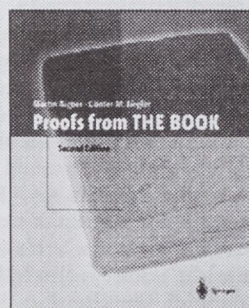
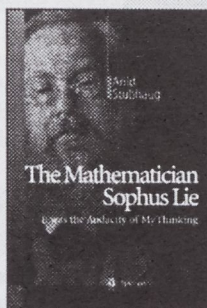
2002. XI, 555 p. 105 illus., 8 in color. Hardcover
€ 39.95, £ 28.00, sFr 68.50 ISBN 3-540-42137-8

Also by A. Stubhaug

NIELS HENRIK ABEL and his Times

Called Too Soon by Flames Afar

2000. X, 580 p. 51 illus., 13 in color. Hardcover
€ 44.95, £ 31.50, sFr 77.00 ISBN 3-540-66834-9



M. Aigner, G. M. Ziegler

Proofs from THE BOOK

From the reviews:

"...Clearly this second edition is dangerously well suited to infect the reader with the enthusiasm of the authors."

(J. Elstrodt in Zentralblatt MATH)

2nd ed. 2001. Corr. 2nd printing 2002. VIII, 215 p. 240 illus.,
5 in color. Hardcover € 24.95, £ 17.50, sFr 43.00
ISBN 3-540-67865-4

P. Hilton, D. Holton, J. Pedersen

Mathematical Vistas

From a Room with Many Windows

Mathematical Vistas stimulates the interest of bright people in mathematics. The book consists of nine related mathematical essays which will intrigue and inform the curious reader. In order to offer a broad spectrum of exciting developments in mathematics, topics are treated at different levels of depth and thoroughness.

2002. XIV, 335 p. 162 illus. (Undergraduate Texts in Mathematics)
Hardcover € 69.95, £ 49.00, sFr 116.50
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YOUNG RUSSIAN MATHEMATICIANS

Following discussions with representatives of the Moscow Mathematical Society and the Russian Academy of Sciences, Council agreed to establish in 2000 a new scheme to help young Russian mathematicians to visit the UK and to provide some financial support.

Visitors are chosen by Programme Committee from nominations made by the Council of the Moscow Mathematical Society, the Mathematical Department of the Russian Academy of Sciences, or by the head of the host department in the UK. Individuals may also apply personally. They each come to the UK for a period of between two and three weeks and give a series of about eight lectures on the work of their groups in Russia as well as their own contributions to it. They are expected to write up these lectures for publication in a series of occasional volumes in the Lecture Notes series, and they receive an advance on royalties of £1000 on receipt of the manuscript in publishable form. The Society will pay actual travel, accommodation, and subsistence costs up to a maximum of £1500.

Nominations or applications under this scheme should be sent to the Programme Secretary, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HS, in the form of a brief letter. Before a nomination or application is sent, preliminary discussion should be held between the potential host department in the UK and the potential visitor. The nomination or application should include the following information:

- 1) The name and brief CV of the proposed visitor.
- 2) An invitation from the host department in the UK. This should include the name of a person in the department who will act as personal host to the visitor.
- 3) The dates of the visit and approximate cost.

- 4) Brief synopses of the proposed lectures.
- 5) In the case of individual applications, the name of a referee; in the case of nominations, a statement of the academic standing of the nominee.
- 6) The name of a person in the UK who will read the manuscript and help to bring it into publishable form.

CHANGES TO SCHEMES TWO, THREE AND FIVE

The maximum award under Scheme 2 (Support for visits to the UK to include seminars at three institutions) has been increased to £1,200, and awards may now be used for accommodation and subsistence as well as travel.

The maximum award under Scheme 3 (Support of joint research groups) has also been increased to £1,200, for those groups holding four meetings. In other words, the amount per meeting has been increased to £300.

Scheme 5 (International short visits to or from disadvantaged countries) applications will now only be considered at the February and September meetings of Programme Committee: the deadlines are the 31 January and the 31 August. We are receiving a number which propose excellent visits but which do not adequately meet the condition 2f (benefit to the country concerned) on the application form: these are being redirected to Scheme 2.

For the full details of all the Schemes please see the following article. In particular, it remains the case that the Society expects normally only to provide part funding for an activity.

Also, please remember that the funding for all these awards comes entirely from the LMS itself, and that much of the income to the Society arises from its investments. Members will not be surprised to learn, therefore, that the current state of the market is giving us cause for some concern that we may not be able to maintain our current level of expenditure on our grant schemes.

LMS PROGRAMME AND CONFERENCE FUND

The Programme and Conference Fund is used to give financial support for mathematical research in the UK. The fund is administered by the LMS Programme Committee, which distributes as grants some of the funds that the Society receives from its investments and publishing activities. This is one of the mechanisms through which the Society achieves its central purpose, namely to 'promote and extend mathematical knowledge'. The Society operates as a charity and does not receive any public funding. Thus Programme Committee has different opportunities and works within a different regulatory framework from other funding bodies, such as the EPSRC. Grants are made under six schemes which are described below.

How to Apply

For Schemes 1-5 application forms may be obtained from the Society's Office or may be downloaded as rich text files from the LMS website (www.lms.ac.uk). For Scheme 6 applications should be made by letter. All applications should be sent in hard copy to the Programme Secretary at De Morgan House.

Grants must be claimed in a specified financial year from 1 September to 31 August. Please ensure that you state in your application in which year you intend to claim the grant, bearing in mind that grants should normally be claimed not earlier than 3 months before, and not later than 3 months after, the event for which the grant is made.

Who may Apply

For Schemes 1,2,3,5 and 6 any mathematician working in the UK is eligible to apply for a grant, but if the applicant is not a member then the application must be countersigned by an LMS member. For Scheme 4, only LMS members working in the UK are eligible.

When to Apply

Please note that applications will not be

considered between mid-June and mid-September. The main meetings of the Committee are held in February and September. Additional meetings are held in between, but time at these is very limited and it cannot be guaranteed that your application will be considered. For the date of the next meeting please contact grants@lms.ac.uk or spoor@lms.ac.uk, but above all please note that some of the individual schemes have their own deadlines: these are detailed under the headings for each scheme.

Assistance

Queries regarding applications can be addressed to the Programme Secretary, Stephen Huggett (tel: 01752 232710) or the Administrative Officer, Frances Spoor (tel: 020 7291 9979), who will be pleased to discuss proposals informally with potential applicants and give advice on the submission of an application. For general information on completing your application please refer to the Notes for Guidance. For assistance please email grants@lms.ac.uk.

Multiple Applications

The Society does not like to receive sequential applications for grants to support the same or closely related events, and will not allow its limits for individual schemes to be exceeded by artificially sub-dividing an application into a number of separate requests under different headings.

In the case of satellite conferences, organisers of the main meeting are asked to give brief details of any planned satellites as part of their application for a conference grant. Applications for support for satellite meetings should make clear the financial and organisational connection with the main meeting. This is particularly important in cases where the expenses of speakers could be shared between the two meetings. Special arrangements apply to the BMC and its satellites.

Notes for Guidance

Applicants should keep in mind the following points:

1. The committee does not normally meet the full cost of an activity. Rather it aims to give added value to an event largely funded by other means, or to bridge the gap between cost and the resources that might reasonably be made available by a university department.
2. The grants do not cover departmental overheads. The committee will generally not allow items such as secretarial costs, which could be seen as part of normal departmental provision, or entertainment.
3. Each of the schemes has a particular aim as well as its own financial limits. It is helpful if applicants consider carefully how their proposal fits the particular scheme in question, and its detailed rules (which change from time to time). Thus the academic justification for a Scheme 2 grant should focus on the benefit to UK mathematics that the proposed visit would bring, while that for a Scheme 5 grant should focus on the benefits in the Scheme 5 country. In neither case should it be assumed that the distinction of the visitor renders further justification unnecessary.
4. The committee is made up of mathematicians with a wide spread of research interests, but it should not be assumed that they are familiar with the technical details of any particular area of mathematics. Proposals are judged by the committee itself: although it may seek advice, it does not normally send proposals to referees. It is therefore important that the case for a grant should be written for the general mathematician and not for the specialist.
5. The committee judges each application on its merits. Since its membership changes from year to year, it should not be assumed that it is familiar with the details of previous applications and correspondence from earlier rounds; nor should it be assumed that a grant, for example under Scheme 3 or for a regular collaboration under Scheme 4, will be renewed repeatedly.
6. The limits mentioned in the various schemes are upper bounds, not standard awards. Grants are made to meet actual expenditure on items in the application, and any surplus must be returned to the Society, rather than retained for related purposes or carried forward to another year.
7. Applications should be brief and self-contained. Please do not append substantial documents that contain irrelevant detail or refer to websites for key information.
8. The task of collating applications, forwarding them to the committee, recording decisions, and preparing and checking notification letters is nontrivial and time-consuming. Please apply well in advance and bear in mind that you may not hear the outcome of an application immediately.

Scheme 1 - Conference Grants

Grants are made to the organisers of conferences to be held in the United Kingdom. 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. The Society expects that the meetings which it supports will be open to all members of the Society, and will only support a closed meeting if an exceptional case is made. 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. Potential applicants should note that the Society is reluctant to award grants to conferences which clash with other significant mathematical meetings in Britain such as the British Mathematical Colloquium or the British Applied Mathematical Colloquium.

The current upper limit for grants is £5,000, the size of the grant to take into account the length of the conference, the

number of UK participants and the number of research students taking part. The basic grant shall not normally exceed £3,000, with additional support available for research students (up to £1,000) and 'Scheme 5' participants (up to £1,000). The basic grant is primarily intended to cover the expenses of principal speakers.

Applicants should note that conference attendance will not be funded, except for principal speakers, research students, and 'Scheme 5' participants. Support here is intended to contribute to travel, accommodation and subsistence costs, but not registration fees.

The Society will not make grants to cover the cost of secretarial help, excessive room charges, publicity, or conference dinners and entertainment: it expects such items to be covered by contributions in kind from the host department, or by registration charges, or by income from other sources.

The Society wishes to support UK based research students, and applications should include details of the extent to which such research students will be involved in the conference. Up to £1,000 may be awarded to support participants who are research students at UK universities. (In this context 'research student' means 'research student of any nationality studying at a UK university'.)

The Society also wishes to encourage overseas participants from the former Soviet Union, Eastern Europe and other countries within the scope of Scheme 5 (see below); a further £1,000 may be awarded to support such participants.

These additional grants are intended to help widen participation in a meeting. The committee does not expect that all of these sums will necessarily be spent; any surplus must be returned to the Society and may not be used for other purposes. Academic and financial reports of the conference are expected.

Applications are considered at the September, February and June meetings of Programme Committee. Deadlines for receipt of applications for these meetings are 31 August, 31 January and 31 May.

Scheme 2 - Visitors

Some financial support is provided for visitors to the UK who give lectures in at least three separate institutions. Exceptionally, support under this scheme might be provided for a speaker addressing just one meeting which is regional in scope, but a special case would be required.

The LMS contribution under this scheme is towards actual expenses for travel (international and within the UK), accommodation and subsistence, up to a maximum of £1,200. The grant is only intended as a partial contribution and applicants are expected to approach the host institutions for funding to cover the remainder of these costs. Applicants are responsible for making all the arrangements for a visit under this scheme and are expected to make economical travel arrangements where possible, e.g. Apex air fare and 2nd class rail fare. A maximum of £50 a day is allowable for accommodation and subsistence according to the formula: actual accommodation costs up to £35 per day, £15 per day for other subsistence costs.

There are no specific deadlines but normally an application should be submitted at least three months before the date of the proposed visit to allow for consideration by the LMS Programme Committee and an announcement of the visit in the Society's Newsletter. Applications will not be considered between mid-June and mid-September.

Scheme 3 - Support of joint research groups

The scheme is to provide support for groups of mathematicians, working in at least three different locations in the United Kingdom, who have a common research interest, who wish to engage in collaborative activities and whose geographical locations are such that reasonably frequent regular meeting - several per year - are a realistic possibility.

The maximum grant awarded is currently £1,200; this is awarded where four meetings per year are held, or there is an equivalent level of activity. Meetings

should be open, and have at least two formal talks on the programme. The grant is made for the academic year and the Society will expect to receive a report, both academic and financial.

A grant may be used for a variety of purposes associated with the group's activities, such as expenses for speakers at common seminars, travel for group members between institutions either for research visits, seminars or study groups, or support for TMR networks (on items ineligible for EU grants). The Society wishes to support research students and young postdoctoral mathematicians, and applications should indicate details of the extent to which they will be involved in the programme. No strict criteria will be laid down as to the use of the money but the Society reserves the right to judge whether the activities proposed in an application are appropriate for a grant.

Renewals

Applications for renewal should be made using an application form and be accompanied by full financial and academic reports. Programme Committee will normally either:

- a) renew at some appropriate level, or
- b) give notice of termination at the end of the calendar year, in which case a sum equal to not more than one third of the previous year's grant can be claimed to cover actual expenditure in the residual period.

In both cases, the application form should be completed by a nominated 'grant-holder', who will be responsible for the use of the grant, and countersigned by a 'supporter' from each of at least two further institutions. (If none of the applicants is a member of the Society, the application must be countersigned by a member of the Society.)

New and renewal applications are considered at the September meeting of Programme Committee. The deadline for receipt of applications for this meeting is 31 August. Renewal applications will also be considered at meetings between September and December, and should be

submitted as soon as final reports can be completed.

Scheme 4 - Collaborative small grants

The aim of the scheme is to provide small grants to individual LMS members within the United Kingdom to help support a visit for collaborative research, either by the grantee to another institution within the UK or abroad, or by a named mathematician from within the UK or abroad to the home base of the grantee. The time available for joint research arising from the grant is expected to be several working days. The maximum sum available is £500 and, where necessary, grantees will have to cover further costs from other sources such as departmental or personal funds. The intention is to provide sufficient funds so that the call on other sources is held within manageable bounds.

Applicants should bear in mind that the purpose of the Scheme is to support specific projects with named collaborators and not, for example, simply to contribute to the costs of a sabbatical visit. A brief report on the use of the grant is expected: this should describe the academic outcome of the visit, together with very brief financial details.

Applications for a grant under this scheme may only be made by LMS members working in the UK. Applications are considered at the September, February and June meetings of Programme Committee. Deadlines for receipt of applications for these meetings are 31 August, 31 January and 31 May. Awards will be restricted to one in any given academic year (September to August) and in the event of over-subscription in any particular round, applicants who received an award in the previous academic year will not be considered.

Scheme 5 - International Short Visits

This scheme, originally to support mathematics in the countries of the former Soviet Union, has been extended to other countries. It now includes the countries of the former Soviet Union and Eastern

Europe including the former Yugoslavia, China, India, Pakistan, Bangladesh, and the countries of Africa. It excludes the countries of Western Europe and North America and Australia. The status of other countries will be determined by Programme Committee case by case. For visits to Britain, the maximum grant shall be £1,400, and up to £500 for travel. A maximum of £50 a day is allowable for accommodation and subsistence according to the formula: actual accommodation costs up to £35 per day, £15 per day for other subsistence costs. For visits from Britain, the maximum grant is £1,200.

Success of an application will depend mainly and crucially on the likelihood of potential benefit to mathematics in the country concerned. Grants will not be made solely for attendance at conferences. Where a visit to or from the UK includes a conference, it should also include other academic activities which in themselves would justify the grant, and should be for a total period of not less than 14 days. For visits to the UK, any expenses during the period of a conference should be met by the conference organisers (see 'Conference Grants' above).

Applications for a grant under this scheme should be made by mathematicians at UK institutions, both for visits to the UK and for visits to the countries concerned. Applications are considered at the September and February meetings of Programme Committee. Deadlines for

receipt of applications for these meetings are 31 August and 31 January.

Scheme 6 - Connectivity Grants

Up to £500 may be awarded towards the cost of exploring potential new collaborations between mathematicians and non-mathematicians on new applications of mathematics. The use of the grants is not restricted but might include the costs of a small-scale meeting to identify problems or travel costs to bring in external experts. The intention is to help the applicants do the preparatory work prior to a larger scale application to EPSRC. The application should be by short letter giving:

1. the names of at least two co-applicants, one a member of a mathematical science department and one a member of a non-mathematical department;
2. outline CVs of the two applicants;
3. a description of how the grant would be used;
4. the financial year (starting 1 September) in which you would wish to claim the grant.

Preference will be given to novel areas of application. Support for existing collaborations is not eligible.

If none of the applicants is a member of the Society then the application must be countersigned by a member. Applications are considered at the September, February and June meetings of Programme Committee. Deadlines for receipt of applications for these meetings are 31 August, 31 January and 31 May.

Grants awarded since June 2002

SCHEME 1

Applicant	Title	Grant
D.M. Gabbay	4th De Morgan Conference: Combining Probability and Logic	£2,000
D. Sloan	Scottish Computational Mathematics Symposium 2002	£875
R. Fenn, C. Rourke	Geometric Topology 2002	£3,000
E. Riccomagno	Dynamics, Algebra and Statistics (DAS)	£2,760
F. Theil	Multiscale Phenomena in Plasticity	£1,295
M.J. Taylor	New Horizons in Arithmetic Geometry	£5,000
P.J. Rippon	One Day Function Theory Meeting	£500
P. Ramsden	International Mathematica Symposium 2003	£2,000

R.W. Knight	6th Galway Topology Colloquium	£1,280
C. Howls	British Applied Mathematics Colloquium 2003 (BAMC)	£5,000
J. Kingman, J.P. Dougherty	Centenary of the Death of Sir George Gabriel Stokes	£1,500
B.M. Brown,	Conference dedicated to the 80th Birthday of	
W.D. Evans	Professor W.N. Everitt - Titchmarsh-Weyl m-function	£2,000
P. Rowlinson	19th British Combinatorial Conference	£2,000
J.M. Howie	Combinatorial and Computational Group Theory	£2,600

SCHEME 2

Applicant	Visitor	To Visit	Grant
E.V. Ferapontov	S.B. Leble	Loughborough, Glasgow, Aston	£1,000
M. Nazarov	V. Tolstoy	York, Leeds, Durham	£1,200
V.P. Smyshlyaev	V.V. Zhikov	Bath and two other institutions	£1,200
S.B. Cooper, S.S. Wainer	B. Khoussainov	Leicester, Swansea, Leeds, Manchester, Oxford	£500
H. van Elst	J. Lewandowski	QMUL, Oxford, Southampton	£320
D.G. Larman	A. Brieden	Oxford, UCL, Cambridge	£164
S.B. Cooper	T.A. Slaman	Leeds, Oxford, Birmingham	£400
H.G. Dales	A.Y. Helemskii	Leeds and two other institutions	£1,200
T.J. Bridges	A.L. Afendikov	Surrey and two other institutions	£1,060
Y.B. Fu	D.M. Klimov	Keele, Salford, Manchester	£1,100
Z.A. Lykova	O.Y. Aristov	Newcastle, Leeds, Leicester	£1,200
M. Ruzhansky	L. Volevich	Imperial and two other institutions	£1,200
S. Kuksin	M. Blank	Heriot-Watt, Edinburgh, Warwick	£1,150
D.G. Larman	A. Pelczynski	UCL and two other institutions	£1,200

SCHEME 3

Applicant	Institution	Title	Grant
A.F. Jarvis	Sheffield	North of England Algebraic Number Theory Group	£1,000
M. Dritschel	Newcastle	North British Functional Analysis Seminar	£750
I.R. McIntosh	York	Yorkshire Differential Geometry Days	£1,200
J.M. Figueroa- O'Farrill	Edinburgh	North British Mathematical Physics Seminar	£1,200
X-M. Li	Nottingham Trent	East Midlands Stochastic Analysis Seminar	£1,200
D.E. Evans	Cardiff	Mathematical Physics - Physical Mathematics	£1,200
N. Snashall	Leicester	Bristol Leicester Oxford Colloquium (BLOC)	£1,200
R.M. Green	Lancaster	North British Quantum Groups Collective	£600
Y.V. Kurylev	Loughborough	British Inverse Problems Society	£1,200
R.J. Sharp	Manchester	Ergodic Theory	£1,200
T. Brzezinski	Swansea	Quantum Geometry of Hopf Algebras and Hopf Algebroids	£900
J. Brodzki	Southampton	K-Theory and Analysis	£1,200
G.K. Sankaran	Bath	Algebraic Geometry Seminar (COW)	£1,200
S.M. Tobias	Leeds	Astrophysical and Geophysical MHD	£900

S. Koenig	Leicester	Algebraic Lie Theory (LOW)	£1,200
D.R.J. Chillingworth	Southampton	Dynamics, Bifurcations and Unfoldings Group in the South (DynaBUGS)	£1,200
C.R. Hajarnavis	Warwick	Noncommutative Rings	£1,200
R. Thomas	Imperial	London Topology and Geometry Group	£1,200

SCHEME 4

Applicant	Institution	Collaborator	Institution	Grant
E.P. Ryan	Bath	A. Ilchmann	Ilmenau, Germany	£500
J. Feinstein	Nottingham	J. Wermer	Providence, Rhode Island	£500
C.W. Parker	Birmingham	A. Chermak	Kansas State	£500
L.J. Halbeisen	QUB	B. Löwe	RhFWU Bonn	£500
C. Christopher	Plymouth	C. Rousseau	Montreal	£500
M. Nazarov	York	P. Papi	Rome I	£500
M.D. Penrose	Durham	J.E. Yukich, Y. Baryshnikov	Lehigh, Pennsylvania Lucent, New Jersey	£500
A. Taormina	Durham	A. Semikhatov	Lebedev	£500
C. Smyth	Edinburgh	J. McKee	Royal Holloway	£195
P. Rowley	UMIST	C.W. Parker	Birmingham	£450
J.D.P. Meldrum	Edinburgh	G. Mason	New Brunswick, Canada	£500
I. Bárány	UCL	J. Matousek	Charles, Prague	£500
T.B.M. McMaster	QUB	A.E. McCluskey	NUI	£500

SCHEME 5

Applicant	Visitor	Institution	To Visit	Grant
I.J. Leary	P.A. Minh	Hue, Vietnam	Southampton, Manchester, UMIST	£950
S. Koenig	C. Xi	Beijing	Leicester, Oxford, Warwick	£1,400
P.K. Maini	A.S.R. Srinivasa Rao	India	Oxford, Imperial	£1,900
D.R. Solomon	R. Kucera	Masaryk, Brno, Czech Republic	King's College London	£1,080
S.Y. Novak	I.S. Borisov	Novosibirsk	Brunel, Oxford, Cambridge	£1,200
L.C.G. Rogers	A. Cherny	Moscow State	Cambridge	£1,760
D.E. Edmunds	G.E. Karadzhov	Bulgarian Academy of Sciences	Sussex	£1,610
F.C. Holroyd	M. Skoviera	Comenius, Bratislava	Open, Southampton	£1,100
I. Wanless	G-S. Cheon	Daejin, S Korea	Oxford, OU Winter Combinatorics Meeting	£1,415
A.E. Zalesski	I. Suprunenko	Belarus	Belarus	£700

SCHEME 6

Applicant	Institution	Collaborator	Institution	Grant
J.R. Terry	Loughborough	P. Robinson, M. Breakspear	Sydney & Westmead Hospital	£500

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Applicants must be British Citizens. Nationality rules can be viewed on www.gchq.gov.uk/recruitment/current/nationality.html.

Further details (accessible on www.dpmms.cam.ac.uk/Vacancies) and application forms can be obtained from Professor G.R. Grimmett, Head of Department, Department of Pure Mathematics & Mathematical Statistics, Wilberforce Road, Cambridge, CB3 0WB (telephone 01223 337996, fax 01223 337920, or from the Administrator by email request: S.Lowe@dpmms.cam.ac.uk).

The closing date for applications is **31 December 2002**.

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RECORDS OF PROCEEDINGS AT MEETINGS

ORDINARY MEETING

held on *Wednesday 23 October 2002* at University College London, as a joint meeting on 'The Four-Colour Theorem' held with the British Society for the History of Mathematics. About 100 members and visitors were present for all or part of the meeting.

The meeting began at 2.10 pm. The first session was Chaired by Dr J. BARROW-GREEN, Vice-President of the BSHM.

Professor N.L. BIGGS introduced a lecture given by R. Wilson on 'The Four-colour Problem: 1852-1940'.

Professor Biggs introduced a lecture given by K. Appel and Wolfgang Haken on 'Solving the Four-colour Problem'.

After Tea, Professor J.T. STUART, FRS, President, assumed the Chair. Six people were elected to Ordinary Membership of the Society: D.J. Acheson, G. Ergun, G.A. Georgiou, V.I. Shrira, R. Steinberg, C. Voll; two people were elected to Associate Membership: C. Birkar, M.P. Lingham; and three people were elected to Reciprocity Membership: A. Holme (Nor. Math. Soc.), S.S. Rao (Amer. Math. Soc.), V.F. Sirvent, (Amer. Math. Soc.). Five people signed the book and were admitted to the Society.

The Records of Proceedings of Meetings held on 27 February and 5 June 2002 were signed as correct records.

Professor Biggs introduced a lecture given by D. Archdeacon on 'From the Heawood Conjecture to Topological Graph Theory.'

Professor Biggs introduced a lecture given by R. Thomas on 'The Four-Colour Theorem and Beyond'.

After the meeting, a reception was held at De Morgan House, followed by a dinner at The Old Amalfi Restaurant.

VISIT OF DR R. KUCERA

Dr Radan Kucera (Masaryk University, Brno, Czech Republic) will be visiting King's College London from 29 January to 24 February 2003 on a Scheme 5 grant from the LMS. Dr Kucera is an expert on the number theory of abelian fields and circular units. For further information contact David Solomon (solomon@math.kcl.ac.uk).

VISIT OF DR. O. YU. ARISTOV

Dr Oleg Aristov (Obninsk, Russia) will be visiting the UK from 15 February to 30 March 2003, supported by an LMS Scheme 2 grant. He will give seminars at Newcastle (Z.A. Lykova), Leeds (H.G. Dales) and Leicester (J.R. Hunton). For further information contact Zinaida Lykova, Newcastle University (Z.A.Lykova@ncl.ac.uk).

LMS/BSHM JOINT MEETING ON THE FOUR-COLOUR PROBLEM

A meeting commemorating the 150th anniversary of the four-colour problem and the 25th anniversary of its published solution took place on 23 October 2002 at University College London, in the attractive Cruciform Lecture Theatre. This event, organised jointly by the London Mathematical Society and the British Society for the History of Mathematics, was the centrepiece of a whole week of commemorative events at six venues with four guest speakers from the US.

The afternoon meeting was attended by about 100 people. It opened with a short welcoming speech by Dr June Barrow-Green, Vice-President of the BSHM, who remarked on the appropriateness of time and place of the meeting – 150 years to the day of the posing of the problem by a student at University College – and thanked the LMS for its support and encouragement to the BSHM over many years.

This introduction was followed by two lectures of a mainly historical nature, introduced by Norman Biggs. In the first of these lectures I set the scene for the rest of the meeting by describing the origins of the problem and presenting the fallacious (but useful) proof by Alfred Kempe and its refutation by Percy Heawood. This led to two fundamental ideas (both implicit in Kempe's work) – an unavoidable set of configurations and a reducible configuration – and I outlined the work of Wernicke, Franklin and Lebesgue on the former, and of George Birkhoff on the latter. In the second lecture, Wolfgang Haken (Illinois) and Kenneth Appel (New Hampshire) presented some delightful reminiscences of Heinrich Heesch and outlined his pioneering contributions to the problem. Although their work was based on Heesch's work, they eventually headed in a different direction, seeking unavoidable sets of 'likely-to-be-reducible' configurations, rather than producing reducible config-

urations by the thousands and then trying to package them into unavoidable sets. Appel and Haken outlined the challenges posed by their computer-assisted attack on the problem, and how they overcame them.

After tea in the North Cloisters, we returned for a short formal LMS meeting chaired by Trevor Stuart, at which several new members signed the LMS membership book. This was followed by two talks on more recent work.

Dan Archdeacon (Vermont) gave a lively presentation of the work of Gerhard Ringel, Ted Youngs and others on problems that involve the colouring of maps on general surfaces (both orientable and non-orientable), using the underlying ideas of current and voltage graphs. Finally, Robin Thomas (Atlanta) gave an exciting lecture in which he outlined the more recent solution by Robertson, Sanders, Seymour and himself; although based on the approach of Appel and Haken, it was simpler to understand, and involved only half as many configurations as those given by Appel and Haken. He also outlined some unexpected connections between the four-colour problem and problems from vector algebra, number theory and Lie groups, and concluded by stressing that the four-colour problem is by no means the end of the road – there are several unsolved problems that generalize the four-colour problem, to whose solutions Thomas and his co-workers have recently been making exciting progress.

The afternoon concluded with a reception at De Morgan House and a delightful Italian dinner at the nearby Old Amalfi Restaurant. Like the rest of the afternoon, these had been organised most efficiently by Susan Oakes and her staff, to whom we are most grateful.

Robin Wilson
The Open University

CECIL KING TRAVEL SCHOLARSHIP 2003

The Cecil King Memorial Foundation in 2001 established a Cecil King Travel Scholarship in Mathematics to the value of £5000, to be awarded annually to a young mathematician of outstanding promise, to support a period of study or research abroad for a typical period of three months, to enhance his or her studies and further his or her career development. The Scholarship will normally be awarded to a UK or Irish National under the age of 25 years, either registered for or having recently completed a doctoral degree at a UK University.

The award will be competitive and based on a written proposal describing the intended programme of study or research abroad and the benefits to be gained from such a visit, a short presentation and an interview.

The award will be made by the Council of the London Mathematical Society on the nomination of the Cecil King Prize Committee, whose members will be nominated by the Society's Education Committee.

The initial application should include:

1. A completed application form.
2. A short proposal (4 pages maximum) indicating the proposed programme of study abroad, the benefit of such an opportunity in advancing the candidate's studies, and an indication of the Institute that the candidate wishes to visit.
3. A letter of support from the Head of their Department, or from the candidate's Research Supervisor.

The initial applications will then be considered by the Cecil King Prize Committee, which will select up to six candidates for interview. Selected candidates will be asked to approach the intended research institution or research leader to be visited, to confirm that a visit would indeed be welcomed if an award were made. They will then be invited to make a brief presentation to the Cecil King Prize Committee on their proposed research and the benefits to be gained from the visit abroad.

Final ratification of the award will require formal confirmation from the institution/person to be visited, indicating their willingness to welcome the visit and to provide whatever supervision and research facilities might be needed. Any supervision or other fees will be paid from the Prize.

At the end of the visit, the student will be expected to write a short report to the Cecil King Memorial Foundation, indicating the activities and benefits gained from the visit.

Application forms may be obtained from the Executive Secretary, Mr P.R. Cooper, The London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HS (email: cooper@lms.ac.uk) or from the Society's website (http://www.lms.ac.uk/activities/cecil_king/index.html). The closing date for applications is **Friday 7 February 2003**. It is hoped that the Scholarship will be awarded before the end of March 2003.

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EUROPEAN FUNDING

The European Mathematical Society, being a young society, is run on a shoestring. So its ability to stimulate mathematical activity is limited, largely, by the funds it can raise from other sources. It has good relations with UNESCO, which has helped to fund the EMS Summer Schools, but the Society is dependent on the European Union for its larger projects and has successfully obtained money to support Zentralblatt MATH, to run a "raising public awareness" programme, and to fund a project to compare the mathematical attainments of 16 year-olds across Europe.

Just as important are the Society's efforts to influence the form of research funding. European Union programmes and legislation may seem remote, but in reality emerge out of months of intense discussion, not simply among politicians, but in dialogue with what are quaintly called the 'social partners'. Through the efforts of our successive

presidents and vice-presidents, the EMS is recognised as one such partner. For instance, when the outline of Framework 6 was first mooted by Commissioner Busquin, the EMS submitted a paper outlining the needs of mathematicians (particularly for a more bottom-up and small-scale approach to the funding of research). When the draft programme was published, with an almost exclusive emphasis on large top-down projects, we sent in a detailed critique, backed up by meetings with the Commissioner and civil servants. In the event Framework 6 contains sufficient opportunities to support mathematical research. In general, one doesn't know what part such efforts as ours play in shaping the final result, but we have been told that one aspect, the Marie Curie Fellowships for researchers returning to their home country, is a result of the Society's suggestions.

Recently, the Society been successful

in getting some input into the deliberations of the European Science Foundation, an influential body whose members are mainly appointed by the national research councils and in which mathematics is under-represented. It runs several large research networks and funds conferences. Currently, it is leading the debate about the desirability of a European Research Council (www.esf.org). There was a conference about this in Copenhagen in October at which the European Mathematical Society was the only subject-based society to be formally represented. It seems there is widespread dissatisfaction with the way basic research is financed at the European level, but it is highly contentious whether creating such a research council would be the right step to take.

David Salinger
EMS Publicity Officer

BSHM CHRISTMAS MEETING

The British Society for the History of Mathematics (BSHM) Christmas Meeting will be held on Saturday 14 December at the Clore Management Centre, Birkbeck College, Torrington Square, London WC1. The invited speakers are:

- Peter Neumann: Presidential Address. *Mathematics used to count in universities*
- David Acheson: *New twists on old problems in mechanics*
- Annette Imhausen: *The mathematics in the Reisner papyri: practical calculations versus educational mathematics*
- Simon Singh: *The cracking of the Cipher Challenge*

The cost of the meeting is £16 for BSHM members, £25 for non-members and £10 for concessionary members of the BSHM and full-time students. A sandwich lunch is available for £10 (which is the cost to the BSHM). For further information contact Chris Weeks (tel: 01409 211 346, email: chrisweeks@eurobell.co.uk, web: www.dcs.warwick.ac.uk/bshm/).

SIR GEORGE GABRIEL STOKES (1819 - 1903)

A Centenary Meeting devoted to his scientific work and his influence on modern mathematics and science will be held on Tuesday 18 March 2003 in Cambridge

Programme

- Professor Sir Michael Berry (Bristol University) *Stokes and the Rainbow*
- Professor Michael Hayes (University College Dublin) *Gibbs Bivectors and Stokes Parameters*
- Professor H. Keith Moffatt (Cambridge University) *Stokes and the Dynamics of Viscous Fluids*
- Professor Alastair Wood (Dublin City University) *Family Background and Early Life*
- Professor David B. Wilson (Iowa State University) *G.G. Stokes, Scientist and Victorian*
- Professor Sir Michael Atiyah (Edinburgh) *Stokes's Influence on Differential Geometry*

Lunch will be available at nearby Wolfson Court, part of Girton College. A free exhibition of Stokes Memorabilia will be open from 6.00 - 7.30 pm at Pembroke College. Dinner is at Pembroke College at 7.30 pm. The price is £40.00 per person inclusive of wines.

If you wish to attend this meeting you must pre-book through the website (<http://www.newton.cam.ac.uk/events/stokes/>) where further details of this special event can be found. The venue for this event is Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge CB3 0EH.

TWENTE CONFERENCE ON LIE GROUPS

The 2002 Twente Conference on Lie Groups will be held at Twente University, Netherlands from 16-18 December. More information can be found on the website (<http://www.math.utwente.nl/~lie>).

LMS 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 £1250 for giving the course and a further fee of £1500 on delivery of the text in a form suitable for publication. Recent lecturers in the series have been P.F. Baum (1995), F.J. Almgren (1996), J. Alperin (1997), D. Zagier (1998), A. Mielke (1999), B. Dubrovin (2000), T. Goodwillie (2001), P. van Moerbeke (2002).

The 2003 Invited Lectures Series will be given at the University of Wales Swansea by M. Fukushima.

For the 2004 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. Enquiries about this series should be directed to the Executive Secretary, Mr P.R. Cooper, at the Society (<http://www.lms.ac.uk>; email: cooper@lms.ac.uk; tel: 020 7637 3686; fax: 020 7323 3655). Programme Committee expects to make a decision on Friday 20 June 2003.

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Sometimes mathematicians are surprised to learn that Riemann's collected works do not already exist in English. This volume fills the gap and provides a convenient source for the work of an extraordinary scholar whose impact on today's mathematics is hard to overstate.

Kendrick Press, 520C N. Main St. #341, Heber, Utah 84032, U.S.A.

A Partnership in Mathematics



Codebreakers

Arne Beurling and the Swedish
Crypto Program during World War II

Bengt Beckman

One of the greatest accomplishments in the history of cryptography occurred in 1940 when a Swedish mathematician broke the German code used for strategic military communications. This story has all the elements of a classic thriller: a desperate wartime situation; a moody and secretive mathematical genius with a talent for cryptography; and a stunning mathematical feat, mysterious to this day.

February 2003, 289 pages
Hardback, 0-8218-2889-4, £27.75

1089 and All That

A Journey into Mathematics

David Acheson

This excellent book makes mathematics accessible to everyone, providing one of the most readable explanations of mathematics available.

"Not a page passes without at least one intriguing insight ... This is a clever book ... all mathematicians should buy a least a dozen copies ... My enthusiasm for it knows no bounds." **New Scientist**

July 2002, 184 pages
Hardback, 0-19-851623-1, £12.99

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What's Happening in the Mathematical Sciences

Barry Cipra

This fifth volume of the *What's Happening* series shows how mathematics is universal, and can be found everywhere - in science, art, history, and our everyday lives.

What's Happening in the Mathematical Sciences Vol. 5
October 2002, 95 pages
Paperback, 0-8218-2904-1, £14.75

Random Geometric Graphs

Mathew Penrose

This monograph provides and explains the probability theory of geometric graphs. Applications of the theory include communications networks, classification, spatial statistics, epidemiology, astrophysics and neural networks.

Oxford Studies in Probability No. 5
April 2003, 320 pages
Hardback, 0-19-850626-0, £45.00

The Universality of the Radon Transform

Leon Ehrenpreis

In this monograph the author focuses on recent research, and highlights the strong relationship between high-level pure mathematics and applications of the Radon transform to areas such as medical imaging.

Oxford Mathematical Monographs
May 2003, 860 pages
Hardback, 0-19-850978-2, £65.00



Portraits of the Earth

A Mathematician Looks at Maps

Timothy G. Feeman

Through the visual context of maps and mapmaking, students will see how contemporary mathematics can help them to understand and explain the world. Topics explored are the shape and size of the earth, basic spherical geometry, and why one can't make a perfect flat map of the planet.

Mathematical World No. 18
December 2002, 136 pages
Paperback, 0-8218-3255-7, £20.25

WINTER COMBINATORICS MEETING 2003

The Open University Winter Combinatorics Meeting 2003 will take place on Wednesday 22 January at Walton Hall, Milton Keynes. Talks will be in Room CMR11, the first talk starts at 10.45 am and the last talk will finish at 4.30 pm. Speakers and titles are as follows:

- Ian Anderson *Balancing training schedules for carryover effects*
- Gareth Jones *Graphs, groups and surfaces*
- Stephanie Perkins *Variable length codes that synchronize*
- Martin Skoviera *Colouring cubic graphs by Steiner triple systems*
- Douglas Woodall *Hall-type conditions: irreducibility and colourings*

More information (travel information, programme and abstracts of talks) may be found on the web (<http://mcs.open.ac.uk/puremaths/combin>).

UK-JAPAN WINTER SCHOOL

There will be a UK-Japan Winter School from Thursday 9 to Tuesday 14 January (inclusive). This year it will be hosted by the Mathematics Research Centre, University of Warwick, with mornings devoted to two series of introductory talks:

- J.P. Keating (Bristol) *Random matrix theory and some of its applications*
- T.J. Lyons (Oxford) *Differential equations driven by rough paths*

For more details, including afternoon speakers as they are arranged, see the following website (<http://www.maths.warwick.ac.uk/>). All are welcome and graduate students are especially encouraged to come. Some financial support may be available, eg through the LMS Warwick Visitors' Fund. For details and accommodation arrangements, please contact Peta McAllister (peta@maths.warwick.ac.uk) as soon as possible, since accommodation may be scarce.

CENTENARY OF SIR WILLIAM HODGE (1903-1975)

The year 2003 sees the centenary of the birth of Sir William Hodge, one of the great figures of 20th century geometry. His development of 'harmonic integrals' (or harmonic forms as they are now called) was described by Hermann Weyl as 'one of the great landmarks in the history of science in the present century'. It was a truly pioneering work and set the stage for the explosive development of algebraic geometry in the post-war period. It uses analysis to provide a link between differential geometry and polynomial algebra, and has an impact both on number theory and physics.

In the past twenty-five years Hodge Theory has become a standard tool for theoretical physicists. As Edward Witten has so convincingly demonstrated it can be viewed as 'supersymmetric quantum mechanics' and this provides a springboard for vast generalizations into quantum field theory.

Hodge was born on 17 June 1903 in Edinburgh and he was a graduate of Edinburgh University before moving south to Cambridge. Here he eventually became Lowndean Professor of astronomy and geometry and Master of Pembroke College. He also served as Physical Secretary of the Royal Society and was a key figure in the post-war rebirth of the International Mathematical Union. He presided at the International Mathematical Congress in Edinburgh in 1958 and died on 7 July 1975.

A conference to celebrate Hodge's centenary will be held in Edinburgh from 20 - 26 July 2003. It will be organized by the International Centre for Mathematical Sciences and will deal with the impact of Hodge Theory on mathematics and physics. Further details can be found on the meeting's website (<http://www.ma.hw.ac.uk/icms/meetings/2003/HODGE/index.html>). See also page 26 of this *Newsletter*.

Michael Atiyah

HODGE THEORY IN A NEW CENTURY

A Euro Conference celebrating the Centenary of Sir William Hodge (1903-1975)

Edinburgh, 20-26 July 2003

Supported by the European Commission, High Level Scientific Conferences (HPCF-CT-2002-00233), St John's College, Cambridge and the London Mathematical Society.

Hodge theory was described by Hermann Weyl as 'one of the landmarks in the history of mathematics in the 20th century'. It is fitting that a meeting to celebrate Sir William Hodge's achievements should take place in the city of his birth and in the university where he received his undergraduate education.

The general theme of the Conference will be the influence and development of Hodge Theory in various branches of mathematics and physics. The meeting will also incorporate an afternoon (hosted by the London and Edinburgh Mathematical Societies) with talks tied into the general theme, but suitable for a general mathematical audience. For more information, and a registration form, please see the meeting's home pages:

<http://www.ma.hw.ac.uk/icms/meetings/2003/HODGE/index.html>

Scientific Organising Committee

- Michael Atiyah - Chair - (Edinburgh)
- Spencer Bloch (Chicago)
- Jean Pierre Bourguignon (IHES)
- Simon Donaldson (Imperial College)
- Philip Griffiths (IAS)
- Edward Witten (IAS)

Speakers

Michael Atiyah (Edinburgh)
Alexander Beilinson (Chicago)
Philip Candelas (Oxford)
Jeff Cheeger (Courant)
Simon Donaldson (Imperial)
Mark Green (UCLA)
Philip Griffiths (IAS, Princeton)
Fritz Hirzebruch (Bonn)

Maxim Kontsevich (IHES)
Dusa McDuff (Stony Brook)
David Morrison (Duke)
Roger Penrose (Oxford)
Wilfried Schmid (Harvard)
Cumrun Vafa (Harvard)
Claire Voisin (Paris VII)
Edward Witten (IAS, Princeton)

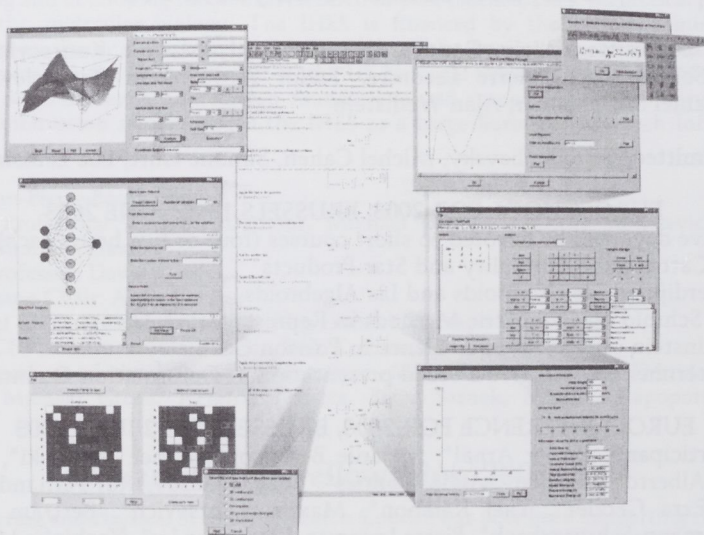
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International EuroSchool and EuroConference PQR 2003

POISSON GEOMETRY, DEFORMATION QUANTISATION AND GROUP REPRESENTATIONS

ULB, BRUSSELS 13-22 JUNE 2003

Scientific Committee Alain Connes, Simone Gutt, Maxim Kontsevich, Yvette Kosmann-Schwarzbach, Pierre Lecomte, Tudor Ratiu, John Rawnsley, Wilfried Schmid, Daniel Sternheimer, Alan Weinstein.

Local Committee Pierre Bieliavsky, Michel Cahen, Simone Gutt, Luc Lemaire.

EUROSCHOOL PQR 2003, BRUSSELS 13-17 JUNE 2003

The first five days will be devoted to short courses (four or five hours each) by

- Alberto Cattaneo on Formality and Star Products
- Ieke Moerdijk on Lie Groupoids and Lie Algebroids
- Wilfried Schmid on Geometric Methods in Representation Theory
- Alan Weinstein on Morita Equivalence in Poisson Geometry
- Daniel Sternheimer will give a broad presentation of Deformation Quantisation

EUROCONFERENCE PQR 2003, BRUSSELS 18-22 JUNE 2003

Invited participants Didier Arnal*, Melanie Bertelson*, Raneé Brylinski*, Henrique Bursztyn, Alberto Cattaneo*, Alain Connes*, Boris Fedosov, Rui Fernandes*, Chris Fronsdal, Ezra Getzler*, Yael Karshon*, Maxim Kontsevich*, Bertram Kostant*, Yvette Kosmann-Schwarzbach*, Pierre Lecomte, Jiang-Hua Lu*, Yoshioka Maeda, Ieke Moerdijk*, Ryszard Nest*, Tudor Ratiu, John Rawnsley, Wilfried Schmid*, Lorenz Schwachhoefer*, Carlos Simpson*, Daniel Sternheimer, Dmitry Tamarkin*, Charles Torossian*, Kari Vilonen*, Stefan Waldmann*, Alan Weinstein*, Ping Xu.

* confirmed lecturers

Proposals for posters are welcome.

Location Université Libre de Bruxelles

Grants This conference is supported by an EU grant; a limited number of young European researchers (under 35 years old at the time of the conference) can be supported for travel, hotel and subsistence. The conference fee is €40 for the Euroschool and €60 for the Euroconference; any researcher can apply for some financial support to attend the meeting. Applications for support should be addressed to pqr2003@ulb.ac.be before **15 December 2002**; late applications will be considered if possible.

Deadlines A special price of €90 per night at the Astrid Hotel in Brussels can only be guaranteed for registration before the end of December 2002.

Information <http://homepages.ulb.ac.be/~pqr2003/>

Registration and further information pqr2003@ulb.ac.be

INSTITUT DES HAUTES ETUDES SCIENTIFIQUES

The Institut des Hautes Etudes Scientifiques, located in Bures-sur-Yvette (France), welcomes each year 200 to 250 mathematicians and theoretical physicists from all over the world and for various periods (2 or 3 weeks up to 1 or 2 years).

Created in 1958, the IHES 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. The IHES is financed by the French Ministère de la Recherche, some European research agencies such as the Engineering and Physical Sciences Research Council in the United Kingdom, the US National Science Foundation, the European Union, and several French and foreign foundations and companies. In February 2000, the European Commission acknowledged the IHES as a Large European Research Infrastructure centre.

Director: Jean-Pierre Bourguignon

Permanent Professors: Thibault Damour, Mikhael Gromov, Maxim Kontsevich, Laurent Lafforgue, Nikita Nekrassov

Honorary Professor: David Ruelle

Léon Motchane Chair: Alain Connes

Louis Michel Chairs: Michael Douglas, Jürg Fröhlich, Samson Shatashvili

Long term CNRS visitors: Ofer Gabber, Dirk Kreimer, Christophe Soulé

External Members of the Scientific Committee: Alain Connes, Bernard Derrida, Giovanni Gallavotti, Michael Green, Hendrik Lenstra, Peter Sarnak, Michael Rapoport, Gabriele Veneziano

William Hodge Fellowships: 2003/2004

The Engineering and Physical Sciences Research Council has now been supporting the IHES 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 the IHES to visit and additionally perhaps to use the opportunity to visit research groups in the Paris region. More information is given on the IHES website. In addition, the EPSRC and the IHES are offering annually two 1-year fellowships 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 the IHES.

Conditions for application PhD in Mathematics or Theoretical Physics obtained in 2000 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 the IHES Scientific Committee on 11 January 2003. This Committee consists of the permanent professors, the Director, and some external members (names are listed above).

Starting date of the fellowships Autumn 2003.

How to apply The application file should be sent through the IHES website (www.ihes.fr) and should include: a motivation letter, a CV, a publication list, a research project and two or three letters of recommendation.

Deadline for applications: 31 December 2002.

Information IHES, 35 route de Chartres, F-91440 Bures-sur-Yvette, France (tel: +33 1 6092 6600, fax: +33 1 6092 6669; email: hodge@ihes.fr; website: www.ihes.fr).

Euro Summer School

Instructional Conference on Mathematical Analysis of Hydrodynamics

Edinburgh, 18-29 June 2003

Organising committee

Peter Constantin (Chicago), Sergei Kuksin (Heriot Watt), John Toland (Bath)

The aim of this 10-day course is to instruct young mathematicians in topics involving mathematical analysis of hydrodynamics. The conference takes the form of a series of courses supplemented by single research-level talks on recent advances.

The following themes will be addressed: Euler equations; Quasi-geostrophic equations; Statistical hydrodynamics; Related models; Mathematical aspects of physical turbulence; and Water waves.

Supporting institutions and organisations

The meeting is supported by the European Commission, DG XII, Human Potential Programme, High Level Scientific Conferences HPCF-CT-2001-00103 and by the Engineering and Physical Sciences Research Council (EPSRC) of the UK. The Organisers hope to provide financial support for the majority of younger participants.

Speakers

The following have provisionally agreed to speak:

A. Babine (UC Irvine)	A. Kupiainen (Helsinki)
Y. Brenier (Nice)	P. Plotnikov (Novosibirsk)
P. Constantin (Chicago)	J. Robinson (Warwick)
D. Cordoba (Princeton)	A. Shnirelman (Hull)
W. Craig (McMaster)	A. Shirikyan (Paris)
C. Doering (Michigan)	E. Titi (UC Irvine)
A. Fursikov (Moscow)	J. Toland (Bath)
J. Gibbon (Imperial College)	V. Vladimirov (Hull)
E. Grenier (Lyon)	E. Wayne (Boston)
S. Kuksin (Heriot-Watt)	J. Wu (Oklahoma)
	S. Wu (Maryland)

Anyone interested in attending should complete the online application form (accessed via the meeting home page). The meeting webpages contain detailed information:

<http://www.ma.hw.ac.uk/icms/meetings/2003/hydro/index.html>

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MATHEMATICIANS VISITING THE UK IN 2002/2003

ABERDEEN UNIVERSITY

Czinner, V. (University of Budapest)

Relativity, 1 Oct – 30 Nov '02

Sharif, M. (Punjab University, Lahore)

Relativity, 2003

Vokrinek, L. (University of Brno)

Topology, 19 Sep – 15 Dec '02

ABERTAY UNIVERSITY OF DUNDEE

Kaminski, D. (Lethbridge University, Canada) Asymptotic Analysis, 29 Aug – 17 Dec '02

BRISTOL UNIVERSITY

Bortot, P. (University of Bologna, Italy) Extreme Value Theory, Environmental & Financial Applications, Population Pharmacokinetics, 1 Oct '02 – 1 Jan '03

Buchstaber, V. (Moscow State University)

Algebraic Topology, Theory of Lie Groups, Mathematical Physics, 20 Oct – 20 Dec '02

Gottlieb, O. (Institute of Technology, Technion, Israel) Non-linear Mechanics, Dec '02 – Feb '03

BRUNEL UNIVERSITY

Borisov, I.S. (Novosibirsk Univ., Russia)

Probability, Statistics, 10 – 24 Dec '02

Monk, P. (University of Delaware, USA)

Finite Element Methods for Electromagnetism and Inverse Scattering, 1 May – 15 Jul '03

DUNDEE UNIVERSITY

Dai, Yu-Hong (State Key Laboratory of Scientific & Engineering Computation, Beijing, China) Optimisation, 1 May '02 – 30 Apr '03

DURHAM UNIVERSITY

Rosseau, D. (Cergy Pontoise, Paris)

Topological Solitons, May – Jun '03

Shigeyasu, K. (Okayama University of Science) Hyperbolic Geometry, Jan – Mar '03

EAST ANGLIA UNIVERSITY

Bhattacharya, S. (Tata Institute, India)

Ergodic Theory, 27 Sep – 29 Oct '02

Kalman, G. (Debrecen Univ., Hungary)

Number Theory, 1 May – 26 Jun '03

Mnukhin, V. (University of Fiji) Algebraic

Combinatorics, 1 Mar – 1 May '03

Shparlinski, I. (Macquarie University)

Number Theory, 1 Mar – 1 Apr '03

Tesman, B.A. (Dickenson College, PA)

Combinatorics, 1 Sep '02 – 30 Jun '03

EDINBURGH UNIVERSITY

Domainko, W. (Innsbruck University)

Theoretical Astrophysics, 1 Oct – 30 Dec '02

Fellhauer, M. (Kiel University)

Computational Astronomy, 05 Aug – 06 Oct '02

Timoney, R. (Trinity College Dublin)

Complex and Functional Analysis, 09 Sep – 20 Dec '02

Walker, P. (Sharjah University, UAE)

Harmonic Analysis, 11 Oct '02 – 20 Dec '04

Xiao-ling, S. (Shanghai University)

Optimization, 01 Aug – 31 Dec '02

EXETER UNIVERSITY

Dangelmayr, G. (Colorado State University) Applied Dynamical Systems, Feb – Mar '03

GLASGOW UNIVERSITY

Vaida, F. (Harvard School of Public Health, USA) Biostatistics, 15 Oct – 30 Nov '02

HULL UNIVERSITY

Gubarev, Y. (Russian Academy of Sciences, Novosibirsk, Russia) Hydrodynamic Stability; Industrial Applications of Fluid Dynamics, 14 Jan – 14 Mar '03

Yudovich, V. (Rostov University, Russia)

Mathematical Fluid Dynamics, 24 Sep – 24 Dec '02

KEELE UNIVERSITY

Freidin, A.B. (Institute of Mechanical Engineering Problems, Russian Academy of Sciences) Applied Mathematics, 9 Nov – 20 Dec '02

Stiassnie, M. (Institute of Technology, Technion, Israel) Applied Mathematics, Sep – Oct '03

Yakubovich, E. (Institute of Applied Physics, Novgorod, Russia) Applied Mathematics, May – Jun '03

KING'S COLLEGE LONDON

Enger, H. (University of Oslo, Norway)

Conformal Field Theory & String Theory, 23 Sep '02 – 22 Jan '03

Gilman, J. (Rutgers University, USA)

Discrete Group Theory, Hyperbolic Geometry, Jan – Mar '03

- Lovric, M. (McMaster University, Ontario)
Mathematics Education, Sep – Dec '02
- Roggenkamp, D. (Bonn University, Germany) Conformal Field Theory & String Theory, 01 Sep '02 – 31 Aug '03
- LANCASTER UNIVERSITY**
- Doty, S.R. (Loyola University, Chicago)
Quantum Groups, Apr – May '03
- Hopenwasser, A. (University of Alabama)
Operator Algebras, Jan – Jul '03
- Jaeck, J. (University of Bordeaux) Operator Algebra, Sep '02 – Aug '03
- Losonczy, J. (Long Island University)
Combinatorics, Jun – Jul '03
- LEICESTER UNIVERSITY**
- Changchang, X. (Beijing Normal University, China) Representation Theory, 9 Oct '02 – 9 Dec '03
- Doty, S. (Loyola University, Chicago)
Representation Theory, 15 Oct – 15 Nov '02
- Mazorchuk, V. (Uppsala University, Sweden) Algebraic Lie Theory, Jan '03
- Milstein, G.N. (Berlin) Stochastic Numerics, Stochastic Analysis, Stability, Optimal Control, 09 Sep – 08 Oct '02
- LIVERPOOL UNIVERSITY**
(Statistics & OR)
- Garcia Finana, M.I. (University of Cantabria, Santander, Spain) Statistics, Geometrical Probability & Stereology, Jun '02 – Jun '03
- LOUGHBOROUGH UNIVERSITY**
- Bogdanov, L. (Landau Institute, Moscow, Russia) Continuous & Discrete Multi-dimensional Integrable Systems, Non-linear Waves, 15 Oct – 15 Nov '02
- Gonpot, P. (University of Mauritius Reduit) Applied Numerical Models for Bio-films, 15 Jun – 15 Dec '02
- Zhang, J. (Zhenjiang Teacher University, China) Non-linear Waves, 1 Oct – 31 Dec '02
- NEWCASTLE UNIVERSITY**
- Gourdeau, F. (University of Laval, Canada)
Analysis, Sep '02 – Sep '03
- Pourabbas, A.R. (Amirkabir University of Technology, Iran) Functional Analysis, Jan '03 – Jan '04
- NOTTINGHAM UNIVERSITY**
- Elzanowski, M. (Portland State University)
Continuum Mechanics of Defects, Oct '02 – Mar '03
- Kamowitz, H. (University of Mass., Boston) Functional Analysis, 11 Feb – 10 Mar '03
- Rajarama, B.V. (Indian State Institute, Bangalore Centre) Non-commutative Probability, Dilation & E_0 -semigroup Theory, Dec '02 – Mar '03
- OXFORD UNIVERSITY**
(Mathematical Institute)
- Brent, D. (Princeton) Geometry, 1 Aug '02 – 30 Apr '03
- Cooper, D. (Santa Barbara, USA) Topology, Three-manifolds, 14 Aug – 30 Nov '02
- Donaldson, J. (Tasmania) Industrial Applications, Geophysical Applications, 4 Nov – 31 Dec '02
- Hobson, D. (University of Bath) Nomura Visiting Fellow, 23 Sep – 31 Dec '02
- Kinnebroch, S. (Kaiserslautern, Germany)
Industrial Applications, Geophysical Applications, 1 Oct '02 – 31 Mar '03
- Kjellemo, D.O. (Trondheim, Norway)
Algebraic Topology, 1 Sep '02 – 31 Aug '03
- Leite, E.E. (Sao Paulo, Brazil) Twistor Theory, 1 Oct '02 – 30 Sep '03
- Liang, Z. (Beijing) Stochastic Analysis, 1 Oct '02 – 30 Sep '03
- McGuinness, M. (Wellington, NZ)
Mathematical Physiology, 1 Jan – 31 Jan '03
- Manevitz, L. (Israel) Logic, 19 Aug '02 – 30 Sep '03
- Ngwa, G.A. (Cameroon) Mathematical Biology, 1 Oct '02 – 30 Sep '03
- Pastor, J. (Spain) Analysis, 1 Sep – 30 Nov '02
- Schmelzer, T. (Kaiserslautern) Industrial Applications, Geophysical Applications, 1 Oct '02 – 31 Mar '03
- Scowcroft, P. (Wesleyan University) Model Theory, 20 Sep '02 – 31 Aug '03
- Srinivasa Rao, A.S.R. (Bangalore)
Epidemiological Modelling, 12 Jan – 28 Feb '03
- Tegnander, C. (Trondheim) Fluids, Flow in Porous Media, 1 Sep – 1 Dec '02
- Van der Hoist, H. (Berlin) Combinatorics, 14 May – 31 Dec '02
- Zarmi, U. (Israel) Superconductivity, 14 Sep – 14 Nov '02

PLYMOUTH UNIVERSITY

Curran, M.J. (University of Otago, New Zealand) Mathematics Education, 14 Oct – 31 Dec '02

Dimitrova, E. (Higher Institute of Food & Flavour Industries, Plovdiv, Bulgaria) Mathematics Education – Research Methods, Jan – Apr '03

QUEEN MARY, UNIVERSITY OF LONDON

Bae, J. (Chonnam National University, Korea) Design of Experiments, Feb '03 – Jan '04

Knarr, N., Finite Geometry, 10 Oct – 31 Dec '02

Konkowski, D. (US Naval Army, USA) General Relativity, 1 Sep – 9 Dec '03

Morgan, J.P. (Virginia Tech, USA) Design of Experiments, Jan–Jun '03

ROYAL HOLLOWAY UNIVERSITY

Park, S.J. (Korean Information Security Agency) Information Security, 1 Sep '02 – 31 Aug '03

Shparlinski, I. (Macquarie University) Number Theory, 15 Feb – 30 Apr '03

SALFORD UNIVERSITY

Nodle, E.V. (Russian Academy of Sciences, Moscow) Elasticity, Asymptotic Analysis, Oct – Nov '02

Perrel, M. (St. Petersburg University, Russia) Asymptotic Methods, Inhomogeneous Wave-guides, Jan – Feb '03

SHEFFIELD UNIVERSITY

Zakeri, H. (University for Teacher Education, Tehran, Iran) Commutative Algebra, 3 Aug '02 – 31 Jan '03

SOUTHAMPTON UNIVERSITY

Barry, S. (Bureau of Resource Science, Canberra, Australia) Statistics – Environmental Problems, 1 Jul – 30 Nov '02

Costa, A. (University of Bahia, Brazil) Operational Research – Health Modelling, 30 Sep – 30 Dec '02

Field, C.A. (Dalhousie University, Canada) Statistics – Accurate Confidence Intervals, 1 Oct – 30 Nov '02

Kiselev, A. (Chernigov State Technological University, Ukraine) Applied Mathematics – Light Scattering in Liquid Crystals, 11 Nov – 22 Dec '02

ST ANDREWS UNIVERSITY

Broline, D. (Eastern Illinois University, USA) Algebra & Combinatorics, Jan – May '03

Evans, M. (Washington & Lee College, Virginia, USA) Real Analysis, Sep – Dec '02

Humke, P. (St Olaf College, Minnesota, USA) Real Analysis, Sep – Dec '02

Rexstad, E. (University of Alaska, Fairbanks, USA) Wildlife Population Assessment, Jan – May '03

UMIST

Ashrafi, A.R. (Kashan University, Iran) Pure Mathematics, 16 Oct '02 – 15 Jul '03

Bogoliubov, N.M. (Russian Academy of Sciences) Theory of Bose-Einstein Condensation, 2 Sep – 8 Nov '02

Darvizeh, M. (University of Guilan, Iran) Stability of Cylindrical Shells, 22 Oct '02 – 1 Oct '03

Rybin, A.M. (University of Jyväskylä, Finland) Bose Condensates, 23 Sep – 14 Dec '02

Terdik, G. (University of Debrecen, Hungary) Statistics, 1 Oct – 1 Dec '02

UNIVERSITY OF WALES, SWANSEA

Fukushima, M. (Kansai University) Dirichlet Forms, Aug – Sep '03

Smolyanov, O.G. (Moscow State University) Mathematical Physics & Stochastic Processes, 19 Jan – 3 Mar '03

WARWICK UNIVERSITY

Bloemker, D. (RWTH Aachen, Germany) Stochastic Analysis, Dec '02 – Dec '03

Hairer, M. (Dept Physique Théorique, Switzerland) Stochastic Analysis, 1 Oct '02 – 1 Oct '03

Honary, B. (Sahid Beheshti University, Iran) Dynamical Systems, 5 Oct '02 – 30 Sep '03

Karoly, S. (Technical University of Budapest) Dynamical Systems, 5 May – 5 Aug '03

Kotus, J. (Warsaw University of Technology) Complex Dynamics, Apr – May '03

Urbanski, M. (University of North Texas) Dynamical Systems, 3 – 31 Jul '03

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS



FORTHCOMING CONFERENCES

- | | |
|--|--|
| Mathematics in Communications | <i>Lancaster University, 16-18 December 2002</i> |
| The Future of Pension Schemes: | <i>Royal Society, London, 27 March 2003</i> |
| Actuarial Valuations, Accounting | |
| Standards and Financial Economics | |
| Mathematical Education of Engineers IV | <i>University of Loughborough,</i> |
| | <i>1-3 April 2003</i> |
| Vision, Video and Graphics | <i>University of Bath, 10-11 July 2003</i> |
| Bifurcations: | <i>University of Southampton,</i> |
| The Use and Control of Chaos | <i>28-30 July 2003</i> |
| Quantitative Modelling in the | <i>University of Salford, 3-5 September 2003</i> |
| Management of Healthcare IV | |
| Imaging and Digital Image Processing IV: | <i>University of Leicester, 9-12 September 2003</i> |
| Mathematical Methods algorithms | |
| and Applications | |
| Mathematics of Surfaces X | <i>University of Leeds, 15-17 September 2003</i> |
| Fractal Geometry II | <i>University of Leicester, 16-19 September 2003</i> |
| Cryptography and Coding IX | <i>Royal Agricultural College, Cirencester,</i> |
| | <i>16 - 18 December 2003</i> |
| Modelling Permeable Rocks IV | <i>University of Southampton,</i> |
| | <i>30 March-1 April 2004</i> |

CO-SPONSORED CONFERENCES

- | | |
|---|---------------------------------|
| Second International Conference on | <i>University of Greenwich,</i> |
| Pedestrian and Evacuation Dynamics (PED) | <i>20 - 22 August 2003</i> |
| 6th Hellenic European Research Conference | <i>Athens, Greece,</i> |
| on Computer Mathematics and its | <i>25 - 27 September 2003</i> |
| Applications - HERCMA 2003 | |

For further details of all these conferences visit our website on www.ima.org.uk or contact: Carole Harp Conference Office, The Institute of Mathematics and its Applications, Catherine Richards House, 16 Nelson Street, Southend-on-Sea, Essex SS1 1EF.

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V.F.R. JONES
HONORARY MEMBER 2002

DIARY

The diary lists Society meetings and other events publicized 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 in the Society's web site (<http://www.lms.ac.uk/meetings/diary.html>).

DECEMBER 2002

- 6 Edinburgh Mathematical Society Meeting, Napier University (308)
- 7 SECANTS, Oxford (310)
- 9-13 Elliptic Cohomology & Chromatic Phenomena EuroWorkshop, INI, Cambridge (305)
- 9-13 Real and Complex One-dimensional Dynamics Workshop, Warwick University (308)
- 14 BSHM Christmas Meeting, Birkbeck College, London (310)
- 16-18 Twente Lie Groups Conference, Twente University, Netherlands (310)
- 16-20 Higher Chromatic Phenomena EuroWorkshop, INI, Cambridge (305)
- 17 Recent Advances in Probability and Statistics Workshop, Brunel University of West London (306)

JANUARY 2003

- 9 UK-Japan Winter School, Warwick University (310)
- 17 Edinburgh Mathematical Society Meeting, Edinburgh University (308)
- 20-24 Mathematical Challenges in Scientific & Engineering Computation, INI, Cambridge (306)
- 22 Winter Combinatorics Meeting, Open University (310)

FEBRUARY 2003

- 10-14 Permutation Patterns Conference, Otago University, New Zealand (303)
- 13-14 Computational Challenges in Micromagnetics & Superconductivity, INI, Cambridge (306)
- 14 Edinburgh Mathematical Society Meeting, Stirling University (308)
- 27 Kolmogorov Lecture 'A General System for Incremental Learning', Royal Holloway, Surrey (310)
- 28 LMS Mary Cartwright Lecture, Edinburgh (310)

MARCH 2003

- 7 Edinburgh Mathematical Society Meeting, Abertay University of Dundee (308)
- 11 LMS Northern Regional Meeting, Manchester University
- 18 Sir George Gabriel Stokes Centenary Meeting, INI, Cambridge (310)
- 31-4 Apr SDEs and SPDEs: Numerical Methods and Applications ICMS Workshop, Edinburgh (308)

APRIL 2003

- 4-12 Holomorphic Dynamics Workshop, Warwick University (308)
- 7-10 BMC 2003, Birmingham University (296)
- 7-10 BAMC 2003, Southampton University (296)

- 7-11 Multiscale Modelling, Multiresolution and Adaptivity Euroconference, INI, Cambridge (309)

MAY 2003

- 2 Edinburgh Mathematical Society Meeting, Edinburgh University (308)
- 13-14 Advances in Theoretical Sciences Conference, Putra University, Malaysia (310)
- 14 LMS Midlands Regional Meeting, Coventry University
- 30 Edinburgh Mathematical Society Meeting, Aberdeen University (308)

JUNE 2003

- 10-14 Differential Equations Conference, Dublin City University, Ireland (310)
- 13-22 Poisson Geometry, Deformation Quantisation and Group Representations Euro School & Euro Conference, ULB, Brussels, Belgium (310)
- 18-19 Mathematical Analysis of Hydrodynamicis Instruction Conference, ICMS, Edinburgh (310)
- 23-27 Hyperbolic Models in Astrophysics & Cosmology EuroConference, INI, Cambridge (308)

- 30-3 Jul Max-Algebra International Workshop, Birmingham University (308)

JULY 2003

- 7-11 ICIAM 2003, Sydney, Australia (308)
- 7-11 International *Mathematica* Symposium, Imperial College, London (309)
- 7-11 Computational Mathematics Workshop, Indonesia (308)
- 7-18 Symbolic Dynamics & Ergodic Theory Workshop, Warwick University (308)
- 14-17 Mathematics and its Applications International Conference, Indonesia (308)
- 14-18 Algebras, Modules and Rings International Conference, Lisbon, Portugal (308)
- 20-26 Hodge Theory in a New Century Euro Conference, ICMS, Edinburgh (310)
- 21-25 Geometric Aspects of Dynamical Systems Workshop, Warwick University (308)
- 27-9 Aug Banach Algebras & their Applications Conference, Edmonton, Alberta (302)

AUGUST 2003

- 28-5 Sept New Horizons in Arithmetic Geometry, Durham University (307)

APRIL 2004

- 5-8 British Mathematical Colloquium, Queen's University Belfast

JULY 2004

- 4-11 ICME10 - International Congress of Mathematical Education, Denmark (308)

SEPTEMBER 2004

- 1-6 Pan-African Congress of Mathematicians, Tunisia (308)