THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 267

January 1999

FORTHCOMING SOCIETY MEETINGS Friday-Saturday 12-13 February 1999 - Leeds Proof and Computation Friday-Sunday 14-16 May 1999 - Brussels Joint meeting with the Belgian Mathematical Society Friday 18 June 1999 - London Hardy Lecture

COUNCIL DIARY 20 November 1998

The last Council meeting of each year precedes the Annual General Meeting at which the democratic processes of the Society (see later) are invoked. On this occasion we thanked various retiring members of Council. Frances Kirwan and Angus Macintyre have served on Council for the last two years, and on various subcommittees, Angus also as Vice-President. John Erdos has been the Society's librarian for nine years, and it is thanks to his quiet but determined efforts that the services offered by the LMS library at University College have been much improved. Finally, we took the opportunity to express our enormous gratitude to John Ball, who as President for the last two years has guided the Society with a firm and unerring hand through the most radical period of change in its history.

We decided to hold a Council Retreat at the end of February 1999, to consider broad policy issues away from the pressure of everyday business, and chose a list of topics to discuss and convenors of various working groups. The reader will find an article explaining this in more detail later in this issue of the *Newsletter*. As Council's correspondent, the present writer has been given the task of examining our public relations and links with the media. This gives me an opportunity to appeal to all readers who have contacts in radio, TV or the newspapers to step forward and advise us on the way to advance the Society's image and ensure that mathematics is given appropriate coverage in print and on the airwaves.

One item which has been the object of attention recently is the Society's democratic process. At the meeting we considered proposals arising from the discussion paper on 'Council Structure and Democracy' in the July Newsletter. So far this has generated little controversy - hopefully this is an indication from the membership that we are moving in the right direction. The Council guillotine did not permit a full resolution of the technicalities involved, but we have made some progress, and it is very likely that a new system, along the general lines of that proposed in the discussion paper, will be in place in time for next year's elections.

Tony Scholl

TREASURER'S REPORT TO THE ANNUAL GENERAL MEETING 1998

As a published version of the Annual Report and Accounts is available to all members of the Society on request and as a version will be deposited in the Society's Archives on the World Wide Web, a few basic facts only are highlighted in this report to the Annual General Meeting.

This last year has been a momentous one for the Society. Twelve months ago, I reported that the Council had already decided after long and careful consideration that the time had come for it to purchase its own premises and to appoint professional staff to run its affairs from dayto-day. In a Special Council Meeting in December 1997 Council approved the purchase of 57-58 Russell Square, now called De Morgan House, as the Society's Headquarters at a price of £1,800,000. In the meantime, all the additional staff have been appointed. That the Society was in a sufficiently strong financial position to take this historical step was not only due to the financial leadership of my predecessors as Treasurers' of the Society but also the free service given to the Society by generations of Officers, Editors, etc. The drive, vision and energy of our President were absolutely crucial in all that was involved in the move.

The last month of the financial year was a turbulent one in world markets, but I am pleased to say that the total assets of the Society still grew during the year from £9.096.047 to £10,016,868 - now of course this includes De Morgan House which adds diversification to our investments. Although there was further turbulence in the following weeks, by now the Society has more than recovered the subsequent losses. The Ordinary Share Fund was valued at £5,566,000 compared with £5,127,663 - this has grown from £1,218,215 in 1994. A total of £1,469,445 is held in the Fixed Interest Fund and £1,239,175 in other accounts. The Society's investments on the whole performed well relative to the relevant indices. The Society's publishing activities continued to flourish both academically and financially although the surplus generated decreased from £518,920 to £452,536. There were special reasons to explain some of this decrease; the Society's recent policy of keeping price rises closer to inflation has ensured that subscription levels have kept up on the whole.

The Society is continually looking for new ways to serve its members and to support mathematics. Total expenditure this year was of the order of £240,000. Next year, this is budgeted to increase to about £320,000 - including a 50% growth on this year's expenditure on conferences and the various schemes to support research administered by the Programme, Durham Symposia and Computer Science Committees to £215,000. There is every intention to increase this further in the future.

I would again this year wish to express my thanks to Susan Oakes for her efficiency and unfailing support especially with all the new challenges involved in the Society's move to De Morgan House. Also, I would like to express my thanks and best wishes to Harvinder Lotay who leaves the Society after seven years dedicated service to the Society.

It is my pleasure to recommend the Annual General Meeting

- 1. to approve the Society's Accounts for the financial year September 1st 1997 -August 31st 1998
- 2.to re-appoint Messrs Fraser Russell, Chartered Accountants, as Auditors for the financial year September 1st 1998 -August 31st 1999.

BERNARD BOLZANO HONORARY MEDAL

Professor David E. Edmunds, from the School of Mathematical Sciences at the University of Sussex, was awarded the prestigious Bernard Bolzano Honorary Medal by the Academy of Sciences of the Czech Republic in Prague on 4 September 1998.

LONDON MATHEMATICAL SOCIETY

TWO-DAY MEETING FRIDAY 12th AND SATURDAY 13th FEBRUARY 1999

UNIVERSITY OF LEEDS Fairborn House, 71-75 Clarendon Road, Leeds LS2 9PL

PROOF AND COMPUTATION

Friday	
2.00	Opening
2.10 - 3.10	G. Plotkin (Edinburgh)
3.20 - 4.20	J.M.E. Hyland (Cambridge)
4.30 - 5.00	Tea
5.00 - 6.00	W. Pohlers (Münster)
7.00	Dinner
Saturday	
9.00 - 10.00	H. Schwichtenberg (Münich
10.00 - 10.30	Coffee
10.30 - 11.30	P. Martin-Löf (Stockholm)

P. Martin-Löf (Stockholm) 11.40 - 12.40 P. Aczel (Manchester) Lunch 12.45 - 1.30 1.30 - 2.30 D. Normann (Oslo) Tea

All interested are very welcome

2.30

Those wishing to attend should inform Mrs A. Landford, Department of Pure Mathematics, University of Leeds, Leeds LS2 9JT (a.landford@leeds.ac.uk) as soon as possible. Participants wishing to take dinner on the Friday evening and/or lunch on the Saturday should also send a cheque, payable to the University of Leeds, to cover the cost (dinner £15, lunch £8). Please note that immediately before and following this meeting, there will be a Research Workshop on Proof Theory, also at Fairbairn House and supported by the London Mathematical Society. This will begin at 2 pm on Thursday 11th February. A list of guesthouses within fairly easy reach of the University will be available on request from Mrs Landford, for those requiring accommodation.

There are limited funds available to help research students attend the meeting. Requests for support may be addressed to Dr D.J.H. Garling, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HP (e-mail: garling@lms.ac.uk).

BRITISH TOPOLOGY MEETING

The 14th British Topology Meeting will be held at the University of Wales Swansea from Tuesday 6th to Thursday 8th April 1999. This is the week immediately after Easter. Talks will start on Wednesday morning and finish at lunchtime on Thursday. Invited talks will be given by Hans-Werner Henn (Strasbourg) and John Rognes (Oslo). In addition there will be eight to ten 30-40 minute talks.

The meeting is supported by a grant from the London Mathematical Society. Some support will be available to help finance those participants who cannot obtain funding from their own institutions. There are funds earmarked specifically to support postgraduate research students. Up-to-date details of the meeting may be obtained from the BTM homepage (http://www.maths.swan.ac.uk/btm). For further information contact Francis Clarke (F.Clarke@Swansea.ac.uk).

51st BRITISH MATHEMATICAL COLLOQUIUM University of Southampton

As previously announced in the November Newsletter, the 51st BMC is to be hosted by the University of Southampton from 29 March to 1 April 1999, with financial support from the London Mathematical Society. Part of the LMS grant is to be used to subsidize the expenses of postgraduate students who attend the BMC. We ask LMS members to bring this notice to the attention of postgraduate students.

A registration form and a Programme for the meeting are included with this *Newsletter*. Copies have also been sent directly to UK Mathematics Departments. The registration form and programme are also obtainable (in dvi and html formats) from the BMC web page (http:// www.maths.soton.ac.uk/bmc/).



1999 COUNCIL RETREAT

Council has agreed that it will hold a Retreat at the end of February 1999, in order that it can consider broad areas of policy without the pressures of time that Council meetings impose. It has agreed that the following topics will be considered, and has agreed that a member or members of Council will, after consultation, prepare a discussion paper for each topic. Council would like to learn of the views of members of the Society on these topics; members are invited to send any views that they would like to have considered to an appropriate member of Council, by 31 January 1999.

Topic	Council member	Address and e-mail
Women in mathematics	Dr C.A. Hobbs	School of Computing & Math. Sciences, Oxford Brookes University, Gipsy Lane, Oxford OX3 0BP (cahobbs@brookes.ac.uk)
Relationship with applied mathematics, and the new universities	Professor M.A.H. MacCallum	School of Math. Sciences, Queen Mary & Westfield College, London E1 4NS. (m.a.h.maccallum@qmw.ac.uk)
Publications - an applied mathematics periodical; strategic development	Professor E.C. Lance	School of Mathematics, University of Leeds, Leeds LS2 9JT. (e.c.lance@leeds.ac.uk)
Education - teaching of mathematics in schools and universities: professional qualifications	Professor P.T. Saunders	Department of Mathematics, King's College London, Strand, London WC2R 2LS. (peter.saunders@kcl.ac.uk)
Public relations and the media	Professor A.J. Scholl	Dept. of Mathematical Sciences, University of Durham, South Road, Durham DH1 3LE. (a.j.scholl@durham.ac.uk)
Scientific activity of the Society, and its financial implications	Professor A.O.Morris	Department of Mathematics, University of Wales, Aberystwyth, Ceredigion SY23 3BZ. (aom@aber.ac.uk)
in the sector of	Professor E.G. Rees	Dept. of Maths. and Statistics, University of Edinburgh, King's Building, Edinburgh EH9 3JZ. (elmer@maths.ed.ac.uk)
Constants Constants • Scientific Completes • Scientific Completes	Dr N.M.J. Woodhouse	Wadham College, Oxford OX1 3PN. (nwoodh@maths.ox.ac.uk)



UNIVERSITY OF DUBLIN

TRINITY COLLEGE

Department of Pure and Applied Mathematics

Trinity College, Dublin, is seeking outstanding candidates, with an international reputation, for the following appointment in the Department of Pure and Applied Mathematics, tenable from 1 October 1999 (or as soon as possible thereafter):

Erasmus Smith's Chair of Mathematics (1762)

Candidates should have a distinguished record of achievement in pure mathematical research and a strong commitment to teaching. The person appointed will serve as head of Department in accordance with College regulations concerning headship.

Appointment will be made at an appropriate point of the professorial salary scale, currently IR£48,175 - IR£62,250.

Information about the Department and further particulars of the appointment, including details of salary and other benefits may be obtained from

Michael Gleeson Secretary to the College West Theatre Trinity College Dublin 2 Tel: +353 1 608 2197/1123

Fax: +353 1 608 2197/1123 Fax: +353 1 671 0037 e-mail: domurphy@tcd.ie

to whom formal application may be sent to arrive by the preferred closing date of **15 February 1999**.

Further details regarding the Department may be obtained on the website: http://www.maths.tcd.ie

Trinity College is an equal opportunities employer.

CALL FOR BIDS TO HOLD THE 4TH EUROPEAN MATHEMATICAL CONGRESS

Applications are invited to hold the 4th European Mathematical Congress in the year 2004. Applications should reach the Executive Committee before **15 March 1999**, to the following address: EMS Secretariat, Department of Mathematics, PO Box 4, FIN-00014, University of Helsinki, Finland. This call for applications will also be sent by letter to each member society of the EMS. The decision process and the organisation are subject to the following guidelines:

European Congress of Mathematics in the year n

Bids Bids are asked for in the EMS Newsletter and letters to the members societies in the year n-6. The EC appoints a site committee in case there is more than one bid. The site committee makes its inspections during the year n-5; the costs is borne by the bidders. The site committee inspects the auditoriums and the accommodation, plans for the scientific programme, the financial plans and the strength of the mathematical community making the bid. It also takes into consideration the costs for the participants to reach the site and the costs for the stay during the congress. Special attention will be paid to the availability of inexpensive student dormitories.

Decision In the year n-5 or n-4 the Executive Committee makes a recommendation for the site to the Council and the Council decides in the year n-4.

Local Organisation This is the responsibility of the organizers of the Congress.

Finances The financial responsibility lies wholly with the local organizers. The EMS assists in seeking outside financial support but, as a rule, does not enter into contracts on behalf of the congress. The EMS provides some financial support for travel of Eastern European mathematicians to the Congress as well as to the satellite conferences.

Committees

 Scientific Committee: the local organizers suggest the chair for the scientific committee for the EC of EMS to approve.

- Prize Committee: the local organizers suggest the chair for the prize committee for the EC of EMS to approve.
- Round Tables Committee: the local organizers suggest the chair for the round tables committee for the EC of EMS to approve.

The chairs of these committees suggest the members for the respective committees, for approval by the EC of EMS. The local organizers commit themselves to the financial support needed for the work of these committees as well as to any secretarial help needed. The registration fees should be brought to the Executive Committee meeting for discussion before the final decision is made. The EMS individual members must get a reduction of about 20%.

The local organizers report regularly to the Executive Committee on the progress of preparations. Specifically, it should bring forward plans for:

- the aims of the scientific programme and its general plan (number of plenary lectures and their positions in the programme, section lectures, round tables, possible short communications, posters). The selection of the speakers is the responsibility of the scientific committee. The final decision lies with the scientific committee;
- the budget plans, for consultation and advice;
- accommodation: for information and discussion;
- registration: for information and discussion;
- publicity: final responsibility is with the local organizers but EMS strives to give the congress as wide a publicity in its organs as possible;
- publications: final responsibility is with the local organizers.

The local organizers pay for the travel and

lodging of the speakers and waive their fees. The funds for the prizes are the responsibility of the local organizers but EMS support for fundraising is provided. The local organizers are free to use contractors in any local arrangements but it is in the interest of all parties concerned that the actions of these contractors are carefully supervised. The social programme is the responsibility of the local organizers. The local organizers take the responsibility for the local arrangements for the EMS Council meeting.

THE JOINT MATHEMATICAL COUNCIL

This country has a large number of mathematical societies, each with its own specific area of interest and influence. Unfortunately, that is not the most effective form of organisation for the mathematical community to be able to influence government and its agencies. In 1963, the Joint Mathematical Council of the United Kingdom (JMC for short) was formed with Sir William Hodge as its first Chairman.

The JMC is not a society, but rather a forum in which discussion can take place between societies, information can be passed between societies, and joint representations can be made to government and other bodies. Thus its members are mathematical societies, not individuals. Each member society (currently there are some 16 of these) nominates an individual as its representative. This procedure can somewhat insulate the JMC from individual members of the LMS. Hence this article seeks to give a little information about it.

The London Mathematical Society's representative is Professor Peter Saunders, Chairman of the Education Committee. He attends the JMC meetings, of which there are three per year, and reports back to the Education Committee and to Council.

Nowadays, each meeting typically starts at midday and finishes around 4 pm. It starts with routine business, checking on actions taken and actions required. Its major focus is concentrated on school mathematics, including teacher supply and training, but its interests include undergraduate mathematics and on the popularisation and general public image of mathematics. Information is exchanged - including much directly from government agencies such as QCA, TTA, OFSTED each of which has 'observer' status at Council meetings. There are reports about responses to government consultations, nominations to committees, working parties, etc., to consider. There was recently a report about current progress with plans for the next BCME (British Congress for Mathematical Education), this being run by the IMC and linking in with the quadrennial ICME (International Congress for Mathematical Education). There are reports from groups set up to discuss and report on specific issues. For example, last year a group set up by the JMC and the Royal Society produced (with some financial support from the London Mathematical Society) a report on the teaching of algebra in schools.

The Council meeting then turns to one. or sometimes two, specific issues upon which a debate would seem timely - perhaps in order to aim towards consensus in dealing with some government initiative, perhaps in trying to find common ground in dealing with some particular contentious issue. The Algebra report mentioned above is a good example of the latter. There was considerable disguiet, and strong feelings were expressed in the media. After an initial, rather heated, debate on the issue, a special meeting was called. That led to the setting up of a working party which then had several lively meetings before achieving substantial agreement in the form of its final authoritative report whose recommendations are already beginning to be taken up.

Of course, the JMC is consulted frequently throughout the year. It has an Executive Committee of six which includes its Chairman, Chris Robson, its Secretary and its Treasurer. This meets, or more commonly e-meets (using e-mail!) to discuss actions to be taken in the interim.

Back to the Future



R. Courant, F. John Introduction to Calculus and Analysis 1

Reprint of the 1989 ed. 1998. XXVI, 662 pp. Softcover £ 26.00 ISBN 3-540-65058-X

From the reviews:

"Volume 1 covers a basic course in real analysis of one variable and Fourier series. It is well-illustrated, well-motivated and very well-provided with a multitude of unusually useful and accessible exercises. (...) It is the best text known to the reviewer for anyone trying to make an analysis course less abstract. (...)"

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S. Flügge Practical Quantum Mechanics

Reprint of the 1974 ed. 1998. XV, 629 pp. 78 figs., Softcover £ 26.00 ISBN 3-540-65035-0

From the reviews:

"The student who can master these problems will have a good grasp of the practical applications of quantum theory and, therefore, of the basic concepts as well. I recommend the book unreservedly."

The Australian Physicist

******* Elliptic Functions According to Eisenstein and Kronecker

A. Weil Elliptic Functions according to Eisenstein and Kronecker

Reprint of the 1976 ed. 1998. X, 94 pp. Softcover £ 26.00 ISBN 3-540-65036-9

From the reviews:

"As a contribution to the history of mathematics, this is a model of its kind. While adhering to the basic outlook of Eisenstein and Kronecker, it provides new insight into their work in the light of subsequent developments. (...) a wideranging survey of one of the most active branches of mathematics at the present time. The book has its own very individual flavour, reflecting a sort of combined Eisenstein-Kronecker-Weil personality. The persistent reader will be richly rewarded."

> Bulletin of the London Mathematical Society



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The Mathemagician <u>and</u> Pied Puzzler: A Collection <u>in</u> Tribute <u>to</u> Martin Gardner

Edited by Will Klump 1999; Hardcover; ca. 250 pages; ca. \$34.00, ca. £22.00 ISBN 1-56881-075-X

This volume comprises an imaginative collection of pieces created in tribute to Martin Gardner. Perhaps best known for writing Scientific American's "Mathematical Games" column for years, Gardner uses his personal exuberance and fascination with puzzles and magic to entice a wide range of readers into a world of mathematical discovery. This tribute therefore contains pieces as widely varied as Gardner's own interests, ranging from limericks to lengthy treatises, from mathematical journal articles to personal stories.



This book makes a charming and unusual addition to any personal library.



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BOOK REVIEWS

Proofs from THE BOOK by M. Aigner and G.M. Ziegler (Springer, 1998) ISBN 3-540-63698-6, 200pp, £19.00

The man who only loved numbers by P. Hoffman (Fourth Estate, 1998) ISBN 1-85702-811-2, 302pp, £12.99

N is a number by G.P. Csicsery (distributor A.K. Peters Ltd) ISBN 1-56881-0946 (PAL), 57 minutes, £32.00

What connects the three items under review here is the most prolific, most eccentric, and by now most legendary mathematician, Paul Erdös. His mathematics, the history of his happy or unhappy life is of interest and of importance for all of us. More books, more biographies, more reminiscences are sure to come.

The Book is an invention of the late great Paul Erdös himself. That's where God keeps the perfect proofs of mathematical theorems. It must have existed even before its invention. The first published version of The Book, under the more modest title Proofs from The Book, contains thirty chapters. Each is a carefully selected topic from number theory, geometry, analysis, combinatorics, or graph theory. There is, of course, arbitrariness in the choice of material, with algebra and topology notably missing. Emphasis is on combinatorics even the geometry chapter is very discrete. But this is inevitable once the choice of material was influenced by Erdös himself. Also, combinatorial thinking, combinatorial ideas lie solidly behind the arguments of all, well, almost all, of mathematics.

This book is a pleasure to hold and to look at: ample margins, nice photos, instructive pictures, and beautiful drawings (by K.H. Hofmann). It is a pleasure to read as well: the style is clear and entertaining, the level is close to elementary, the necessary background is given separately, and the proofs are brilliant. Moreover, the exposition makes them transparent. (It is unfortunate however that, in the first paragraph of the preface, Erdös's death is misdated. For my taste, a result of Johnson and Lindenstruass is missing from Chapter 14, and the counterexample to Borsuk's conjecture has appeared too often in print.) By the way, The Book, if you could read it, would suggest that mathematics is pure beauty and plain sailing. But, as we all know too well, it isn't: it is blood and sweat and tears, it is passion and love.

The second item, the biography by P Hoffman, unlike the first, is for a general audience. I have to correct the author immediately: the pronunciation he proposes for 'Erdös' (air-dish) is not correct. The right one is 'air-dös' where ö is as in the German 'schön' or the English vowel in 'turn', just longer. Alas, this is not the only thing to be corrected: Hungarian history and the history of Erdös's life are sometimes not properly stated. Yet the book starts out nicely. There are hundreds of stories to tell about Erdös, and hundreds of jokes Erdös himself told several times. They are repeated here in a lively and playful way. (My favourite story is missing: some ten years ago, a Hungarian mathematician, of the same age as Erdös, said: "I've had a good life, proved nice theorems, met famous people. I only regret I never met Einstein." To which Erdös replied: "Don't worry, soon you will.")

So the biography by Hoffman starts out well: his childhood, his eccentricity, special language, travels, collaborators, his conflicts with worldly powers, etc. I couldn't stop reading the first few chapters. But then I began to wonder who this book is about. Erdös disappears and Ron Graham takes over. Of the two most frequent collaborators of Erdös, Sárközy is never mentioned, and Hajnal receives a single sentence. The reader is offered a little bit of everything: numerals and Fibonacci, infinite sets and Georg Cantor, Frege, Russell, paradoxes, Gödel, Cohen, continuum, Fermat's last theorem and Andrew Wiles, the Monty Hall dilemma. Perhaps Hoffman set out to write a bestseller about mathematicians and mathematics, centred around Erdös, for non-mathematicians. They may learn something, worthwhile or not, I cannot judge, about us. This book is neither intended, nor recommended for mathematicians.

The title of the videotape (or film, if you like), N is a number, isn't very inventive or informative. The target is again not the mathematical community but the general audience. Two small drops of mathematics, prime numbers and Ramsey theory, are well explained. It was hard to understand, however, the meaning and the purpose of the running race with a random number of laps in it, just as in the biography. What comes definitely through is that "we mathematicians are a little bit≅crazy"!

It is not clear how much of the late great Paul Erdös himself, his genius and his eccentricity, his love for mathematics, his incessant quest for mathematical truth, the driving force of his happy or unhappy life can be conveyed on the screen. But with the film shot about a decade ago, for many of my friends, and for myself as well, it was a pleasure to see our Uncle Paul again.

> Imre Bárány University College London

MEETING OF THE SOCIETY

A meeting was held on Friday 20 November 1998 at University College, London, Professor J.M. Ball, FRS, FRSE, President, in the Chair. There were present about 55 members and visitors. Dr D.J. Collins and Professor R.J. Plymen were appointed Scrutineers for the election of Council Members and collected the ballot papers. The Treasurer, Professor A.O. Morris presented his annual report, which is published in this issue of the *Newsletter*. Messrs. Fraser Russell were appointed as auditors.

Seven people were elected to Ordinary Membership: M.A. Bees, J.F. Blowey, J.J. Hooper, K. Khanin, P.E. Rothman, S.G. Scott and W.W. Wheeler; and two were elected to Reciprocity Membership: M.S. Khan (Amer. Math. Soc.) and D.J. Urbach (Schweizerische Math. Gesellschaft). Three members signed the book and were admitted to the Society.

The President presented the De Morgan medal for 1998 to Professor R.A. Rankin, FRSE. L.C. Evans gave a lecture entitled 'Some dynamical mass transfer problems'. After tea the Scrutineers announced the election results. The newly-elected President, Professor M.J. Taylor, FRS, took the Chair. The retiring President, Professor J.M. Ball, FRS, delivered his Presidential Address: 'The mystery of quasiconvexity'. The meeting adjourned for the Annual Dinner, which was held at the Montague Hotel and attended by 40 people.

ANNUAL LMS SUBSCRIPTION

The Society is appreciative of those members who have paid their 1998/99 subscriptions. May we remind those who have not yet paid that subscriptions were due on 1 November 1998. Prompt payment ensures continuity of publications and avoids the need for time-consuming reminders. The Society reserves the right to discontinue the supply of periodicals and the Newsletter to members whose subscription remains unpaid by 31 January 1999. The methods of payment are either by a sterling cheque drawn on a UK bank; a US\$ cheque drawn on a US bank, direct debit, credit card, Eurocheque quoting your card number on the reverse or by Giro. If you have misplaced your renewal of subscription form, contact the LMS office, e-mail: lms@lms.ac.uk: tel: 0171 637 3686: fax: 0171 323 3655.

IFIP TC7 CONFERENCE

The 19th IFIP TC7 Conference on System Modelling and Optimization will be held in Cambridge from 12th to 16th July 1999. It will address the construction and application of mathematical models in many fields. Therefore the conference topics include control theory, dynamical systems, stochastic and discrete optimization, and algorithms for linear and nonlinear programming. Members of the LMS who wish to participate will be very welcome. Papers may be submitted until 31 January 1999. Further details and registration forms are available by e-mail from tc7con@damtp.cam.ac.uk. The organisers are very grateful for financial support from the London Mathematical Society.

The Best in Mathematics from Oxford University Press

Homogenization of Multiple Integrals

Andrea Braides and Anneliese Defranceschi

This book provides an introduction to the mathematical theory of the homogenization of nonlinear integral functionals, with particular reference to general results that do not rely on assumptions of smoothness or convexity.

Oxford Lecture Series in Mathematics and its Applications No. 12 304 pp, November 1998 0-19-850246-X

£40.00

Multiple Intestals

An Introduction to Semi-linear Evolution Equations

Thierry Cazenave and Alain Haraux

Cazenave and Haraux present the typical basic properties of solutions to semi-linear evolutionary partial differential equations, with special emphasis on global properties. The main objective of the authors is to provide a didactic approach to the subject, and it will thus appeal to graduate students in mathematical analysis as well as professional applied mathematicians.

Oxford Lecture Series in Mathematics and its Applications No. 13

208 pp, illus, October 1998 0-19-850277-X

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This book combines the work of a distinguished team of authors, all renowned mathematicians and expositors, and provides a modern introduction to the calculus of variations. By focusing on the onedimensional case it remains relatively free of technicalities, and provides a useful overview of the theory at a level suitable for graduate students.

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From Single Cells to Continua: Micro-scale to Macro-scale Modelling

A Workshop to be held at ICMS, Edinburgh 22-25 March 1999

Principal Organiser: Jonathan Sherratt (Heriot-Watt University)

Scientific Committee: Mark Chaplain (Dundee), Philip Maini (Oxford) and Hans Othmer (Utah)

Biological cells are discrete objects, and yet most mathematical models for cell populations neglect this discreteness, and use continuum averages. Although such models have been highly successful at predicting a wide range of biological and medical phenomena, it is increasingly clear that in a number of biomedical contexts, discrete cellularity plays a crucial role.

This four-day interdisciplinary workshop will bring together mathematicians and biologists to examine the various discrete modelling approaches now in use in cell biology, and their connection with more established continuum frameworks. The workshop will highlight the wide range of biological phenomena that depend on cellularity, and will identify the key challenges for theoreticians in this exciting new area of mathematical biology.

Each of the four days will be organised around a specific area of application, namely: Bacterial Motion and Biofilms, Aggregation in Cellular Slime Moulds, Developmental Dynamics, and Applications of Micro-Scale Modelling.

Speakers will include:

- Steve Baigent, University College London
- Mark Chaplain, University of Dundee
- John Dallon, Heriot-Watt University
- Robert Dillon, Washington State University
- Thomas Hoefer, Humboldt University Berlin
- Pauline Hogeweg, Utrecht University
- Hilary Lappin-Scott, Exeter University
- Julian Lewis, Vertebrate Development Laboratory, ICRF
- Philip Maini, Mathematical Institute, Oxford
- Hans Othmer, University of Utah
- David Rand, University of Warwick
- Jem Rashbass, Cambridge University Clinical School
- Pej Rohani, University of Cambridge
- Angela Stevens, Universität Heidelberg
- Anne Warner, University College London
- Cornelis Weijer, University of Dundee

Further information, including abstracts of the main talks, will be available via the ICMS web pages (http://www.ma.hw.ac.uk/icms/1999/index.html). Places on the workshop are limited and anyone interested in attending should contact Jonathan Sherratt (jas@ma.hw.ac.uk).

LONDON MATHEMATICAL SOCIETY

Spitalfields Day

Friday 5 March 1999

Isaac Newton Institute for Mathematical Sciences Seminar Room 1, 20 Clarkson Road, Cambridge

Geometric Measure Theory

- 11.00 Coffee & Registration
- 11.30 Pertti Mattila (Jyvaskyla) Rectifiability, singular integrals and analytic capacity
- 12.30 Lunch at Wolfson Court (adjacent to the Institute)
- 14.00 Guy David (Orsay) Quasiminimal sets and rectifiability
- 15.00 Jenny Harrison (Berkeley) Green's theorem for bounded currents
- 16.00 Tea
- 16.30 David Preiss (University College London) Null sets and Lipschitz mappings
- 17.30 Wine Reception at the Newton Institute

These lectures are linked to the Isaac Newton Institute Programme on Mathematics and Applications of Fractals

Anyone interested is welcome to attend. Lunch will be provided at a nominal charge; please let Tracey Andrew at the Institute know by 19 February 1999 if you intend to come, to help us plan for lunch: telephone: (01223) 335984; fax: (01223) 330508; e-mail: t.andrew@newton.cam.ac.uk. There are limited funds available to assist research students to attend: please apply by 19 February 1999 to Tracey Andrew at the Institute. Scientific enquiries may be addressed to Professor Kenneth Falconer, Isaac Newton Institute, 20 Clarkson Road, Cambridge CB3 0EH (e-mail: k.falconer @newton.cam.ac.uk).



JESUS COLLEGE XFORD

Tutorial Fellowship in Pure Mathematics

Applications are invited for a Tutorial Fellowship in Pure Mathematics from 1st October 1999. The Fellowship will be held in conjunction with a Titular University Lecturership (CUF), for which no separate application is required.

The successful applicant will be expected to undertake research and to make a major contribution to teaching Pure Mathematics to undergraduates at Jesus College within the context of Mathematics Moderations and the Honour School of Mathematics and Joint Schools.

The combined college and university salary will be according to age on a scale up to £37,113 per annum. Additional college allowances are available. Further particulars (containing details of the duties and full range of emoluments and allowances) may be obtained from the Principal, Jesus College, Oxford OX1 3DW.

Letters of application, together with a curriculum vitae and the names of three referees, should reach The Principal, Jesus College, Oxford OX1 3DW, not later than 21st January 1999. Referees should be asked to write directly to the Principal by the same date.

The College is an Equal Opportunities Employer.

INTERNATIONAL CENTRE FOR MATHEMATICAL SCIENCES 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, robotics, and quantum computation. Proposals of an interdisciplinary nature are particularly encouraged.

Preliminary proposals should be submitted by **12 February 1999**. Proposals should be no longer than the equivalent of two sides of A4 paper and should include the following:

- A discussion of the objectives of the meeting
- Brief background information on the area of mathematics
- The proposed scientific organising committee
- A list of other key participants
- Other information such as: the probable size and duration of the meeting; its location; sources of funding, other than EPSRC.

Please send proposals to: Professor A.J. Macintyre FRS, Scientific Director, ICMS Proposal, 14 India Street, Edinburgh EH3 6EZ; e-mail: icms@maths.ed.ac.uk; tel: 0131 220 1777; fax: 0131 220 1053. The Scientific Director will solicit opinions on your submission. Should these prove positive he will contact you in order to discuss the enlargement of the proposal with a view to it being submitted for consideration to the ICMS Programme Committee, which meets in June. If you have any general enquiries, for example about ICMS or the procedures for submitting a proposal, please contact Mrs Tracey Dart, Executive Director, ICMS, e-mail: tracey@maths.ed. ac.uk.

LONDON MATHEMATICAL SOCIETY 1998-1999 COUNCIL

President	M.J. Taylor	UMIST	martin.taylor@umist.ac.uk
Vice-President	K.A. Brown	Glasgow	kab@maths.gla.ac.uk
Vice-President	J.W. Bruce	Liverpool	jwbruce@liv.ac.uk
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Publications Secretary	E.C. Lance	Leeds	e.c.lance@leeds.ac.uk
Librarian	N.L. Biggs	LSE	n.l.biggs@lse.ac.uk
Members-at-Large	R.J. Archbold	Aberdeen	r.archbold@maths.abdn.ac.uk
and the second second	A.G. Chetwynd	Lancaster	a.chetwynd@lancaster.ac.uk
	E.B. Davies	King's College, London	e.brian.davies@kcl.ac.uk
	C.A. Hobbs	Oxford Brookes	cahobbs@brookes.ac.uk
	M.A.H. MacCallum	Queen Mary & Westfield	m.a.h.maccallum@qmw.ac.uk
	U. Martin	St Andrews	um@dcs.st-and.ac.uk
	E.G. Rees	Edinburgh	elmer@maths.ed.ac.uk
	S.E. Rees	Newcastle	sarah.rees@newcastle.ac.uk
	P.T. Saunders	King's, London	peter.saunders@kcl.ac.uk
	A.J. Scholl	Durham	a.j.scholl@durham.ac.uk
	I.A. Stewart	Leicester	i.a.stewart@mcs.le.ac.uk
	J.F. Toland	Bath	jft@maths.bath.ac.uk

1998 LMS POPULAR LECTURE VIDEOS

The videos of the 1998 Popular Lectures are now available. There are two changes from before. First, this year we recorded the actual lectures given in London, not studio versions. We're happy with the results, and we plan to continue live recording in the future. Second, this year's videos are for sale, not for hire. They cost £5 each, including postage and packing, from the LMS at De Morgan House. The two titles now available are • Marrying, Voting, Choosing (Tom Körner)

Mathematics cannot tell us how to marry, vote or choose, but it can cast an interesting light on these problems.

• Giraffe Blood Flow and Pattern-forming Bacteria (Tim Pedley) Why is a giraffe's heart so huge, and why do swimming bacteria form patterns? Biological fluid dynamics has the answers.



Leicester Jniversity

Department of Mathematics and Computer Science

POSTS IN MATHEMATICS AND COMPUTER SCIENCE

The University is embarking on a major exercise to consolidate and extend the work of the Department of Mathematics and Computer Science. The four positions currently offered are part of a planned expansion of the Department by more than 20% over the next two years. The immediate objective is an improvement in the RAE ratings across all units of assessment in the Department in 2001, with the long-term aim to be one of the University's leading research departments.

CHAIR IN PURE MATHEMATICS AND CHAIR IN APPLIED MATHEMATICS

Applicants for both posts should have strong research records, and be able to provide academic leadership to the Mathematics group. Current research strengths include various aspects of algebra, algebraic topology and K-theoretic approaches to analysis (pure mathematics) and numerical/applied analysis (applied mathematics). In addition to these appointments, two Lectureships in Mathematics will subsequently be advertised, and each appointee should expect to have a major input in the filling of the relevant position.

Salary will be within the professorial range.

Further particulars may be obtained from the **Personnel Office (Professorial Appointments)**, **University of Leicester, University Road, Leicester LE1 7RH, UK.** Telephone + 44 (0) 116 252 2422, email pat2m@ admin.le.ac.uk, fax + 44 (0) 116 252 5140. UK candidates should submit thirteen copies of their application (overseas candidates may submit one copy).

(Available from 1 July 1999 or as soon as possible thereafter.)

TWO LECTURESHIPS IN COMPÚTER SCIENCE

Applicants should have a proven research record or have shown evidence of strong research potential. The successful applicant will be ambitious and able to develop their own research. There are currently three research groups within Computer Science: logic, algebra and complexity; semantics; the theory of distributed systems. However, applicants with research interests in any area of computer science are encouraged to apply.

Salary will be £16,655 to £21,815 pa.

Further particulars and application forms are available, by quoting reference A5242/LMS, from the Personnel Office (Academic Appointments), University of Leicester, University Road, Leicester LE1 7RH, UK. Telephone +44 (0) 116 252 2439.

(Available from 1 April 1999 or as soon as possible thereafter.)

Informal enquiries are welcome and should be addressed to **Professor Will Light** for the positions in Mathematics (**telephone +44** (0) **116 252 3917**, **email pwl@mcs.le.ac.uk**) and **Professor Iain Stewart** for the positions in Computer Science (**telephone +44** (0) **116 252 3885**, **email ias4@mcs.le.ac.uk**). The Departmental web pages are at www.mcs.le.ac.uk

Closing date for all applications is 1 February 1999.

Towards equal opportunities

PROGRAMME AND CONFERENCE FUND Society Grants for the Support of Mathematical Reseach

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. Grants are made under five main headings, which are described below.

In general any mathematician working in the UK is eligible for a grant, but if an 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.

Applications should be sent to the Executive Secretary at the Society's office (De Morgan House, 57-58 Russell Square, London WC1B 4HP). Applications cannot usually be considered between mid-June and mid-September. Queries regarding applications can be addressed to the Meetings and Membership Secretary, Dr N.M.J. Woodhouse (tel: 01865 277943, e-mail: nwoodh@maths.ox.ac.uk) or to the Executive Secretary, Dr D.J.H. Garling (tel: 01223 337978; e-mail: d.j.h.garling@dpmms.cam.ac.uk) who will be pleased to discuss proposals informally with potential applicants and give advice on the submission of an application.

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. 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. Brief academic and financial reports of the conference are expected. An application form, obtainable from the Society's Office (address above), or (as a LaTex file) from the electronic archive, sets out conditions under which grants are normally made and requests the information Programme Committee usually requires when considering an application. The Society wishes to support research students, and applications should include details of the extent to which research students will be involved in the conference. Potential applicants should note that the Society is reluctant to award grants to conferences which clash with the British Mathematical Colloquium. Applications are considered three times a year and the deadlines for submission are 31st January, 31st May and 31st August. The current upper limit for grants is £4000, 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 total grant, less the support for research students, shall not normally exceed £3000.

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. The LMS contribution under this scheme is principally for the visitor's travelling expenses to and from the UK up to a current upper limit of £1000. Host institutions are expected to share travel and subsistence expenses within the UK, and to meet any residual cost. The application should be made in a letter, usually of no more than two A4 sides, giving a brief summary of the following information:

- the academic standing of the proposed visitor;
- the justification for the visit;
- the visitor's itinerary in the UK;
- an estimated fare at advance purchase or other advantageous rate.

There are no deadlines and straightforward applications can be processed quickly if necessary, although applications cannot usually be considered between mid-June and mid-September. However, about six to eight weeks notice is desirable to allow for publicity in the *Newsletter*. All arrangements for a visit under this scheme are the responsibility of the applicant.

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 meetings - several per year - are a realistic possibility.

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. 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. Applications should be made by a nominated 'grant-holder', which 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.) The grant will cover a twelve month period and the Society will expect to receive a report, both academic and financial. Applications for the renewal of a grant will be considered along with fresh applications. The maximum grant awarded is currently £1000; for this, at least four meetings a year should be held.

An application should take the form of a letter giving details of:

- the proposed activities;
- a list of participants in the group;
- a provisional budget indicating how any grant awarded is likely to be used.

While a reasonable level of detail is desirable, it should not be excessive and altogether the documentation expected might run to at most three A4 pages. Applications are considered three times a year, in February, June and September and the respective deadlines for submission are 31 January, 31 May and 31 August. Grants are expected to run from 1 March or 1 October.

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.

Applications should be in the form of a letter setting out the proposed academic case for the visit, including a detailed description of a specific project, the standing of the collaborator and an estimate of costs. Whilst a reasonable level of detail is desirable, an application should not be excessively long, and the documentation should run to at most three A4 pages. 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.

Grants will awarded three times annually, in September, February and June, with

respective deadlines for applications of 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 receive 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 £50 a day for accommodation and subsistence, up to a maximum of £1400, and up to £500 for travel. For visits from Britain, the maximum grant is £1200. Success of an application will depend mainly on the likelihood of potential benefit to mathematics in the country concerned.

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. The application should be made in a letter, usually of no more than two A4 sides, giving a brief summary of the following information:

- the academic justification for the visit;
- the standing of the visitor (if from the fSU to the UK);
- the proposed itinerary;
- an estimate of travel and 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, in the case of visits to the UK, an announcement of the visit in the Society's *Newsletter*.

All arrangements for a visit under this scheme are the responsibility of the applicant.

Grants awarded since June 1998:

Conference	Applicant	Grant
Topic	D. Sloan	£390.00
Scottish Computational Mathematics Symposium 1998	C.J. Budd	£2,500.00
Set Theory, Analysis and their Neighbours	C. Morgan & M. Dzamonja	£400.00
On Growth and Form: Spatio-Temporal Patterning in Biology One-day Function Theory Meeting	M.A.J. Chaplain P.J. Rippon & G.M. Stallard	£2,500.00 £740.00
Travelling Fronts in Mathematical Biology	T.J. Bridges	£450.00
51st British Mathematical Colloquium	I.J. Leary	£6,400.00
Postgraduate Conference in Combinatorics and Group Theory	A.G.B. Lauder	£1,455.00
Workshop on Proof Theory	S.S. Wainer & M. Rathjen	£1,750.00
Research Students' Conference in Probability & Statistics 1999	M. Harkness	£2,500.00
14th British Topology Meeting	F. Clarke	£2,000.00
International Conference on Near-rings and Near-fields	J.D.P. Meldrum	£2,500.00
17th British Combinatorial Conference	J. Sheehan	£1,900.00
One-day Combinatorics Meeting	A.D. Scott	£410.00

Scheme 2 Applicant	Visitor	Places to Visit		Grant
H. Logemann A.S. Fokas	R. Rebarber S. Brenner &	Exeter, Bath & Lee	eds	£500.00
Maria Jan Dana	L.Y. Sung	Imperial, Warwick	& Loughborough	£750.00
M. van den Berg M.R. Bridson	D. Allcock	Southampton, Ox	ford & Edinburgh	£350.00
G.V. Wood	G. Willis	Cambridge & Swa	nsea	£850.00
C. Kearton	A. Pazhitnov	Durham, Warwick	x & Edinburgh	£250.00
Scheme 3	Annon eda montal			C
Applicant	Institution	lopic		Grant
I.M. James	Oxford	History of Mather	matics	£500.00
C-H. Lai	Greenwich	Dense Complex Li	inear Systems	£300.00
N. Stephens	Goldsmiths' College	Computational N	umber Theory	£/50.00
J. Brodzki	Exeter	K-I heory and Ana	alysis	£1,000.00
N. Snashall	Leicester	Representation Th	neory of Algebras	£1,000.00
D.E. Evans	Cardiff	Mathematical Phy	sics -	
		Physical Mathema	atics	£1,000.00
R. Mackay	Cambridge	The United Kingd	om Spatially	
		Extended Dynami	cs Organisation	£750.00
I. McGillivray	Bristol	South West Proba	bility Seminar	£1,000.00
G.K. Sankaran	Bath	Algebraic Geomet	ry Seminar	£1,000.00
H.D. Macpherson	Leeds	Algebraic Model 7	Theory	£1,000.00
R. Sharp	Manchester	Dynamical System	ns Meetings	£1,000.00
A.P. Fordy	Leeds	Classical and Qua	ntum Integrability	£1,000.00
C.R. Hajarnavis	Warwick	Noncommutative	rings	£1,000.00
A. Veselov	Loughborough	Mathematical Phy	vsics	£1,000.00
M.J. Nicol	UMIST	The Dynamics of	Skew-product Systems	£811.31
Scheme 4	ible level of detail is			<u> </u>
Applicant	Institution	Collaborator	Institution	Grant
T.H. Lenagan	Edinburgh	J.G. Torrecillas	Spain	£300.00
O.H. King	Newcastle	A. Cossidente	Potenza	£300.00
R.M. Thomas	Leicester	G. Rosenberger	Dortmund	£300.00
A.H. Osbaldestin	Loughborough	B.D. Mestel	Exeter	£300.00
N. Stephens	Goldsmiths' College	M.D. Atkinson	St Andrews	£300.00
B. Zhang	Coventry	X. Feng	lennessee	£186.00
R.J. Archbold	Aberdeen	E. Kaniuth	Paderborn	£290.00
A. Carbery	Edinburgh	J. Wright	UNSW	£300.00
D.A. Cruickshank	Glasgow	various	Cornell & SUNY,	£300.00
			Albany	
fSU Scheme	X7:-:	Inchibechion	Places to Visit	Crant
Applicant	VISICOT	Institution	LICI Improvial or Varia	C1 000 00
J.M. Anderson	V.Y.L. Elderman	MOSCOW Ct. Determine	South Papi	£1,000.00
L. Fradkin	V.S. Buldyrev	St retersburg	OMW	£1,000.00
I. Wolf	V. SOKOLOV	Landau	Hariat Watt of	£800.00
S.B. Kuksin	M.I. Vishik	MOSCOW	Edinburgh	2000.00

A.E. Zalesski	A. Baranov & I. Suprenko	Minsk	Minsk £	400.00
P McMullen	N.P. Dolbilin	Steklov	UCL & Birkbeck £1,	,000.00
M A I Chaplain	A. Polezhaev	Moscow	Dundee & Heriot-Watt £1,	,000.00
N.C. Llovd	V. Gaiko	Minsk	Aberystwyth £	150.00
I Strachan &	O. Mokhov	Steklov	Hull, Leeds &	750.00
N I Cutland			ICMS Edinburgh	
A P Veselov	E.D. Belokolos	Ukraine	ICMS Edinburgh, Heriot- £	2750.00
11.1. Vebelev			Watt & Loughborough	
A Fokas	I.A. Taimanov	Siberia	ICMS Edinburgh,	2750.00
11. 101(40			Heriot-Watt & Imperial	
FW Niihoff	D. Levkin	Ukraine	ICMS Edinburgh,	£750.00
1	2.2.)		Heriot-Watt, Leeds &	
			Loughborough	
M MacCallum	I Jezierski	Warsaw	QMW, Southampton £1	,850.00
Ivi. Iviac Salialli	,.,		& Oxford	

ISAAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES

Future Programme Announcements

The following programmes have been confirmed by the Scientific Steering and Management Committees for July 2000 onwards. Further information is available via WWW where indicated. Details of all Newton Institute programmes confirmed from 1999 onwards can be found at http://www.newton.cam.ac.uk/programs /future_progs.html

Free Boundary Problems in Industry 17 July - 4 August 2000 Organisers: N. Barton (Sydney), E.J. Hinch (Cambridge), and J.R. Ockendon (Oxford)

Quantized Vortex Dynamics and Superfluid Turbulence 7 August to 25 August 2000 Organisers: C.F. Barenghi (Newcastle), R.J. Donnelly (Oregon), W.F. Vinen (Birmingham)

Singularity Theory July to December 2000

Organisers: V.I. Arnold (Moscow and Paris IX), J.W. Bruce (Liverpool), D Siersma (Utrecht). Further details at http://www.newton.cam.ac.uk/programs/sgt.html

Geometry and Topology of Fluid Flows September to December 2000. Organisers: H. Aref (Urbana-Champaign), T. Kambe (Tokyo), R.B. Pelz (Rutgers), R.L. Ricca (UCL) Further details at http://www.newton.cam.ac.uk/programs/ gtf.html

Symmetric Functions and Macdonald Polynomials January to June 2001 Organisers: P. Hanlon (Michigan), I.G. MacDonald (QMW), A.O. Morris (Aberystwyth)

Integrable Systems July to December 2001 Organisers: J.C. Eilbeck (Heriot-Watt), A.V. Mikhailov (Leeds), P.M. Santini (Rome), V.E. Zakharov (Moscow)

From Individual to Collective Behaviour in Biological Systems Sept to Dec 2001 Organisers: H. Othmer (Utah), T.J. Pedley (Cambridge), B.D. Sleeman (Leeds)

Higher Dimensional Complex Geometry January to June 2002 Organisers: A.A. Corti (Cambridge), M. Gross (Warwick), M. Reid (Warwick)

POSTGRADUATE COURSE (AIO/OIO SCHOOL) MATHEMATICAL PHYSICS 1999

The Mathematical Physics course 1999 will take place 8-12 March 1999 in Conference Centre Jonkerbosch in Nijmegen. The school, part of the Dutch Research School of Theoretical Physics, is organized by N.P. Landsman (UvA) and R.H. Dijkgraaf (UvA) and intended for PhD students in the first two years of their appointment (as well as for advanced and exceptionally talented undergraduates) from Western Europe. The lectures will be pedagogical, and are meant to be comprehensible to theoretical physicists with a good mathematics background, as well as to mathematicians with some knowledge of physics.

Programme:

- Professor A. van Daele (KU Leuven) "Quantum Groups and C*-Algebras"
- Professor Dr R.H. Dijkgraaf (UvA) "The Mathematics of M-theory"
- Professor D. B. Fedosov (Univ. Potsdam) "Deformation Quantization and Index Theory"

The week will start on Monday with lunch and end on Friday around 4:00 pm. The costs will amount to 575 Dutch Guilders (which includes a double room for four nights and meals). There is a surcharge of 80 Guilders for a single room. Those who intend to participate should notify the Bureau of the Dutch Research School of Theoretical Physics, by letter or e-mail, before 1 February 1999, stating their name, e-mail and postal address and clearly indicating if they want a single room. Advance payment is required, for which you will receive an invoice from the bureau of the DRSTP, with instructions for payment. Costs for reservation will be charged for cancellations after 15 February 1999.

Please send your letter to: DRSTP (LOTN), attn. Ms B. Meijerman, Leuvenlaan 4, PO Box 80.195, NL-3508 TD Utrecht, The Netherlands or your e-mail to: b.c.meijerman@phys.uu.nl.

SÉMINAIRE DE MATHÉMATIQUES SUPÉRIEURES NATO Advanced Study Institute

A seminar on Integrable Systems: From Classical to Quantum will be held at the Université de Montréal from 26 July to 6 August 1999. The Seminar is held with the support of NATO, and the Université de Montréal. The principal speakers are D. Bernard (Service de Physique Théorique de Saclay), B. Dubrovin (SISSA Trieste), J. Harnad (Concordia & Montréal), A. Its (Indiana-Purdue Indianapolis), V. Korepin (SUNY, Stony Brook), A. Leclair (Cornell), T. Miwa (RIMS, Kyoto) A. Morozov (ITEP, Moscow), A. Polychronakos (Ioannina & Uppsala), N. Reshetikhin (California at Berkeley), S. Ruijsenaars (CWI Amsterdam), E. Sklyanin (St. Petersburg & ÉNS Lyon), C.A. Tracy (California at Davis). P. Winternitz (Montréal).

Partial financial assistance is available. Priority will be given to graduate students. Requests for participation or financial assistance must be received before **12th March 1999.** Further information is available from G. David, Co-ordinator SMS, Departement de Mathématiques et de Statistique, Université de Montréal, CP 6128-Centre-ville, Montréal (Qc), Canada H3C 3J7, fax (514) 343-5700, http:// www.dms.umontreal.ca/activite/ sms.

NORTH BRITISH FUNCTIONAL ANALYSIS SEMINAR

A meeting of the North British Functional Analysis Seminar will be held at the Department of Mathematics at Merz Court of the University of Newcastleupon-Tyne, from 2.30 pm until 5.00 pm on Monday 8th March 1999. The speaker will be Professor W. Arendt of Ulm, who will lecture on "Asymptotic theory of one-parameter operator semigroups". For further information, please contact Dr G. Blower, Lancaster University (e-mail: g.blower@ lancaster.ac.uk).

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DIARY

The diary lists Society meetings and other events publicized in the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter number.

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15 Edinburgh Mathematical Society Meeting, Edinburgh (263)
25-27 Phase-Transition Phenomena in Combinatorial Problems EPSRC/LMS MathFit Workshop, Liverpool (261)

FEBRUARY 1999

12 Edinburgh Mathematical Society Meeting, Edinburgh (263)12-13 Two-day LMS Meeting, Proof and Computation, University of Leeds

MARCH 1999

12 Edinburgh Mathematical Society Meeting, Abertay (263)
29 - 1 Apr British Mathematical Colloquium, Southampton University (265)

APRIL 1999

6-9 LMS Invited Lectures - Professor A. Mielke, University of Bath (262)
6-10 Homological Algebra, EPSRC-LMS Short Course (266)
6-15 Analysis on Lie Groups and Partial Differential Equations ICMS Instructional Conference, Edinburgh (265)
12-15 British Applied Mathematics Colloquium 1999, Bath University (266)

MAY 1999

7 Edinburgh Mathematical Society Meeting, Stirling (263) 14-16 Belgian Mathematical Society and London Mathematical Society Joint Meeting, Université de Bruxelles (260)(261)

JUNE 1999

4 Edinburgh Mathematical Society Meeting, Aberdeen (263)18 LMS Meeting, Hardy Lecture, London

JULY 1999

5-9 International Congress of Industrial and Applied Mathematics (ICIAM 99), Edinburgh University (252)
12-16 British Combinatorial Conference, Kent University (254)
12-16 American Mathematical Society and Australian Mathematical Society Joint Meeting, University of Melbourne (260)

AUGUST 1999

22-29 Hall Algebras Summer School, Hesselberg, Germany (263)

APRIL 2000

17-20 British Mathematical Colloquium, Leeds University

JULY 2000

3-7 Functional Analysis Meeting, Technical University, Valencia, Spain (265)
10 - 14 3rd European Congress of

Mathematics, Barcelona, Spain

17-22 International Congress of

Mathematical Physics, Imperial College, London (257)

APRIL 2001

9-12 British Mathematical Colloquium, Glasgow University

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, by e-mail, fax or post to the LMS office (addresses below), to arrive before the first day of the month prior to publication.

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