

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 177

November 1990

FORTHCOMING SOCIETY MEETINGS

Friday 16 November 1990, Burlington House
Annual General Meeting
J.H. Coates, R.L. Taylor

Friday 18 January 1991, Burlington House

Friday 15 February 1991, Lancaster

Friday 15 March 1991, Burlington House

Friday, Saturday 17 - 18 May 1991, Oxford

Thursday 13 June 1991, Burlington House

Friday 18 October 1991, Burlington House

Friday 15 November 1991, Burlington House

THE 1991 HARDY LECTURER

The Council of the London Mathematical Society is pleased to announce that Professor H.B. Lawson has accepted its invitation to be the 1991 Hardy Lecturer. Blaine Lawson graduated from Brown University in 1964 and was awarded the Ph.D. degree at Stanford University in 1968. He was affiliated to the University of California at Berkeley from 1968 to 1978 and has been Professor of Mathematics at the State University of New York at Stony Brook since 1978. He has held numerous Visiting Professorships throughout the world.

Professor Lawson will be visiting the U.K. for four weeks from 20th May 1991 and will give about twelve lectures including the 1991 Hardy Lecture to the Society on Thursday 13th June. He would be prepared to lecture on the following topics:

Symmetric Products, Algebraic Cycles, and Some New Invariants in Algebraic Geometry;

A Theory of Algebraic Cocycles;

Positive Scalar Curvature, Spin Cobordism and

the \hat{A} -invariant;

Algebraic Cycles, Bott Periodicity, and the Chern Characteristic Map;

Singular Connections and Characteristic Residues;

A Relative Index Theorem with Applications to Global Geometry;

Manifolds of Positive Curvature.

Institutions that wish to invite Professor Lawson to give a lecture should write to the Meetings and Membership Secretary, A.R. Pears, Department of Mathematics, King's College London, Strand, London WC2R 2LS by 31st December 1990. First and second choices of lecture topic should be specified. It is expected that many more invitations will be received than can be accepted and neighbouring institutions are strongly encouraged to submit joint invitations. The itinerary and lecture title at each venue will be decided by the Society's Programme Committee in consultation with Professor Lawson and the host institutions.

VISIT OF DR A. MARTIN

Dr André Martin who is a permanent member of the Theory Division at C.E.R.N., Geneva will be visiting the United Kingdom during the first week of December. He will be Lecturing on "Lower Bounds on N-body Hamiltonians and Physical Applications" in Cambridge on 4th December, at Birkbeck College, London 5th December and at the University of Kent on 7th December.

For further details contact Dr Alan Common, Mathematics Institute, University of Kent, Canterbury CT2 7NF. Telephone 0227-764000 ext. 3665, e-mail akc@uk.ac.uk.

Dr Martin's visit is being supported by a Scheme 2 travel grant from the London Mathematical Society.

INTERNATIONAL CENTRE FOR MATHEMATICAL SCIENCES IN EDINBURGH

The July 1989 issue of the Newsletter (No163) included a report on the general principles laid down by Council at its 1989 Retreat for giving London Mathematical Society support to Mathematical Sciences Research Institutes in the United Kingdom. In the same report, a grant was announced to the Isaac Newton Institute in Cambridge under these guidelines. Subsequently, Council has considered a detailed request for support from the proposed International Centre for Mathematical Sciences (ICMS) in Edinburgh.

The plans for the ICMS are now quite advanced: the proposal is supported financially by both the University of Edinburgh and Heriot-Watt University (and also by Standard Life Assurance Company and the Edinburgh Mathematical Society), and, at the time of writing, a formal request is being made to the two Edinburgh universities to establish the ICMS via a partnership agreement. It is intended to establish a new Steering Committee with a very high profile in the academic and business worlds. Scientific leadership will be provided by a Director (who will be a distinguished and active research mathematician) and a Scientific Advisory Board of outstanding mathematicians. The scientific programme will be coordinated by a Programme Committee. The ICMS will attempt to provide opportunities for innovative programmes and research activities in the mathematical sciences which cannot be carried out as effectively in the existing research environment, and will encourage important emerging subjects.

I am happy to report that, after much discussion, Council has decided that the Society should offer

to contribute a sum of £40,000 towards the cost of the ICMS until the end of 1996 to be used as follows. A sum of £15,000 can be used by the Steering Committee as it best sees fit. The remaining £25,000 is to be used by the Programme Committee of the ICMS, at the rate of £5,000 per calendar year for five years (beginning in 1992), to enable mathematicians in British universities and polytechnics to go to Edinburgh to participate in the scientific programme at the ICMS. The conditions of this support follow the guidelines in the July 1989 report of Council, and are as follows:

(i) the London Mathematical Society shall have the right to nominate two representatives to the Programme Committee of the ICMS;

(ii) the majority of the members of the Programme Committee of the ICMS shall be from outside the Edinburgh mathematical community;

(iii) the London Mathematical Society shall have the right to nominate one representative to the Steering Committee of the ICMS;

(iv) mathematicians from British universities and polytechnics who are enabled to go to Edinburgh to participate in the scientific programme at the ICMS as a result of the London Mathematical Society grant shall be provided with adequate office facilities by the ICMS; and

(v) the Steering Committee for the ICMS shall report annually to the Council of the London Mathematical Society on how money from the Society's grant has been spent.

*J. H. Coates
President*

DISCRETE GROUPS AND GEOMETRY Preliminary Announcement

This year, Professor A.M. Macbeath retired from his Chair at the University of Pittsburgh and has returned to live in Scotland. To mark this occasion and to affirm the continuing vitality of the field of discrete groups in its connections with geometry, low-dimensional topology, analysis and number theory, it is planned to hold a two-day conference at the University of Birmingham on 10th and 11th January 1991, devoted to some of the recent developments in this area, concentrating on aspects relating to his work and that of his students and friends.

The provisional list of speakers includes: A.F. Beardon, J.H.H. Chalk, I.M. Chiswell, J. Eells, C.

Maclachlan, H.R. Morton, R.A. Rankin, D. Singerman, H. Zieschang. There will be an opportunity for additional short communications.

Accommodation will be arranged in a local hall of residence at a cost of about £17 per day for bed and breakfast. For further information, please contact Dr W.J. Harvey, either by mail at Mathematics Department, King's College London, Strand, London WC2R 2LS or by electronic mail via udah055@uk.ac.kcl.cc.oak.

All interested are welcome to attend. Financial support for the meeting has been provided by the London Mathematical Society's Conference Fund.

BOOKS FOR SALE

A large collection of 19th and 20th century Mathematics books are for sale (disjoint from the sale a year ago). If you would like to receive a list, write

Dr A.N. Pressley, 40 Millway Close, Upper Wolvercote, Oxford OX2 8BL. Telephone (0865) 515343, e-mail udah207@uk.ac.kcl.cc.oak.

LONDON MATHEMATICAL SOCIETY

**Annual General Meeting
Friday 16th November 1990 at 3.00 p.m.**

**R.L. Taylor (Cambridge)
will speak at 3.10 p.m. on**

Artin Characters and Automorphic Forms

**J.H. Coates, FRS (Cambridge)
will give his Presidential Address at 5.00 p.m. on**

Elliptic Curves with Complex Multiplication and Iwasawa Theory

Tea will be served at 4.10 p.m.

**The meeting is at the Geological Society,
Burlington House, Piccadilly, London W1**

**The Annual Dinner will be at the
Royal Air Force Club**

All interested are very welcome

PLEASE NOTE EARLY START AT 3.00 p.m.

NEW LIBRARY AGREEMENT

A new library agreement between the London Mathematical Society and University College London was signed on the first of October. The signatories were, for the College, The Provost, Dr D.H. Roberts and the Librarian, Mr F.J. Friend and for the Society, the President, Professor J.H. Coates and the Librarian, Dr J.A. Erdos.

The combined holdings of the Society and the College form a valuable research collection and for a long time it has been felt that more could and should be done to make this accessible to members. In view of this, in October 1988 it was decided by Council to open negotiations with a view to making the Library more useful to the general membership. This new agreement is the result. In it, the stated aims of both parties include that they intend to develop and maintain the Library as a principal national resource in the field of mathematics and its related subjects for the use and benefit of the members of the College, of the Society and of the wider mathematical community in the United Kingdom and elsewhere.

There are many useful services now offered to members. As before all members of the Society shall have access to the reading rooms of the University College Library to consult the material available there. There are great improvements in the postal borrowing and Xeroxing services. University College have agreed that all articles requested before 11 a.m. will be despatched on the same day. The charge for this is currently 15p per page (the same as charged to University College staff for copies made by the Library). The

request will require a signed photocopy declaration form (which could be Faxed if need be). Perhaps the greatest convenience to members will be the fact that University College will henceforth pay the outward postage for books borrowed. Thus most members will be able to request a book by letter or e-mail and return it through their departmental post without the nuisance of bills to pay. Note that the Library's LIBERTAS catalogue is available through JANET.

Members wishing to use the Library should register. Unregistered members will not be refused services but having an LMS Library Card will make things run more smoothly. To register, simply write to the Librarian of University College, enclosing a passport-size photograph of yourself and requesting an LMS Library Card. If, as a new member, your name is not in the current membership list you should include the appropriate letter provided by the Administrator. If you have no intention of ever using the Library in person, you may omit the photograph. With your LMS Library Card, you will be sent an information sheet and a copy of the photocopy declaration form. Details of the services and how to use them will also be publicised in future issues of the Newsletter.

In view of the ever-shrinking library resources in many of our Universities, the facilities offered by the LMS should be one of the substantial benefits of membership. Members with non-member colleagues who may find these services useful should encourage them to join the Society.

USEFUL INFORMATION FOR LMS LIBRARY USERS

Address : The Library, University College London, Gower Street, London WC1E 6BT.

Science Issue desk : (071) 387 7050 Extension : 2616.

Electronic mail for book loan requests:
lmslib@uk.ac.ucl.

Assistant Librarian in charge of LMS matters:
Mrs Julia Munro, telephone (071) 387 7050 extension 2638; fax: (071) 380 7373; e-mail: lmsinf@uk.ac.ucl.

Catalogue access

Via **Janet** : enter "LIBRARY" in response to user-name.

Via **Mnemonic** : call UCL.LIB (if mnemonic is set up)

Via **X25 address** : call 000005112800

LMS Librarian: Dr J.A. Erdos, Department of Mathematics, King's College, Strand, London WC2R 2LS. Telephone : (071) 873 2225 (direct line); (071) 836 5454 (switchboard); e-mail j.erdos@uk.ac.kcl.cc.oak.

ANNUAL DINNER

The 1990 Annual Dinner will be held after the Annual General Meeting on Friday 16th November at 6.30 p.m. for 7.00 p.m. at the Royal Air Force Club, 128 Piccadilly, London W1V 0PY. the cost is £18.50 per person and members may book places

for guests. The booking form enclosed with the October Newsletter, should be returned together with payment to the London Mathematical Society office by Wednesday 7th November.

UNIVERSITY OF ABERDEEN
Department of Mathematical Sciences
CHAIR OF APPLIED MATHEMATICS OR STATISTICS

Applications are invited for the position of Professor of Applied Mathematics or Statistics in the Department of Mathematical Sciences. The new Professor will be expected to develop teaching and research in an area of Applied Mathematics or Statistics. Applicants with a main research interest in Applied Analysis or Operational Research are encouraged but applications from specialists in other areas would be welcome.

Further particulars and application forms are available from the Personnel Office, University of Aberdeen, Regent Walk, Aberdeen AB9 1FX (tel: 0224 273500) to whom applications (2 copies) should be returned by **10th December 1990** quoting reference number JA/135.

BALLIOL COLLEGE
OXFORD
JUNIOR RESEARCH FELLOWSHIP
IN MATHEMATICS

The College proposes to elect a Junior Research Fellow in Mathematics for three years from 1st October 1991. The Fellow elected will be a Junior Research Fellow of the College, as defined in the College Statutes. He or she will be required to undertake research in pure or applied mathematics. The stipend is currently £9270 per annum with superannuation, with free meals and rooms (or a housing allowance).

Applications should be sent to the College Secretary, Balliol College, Oxford OX1 3JB, from whom further details and application forms may be obtained, not later than Friday **16th November 1990**.

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Volume 2: forthcoming November 1990
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For further information write to Sue Chadwick at the address below



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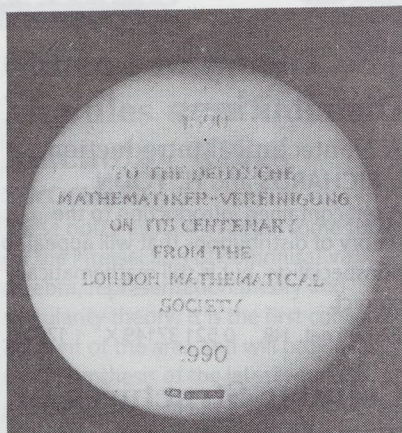
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CENTENARY OF THE DEUTSCHE MATHEMATIKER-VEREINIGUNG



The Deutsche Mathematiker-Vereinigung was founded on 18th September 1890 in Bremen, and this year the DMV celebrated its centenary at its annual meeting from 16th to 22nd September 1990, also in Bremen. To commemorate the centenary, the Council of the London Mathematical Society, on behalf of the Society, has presented a gold medal to the DMV.

The photographs give a good indication of the actual size of the medal, which is 44mm. in diameter. The front of the medal is just like that of the Society's De Morgan Medal, and shows the head of Augustus De Morgan, who was the first President of the London Mathematical Society in 1865. The reverse carries an inscription, namely 'To the Deutsche Mathematiker-Vereinigung on its centenary from the London Mathematical Society'; the medal carries a ribbon for wearing round the

neck, so that it can be worn by the President of the DMV on special occasions.

The medal was presented to the President of the DMV, Professor Dr F. Hirzebruch, by the Council and General Secretary of the London Mathematical Society, Professor R.Y. Sharp, at a special reception at the beginning of the centenary meeting of the DMV on Sunday 16th September 1990 in the Bremen Rathaus.

The meeting was, of course, taking place at an exciting time in Germany, because the reunification of Germany was only two weeks or so away. Many mathematicians from the DDR were actually present in Bremen, and this was the first meeting of the DMV for many years at which this had been possible; even one year earlier, it had been inconceivable that large numbers of East German mathematicians would be able to attend.

BRITISH MATHEMATICAL COLLOQUIUM Second Announcement

The 43rd British Mathematical Colloquium will be held at the University of Bath, the lectures taking place on Tuesday 26th, Wednesday 27th and Thursday 28th March 1991. The list of speakers is as follows: S.I. Adian (Steklov, Moscow), H. Brézis (Paris), I. Ekeland (Paris), A.M. Odlyzko (AT&T Bell Labs), G.R. Brightwell (LSE), C.J.B. Brookes (Cambridge), A.P. Carbery (Sussex), C.M. Goldie (QMW), F.C. Kirwan (Oxford), W. Ledermann (Sussex), A.J. Macintyre (Oxford), U. Martin (RHBNC), M.J. Micallef (Warwick), R.W.K. Odoni (Glasgow), D. Preiss (UCL), J.N. Ray

(Manchester), D.A. Salamon (Warwick), R.S. Ward (Durham).

Other planned activities include a civic reception, and a demonstration of the use of mathematical software on Sun workstations and other computers.

UK members will receive a booking form with the December Newsletter. Enquiries should be addressed to Dr G.R. Burton, School of Mathematical Sciences, University of Bath, Claverton Down, Bath BA2 7AY, telephone 0225 826218, e-mail grb@uk.ac.bath.maths.

VISIT OF PROFESSOR V.M. VALOV

Professor Vesko Valov of the Bulgarian Academy of Sciences will visit Britain between 31st October and 14th November 1990, under the agreement for scientific and cultural collaboration between the United Kingdom and Bulgaria. He will lecture at the Mathematical Institute, Oxford on 5th November, 'Linear topological classifications of

certain function spaces' and 12th November, 'Absolute extensors for 0-dimensional spaces'.

Mathematicians requiring further details of the visit are asked to contact Peter Collins, St. Edmund Hall, Oxford OX1 4AR. Telephone 0865-279014.

CANADIAN MATHEMATICAL SOCIETY WINTER MEETING

The Winter meeting of the Canadian Mathematical Society will be held at the University of Waterloo from 9th to 11th December 1990. The principal speakers will be A. Gleason (Harvard), P. Hanlon (Michigan), N. Kopell (Boston), S. Lichterbaum (Cornell), S. Semmes (Rice) and D. Voiculescu (Berkeley). The Coxeter-James Lecture will be given by N. Ghoussoub (U.B.C.).

For further information about the meeting write to C. Riehm, Chairman of Scientific Committee, Department of Mathematics and Statistics, McMaster University, Hamilton, Ontario, Canada L8S 4L8. Telephone (416) 525 9140 ext 4315; e-mail: riehmc@mcmaster.ca.

AUSTRALIAN MATHEMATICAL SOCIETY ANNUAL CONFERENCE

The 35th Annual Conference of the Australian Mathematical Society will be held in Melbourne, Victoria, Australia from 8th to 12th July 1991. For further information write to J.H. Rubinstein,

Department of Mathematics, University of Melbourne, Parkville, Victoria 3052, Australia. E-mail: rubin@mundoe.maths.mu.oz.au.

AUSTRALIAN MATHEMATICAL SOCIETY RECIPROCAL MEMBERSHIP

Members of associations having reciprocal membership with the Australian Mathematical Society are invited to apply for membership to the Australian Mathematical Society. The subscription is \$A27.50 which includes free copies of the Gazette (6 copies per annum) and copies of Journal Series A - Pure Mathematics and Statistics, Journal Series B - Applied Mathe-

matics, Bulletin and the Lecture Series at members' rates. For 1990/91, the journals' costs are \$A25, \$A18 and \$A22 respectively.

Apply for membership to Dr B.D. Jones, Treasurer, Australian Mathematical Society, Department of Mathematics, University of Queensland, Queensland 4072, Australia.

COMPUTING AND INFORMATION CONFERENCE

An International Conference on Computing and Information will be held in Ottawa, Ontario, Canada from 27th to 29th May 1991. For further information write to Frank Fiala, School of

Computer Science, Carleton University, Ottawa, Canada K1S 5B6. E-mail: icci@scs.carleton.ca or fax: (613) 788 4334.

FIXED POINT THEORY AND APPLICATIONS

The Second International Conference on Fixed Point Theory and Applications is to be held from 9th to 14th June, 1991 at Dalhousie University, Halifax, Nova Scotia, Canada. Abstracts of contributed papers (15 minutes) should be received by the organizers by 15th March, 1991.

For further information contact: Fixed Point Theory Conference (1991), Department of Mathematics, Statistics and Computer Science, Dalhousie University, Halifax, N.S., Canada B3H 3J5.

SINGAPORE NUMBER THEORY WORKSHOP

The Singapore Number Theory Workshop will be held at the National University of Singapore from 7th to 14th May 1991. It is intended to be an instructional workshop and the lectures will be addressed to non-experts. There will be three speakers each giving six one-hour lectures. The speakers and their topics are: Benedict H. Gross (Harvard University) *Elliptic Curves and Modular Forms*, Wolfgang H. Schmidt (University of

Colorado) *Diophantine Equations* and Jean-Pierre Serre (College de France) *Sieves*.

For further information write to S.L. Ma, Secretary, Singapore Number Theory Workshop, Department of Mathematics, National University of Singapore, Kent Ridge, Singapore 0511, Republic of Singapore. E-mail: matmas1@nusvm.bitnet.

CANADIAN NUMBER THEORY ASSOCIATION CONFERENCE

The third conference of the Canadian Number Theory Association will be held at Queen's University, Kingston, from 18th to 24th August 1991. The conference will be partially dedicated to Paulo Ribenboim on the occasion of his retirement from Queen's University in 1993. The area of emphasis of the conference will be Analytic Number Theory,

Arithmetical Algebraic Geometry and Diophantine Approximation.

For further information, contact Noriko Yui, Department of Mathematics and Statistics, Queen's University, Kingston, Ontario, Canada K7L 3N6. Telephone (613) 545-2421; e-mail: yuin@qucdn.bitnet.

RECENT SERC AWARDS

Visiting Fellowships

Bishop, S.R., University College London. S.W. Shaw, U.S.A. *Chaos and nonlinear dynamics of impacting and other mechanical systems.*

Brenner, S., Liverpool. I. Assem, Canada. *Unfoldings of algebras.*

Dales, H.G., Leeds. A.J.A. Helemskii, U.S.S.R. *Cohomology of Banach Algebras.*

Daniels, P.G., City. M. Weinstein, Israel. *Stability of convection in a vertical slot.*

Donnelly, P.J., Queen Mary & Westfield College. T.G. Kurtz, U.S.A. *Genealogical structures of the Fleming-Viot measure valued diffusion.*

Evans, D.E., Swansea. T. Hamachi, Japan. *Operator algebras and applications.*

Graham, I.G., Bath. G.A. Chandler, Australia. *Numerical analysis of boundary integral methods.*

Howie, J., Edinburgh. S.D. Brodskii, U.S.S.R. *Subgroup properties of one-relator products of groups.*

Iserles, A., Cambridge. H.B. Keller, U.S.A. *Non-linear numerical stability and bifurcation theory.*

Jackson, W., Goldsmith's College London. H. Li, China. *Hamilton cycles in regular graphs.*

James, I.M., Oxford. D.M. Davies, U.S.A. *Homotopy theory.*

Leedham-Green, C.R., Queen Mary & Westfield College. A. Shalev, Israel. *The structure and representation theory of finite p-groups.*

Moffatt, H.K., Cambridge. C.C. Hegna, U.S.A. *Structure, stability and singularities of complex magnetostatic equilibria and analogous Euler flows.*

Morton, K.W., Oxford. H.O. Kreiss, U.S.A. *Numerical modelling of Navier Stokes equations.*

Papamichael, N., Brunel. E.B. Saff, U.S.A. *Approximation theory problems in numerical conformal mapping.*

Parker, D.F., Edinburgh. J.K. Hunter, U.S.A. *A 'Direct' analysis of nonlinear surface waves.*

Parker, D.F., Edinburgh. V.V. Krylov, U.S.S.R. *Non-linear surface and wedge waves.*

Pym, J.S., Sheffield. D. Helmer, Bahrain. *Functions continuous on small sets and compactifications.*

Roeckner, M.G., Edinburgh. T-Sh. Zhang, China. *Dirichlet forms on infinite dimensional spaces.*

Smith, R.L., Surrey. I. Weissman, Israel. *Estimating the extremal index.*

Wathen, A.H., Bristol. J.L. Barlow, U.S.A. *Numerical analysis of eigen-value and least squares.*

Research Grants

Higgins, P.J., Durham. *Probabilistic methods in combinatorics. L.M.S. Durham Research Symposium.*

Jones, J.D.S., Warwick. *Four year rolling grant.*

Wassermann, A.J., Oxford. *Symposium on mathematical aspects of qft.*

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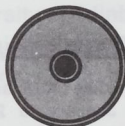


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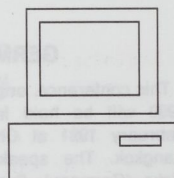
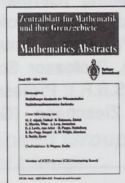
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BRITISH APPLIED MATHEMATICS COLLOQUIUM

The British Applied Mathematics Colloquium (incorporating the 33rd British Theoretical Mechanics Colloquium) will be held at the University of Oxford from Tuesday 9th to Friday 12th April 1991. It will be broader in scope than previous BTMCs, highlighting the interactions of mathematics with exciting new areas of application while still providing a forum for the traditional strengths of British applied mathematics.

The principal invited lecturers will be M.H.A. Davis (Imperial College), M.E. Glicksman (RPI, New York), W. Jäger (Heidelberg), P.D. Lax (New York) and F. Ursell (Manchester). The programme will include five minisymposia, on Mathematical Biology, Materials Science, Mathematics in Finance, Weather and Environment, and Non-linear Partial Differential Equations. Each mini-

symposium will consist of several invited lectures, which will review aspects of the subject in a manner suitable for non-specialists, together with shorter contributed lectures.

Other activities will include three receptions, exhibitions of mathematical books and an exhibition of mathematical software.

Thanks to grants from the London Mathematical Society and the Royal Society, a reduction in fees will be available to postgraduate students and UK postdoctoral academic staff who do not hold a permanent post.

Enquiries and application for registration forms should be addressed to Secretary, BAMC, Mathematical Institute, 24/29 St. Giles, Oxford OX1 3LB: telephone 0865 273525, electronic mail bamc@uk.ac.ox.vax.

1991 LMS INVITED LECTURES

The 1991 LMS Invited Lectures will be given by Professor J.E. Marsden of the University of California, Berkeley. The course of lectures will take place at the University of Southampton during the week 15th to 19th April 1991. A brief

synopsis and information on accommodation and meals are available from David Chillingworth, Department of Mathematics, University of Southampton, Southampton SO9 5NH. E-mail: drjc@uk.ac.soton.maths.

GERMAN-KOREAN-SEAMS CONFERENCE ON GEOMETRY

This conference, originally scheduled for March 1990 will be held from 21st January to 2nd February 1991 at Chulalongkorn University in Bangkok. The speakers are: Professor Menicke (Germany); Professor Helling (Germany); Professor B.H. Neumann (Australia); Professor W. Neumann (U.S.A.); Professor Fukaya (Japan); Professor Kim (Korea), Professor Song (Korea); Professor Krushkal (U.S.S.R.); Professor Hirsch (Germany); Professor Zieschang (Ger-

many); Professor Seppälä (Finland).

There is limited accommodation at Chulalongkorn University. Anyone interested in attending the conference, presenting a short lecture or receiving further information about accommodation should contact: Dr Sidney S. Mitchell, Department of Mathematics, Faculty of Science, Chulalongkorn University, Bangkok 1033, Thailand.

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Prospective authors are encouraged to submit proposals, preferably at an early stage to one of the series editors, or to contact: Martin Gilchrist, Oxford University Press, Walton Street, Oxford OX2 6DP, England.

BRITISH VISITORS FUND

The London Mathematical Society has given the Warwick MRC a grant of £3,000 for the year 1990/1 to help support British visitors who want to take part in the various mathematical activities which take place in Warwick. These funds are specifically for British visitors who would not get support from the SERC or their own university, for this particular visit to Warwick. We can offer support to people who fall into one of the following categories:

- (1) Mathematicians whose principal research area is not necessarily the main subject of the symposium or workshop but who would clearly benefit from taking part.
- (2) Young mathematicians who are developing their research interests but who have not yet really established themselves.
- (3) British graduate students.

In addition these funds can be used to help British mathematicians take part in two-day meetings, special lectures, and one-off events which occur from time to time.

Applications for these funds should be sent to the organiser of the event at Warwick. Expenditure must be approved by the Director of the MRC

and the representative of the London Mathematical Society on the Advisory Board of the MRC.

Programme of Activities at Warwick 1990/1

Symposium: *Groups, Rings, & Representations (January - July)* R.W. Carter, J.A. Green, C.R. Hajarnavis, T.O. Hawkes, D.F. Holt, S.E. Stonehewer;

Symposium Workshop: *General group theory and computation (18th - 22nd March)* R.W. Carter, et al;

Workshop: *Stochastic Analysis (8th - 12th April)* S. Jacka, K.D. Elworthy;

NSL Workshop: (Not yet finalised) *Chaos and coherence in extended systems (April)* D.A. Rand;

Symposium Workshop: *Group representations and algebraic groups (8th - 12th July)* R.W. Carter, et al;

Symposium Workshop: *Ring theory and applications (15th - 19th July)* R.W. Carter, et al;

Workshop: *Geometric variational problems (22nd July - 23rd August)* M. Micallef;

NSL Workshop: *IUTAM Interpretation of time series from nonlinear mechanical systems (26th - 30th August)* G. King, P. Drazin.

WARWICK SYMPOSIUM, 1991/2 GAUGE THEORY, GEOMETRY, AND TOPOLOGY

During 1991/92 the MRC at Warwick will run a symposium on Gauge Theory, Geometry, and Topology. The following themes, which are inter-related in various ways will play major roles in the symposium programme: 1. *Donaldson invariants of 4-manifolds and Floer homology of 3-manifolds*; 2. *The Jones-Witten theory of knot polynomials and invariants of 3-manifolds*; 3. *Gauge theory and algebraic geometry*; 4. *Geometry and topology of moduli spaces*; 5. *Analytical aspects of gauge theory*; 6. *The uses and interpretation of gauge theory in physics*.

The symposium will be led by N.J. Hitchin, J.D.S. Jones, J.H. Rawnsley, and D.A. Salamon.

In addition to a regular programme of seminars and visitors, there will be an introductory workshop in September 1991, a one week workshop during the period April 6th - 10th 1992, and a two week workshop during the period July 13th - July 24th 1992.

Further information, including preliminary lists of invited participants, can be obtained by writing to Ms E. Shiels, Business Manager, Mathematics Research Centre, University of Warwick, Coventry CV4 7AL.

The symposium is supported by the SERC. Further support for British visitors may be available from the London Mathematical Society Grant.

THE MATHEMATICS OF NONLINEAR SYSTEMS

As part of its Nonlinear Systems initiative, the United Kingdom Science and Engineering Research Council is sponsoring a major international conference to be held at the University of Bath on 1st to 5th July 1991. The aim is to review the importance of recent mathematical contributions to nonlinear science and to look forward to likely future developments.

The total number of conference places available

is limited and anyone wishing to attend should make enquiries as soon as possible, and in any case not later than **1st January 1991**, of Professor J.F. Toland, School of Mathematical Sciences, University of Bath, Claverton Down, Bath BA2 7AY, United Kingdom. Attendance will be by invitation only. Substantial financial support is available for U.K. participants to cover travel, accommodation and registration costs.



Godfrey Harold Hardy (1877-1947) was educated at Trinity College Cambridge, where he was fourth Wrangler in 1892 behind Hudson and Jeans, and Smith's Prizeman in 1901. There Love introduced him to pure mathematics, the medium being Jordan's *Cours d'analyse*. His first book *The integration of functions of a single variable*, (1905), helped bring that subject rigorously to an English audience; the first edition of *A course of pure mathematics* followed in 1908, the year he discovered his law in genetics. In 1910 he was made an FRS, his collaboration with J.E. Littlewood began in 1912, the years with Ramanujan ran from 1914 to 1919. The only person ever to be the Society's President twice, he was the Society's 32nd President from 1926-1928.

DIARY

The diary lists Society meetings and other events publicised in previous issues of the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter Number.

1990

NOVEMBER

- 16 LMS Meeting, London
- 16 Edinburgh Mathematical Society Meeting, Strathclyde (176)
- 17 Mobius Day Conference, Oxford (175)
- 19-22 Huygens' Principle, Theory and Applications, The Netherlands (170)
- 25-28 Mathematics and its Applications, Bahrain (172)

DECEMBER

- 7 Edinburgh Mathematical Society Meeting, Napier College Edinburgh (176)
- 17-20 Texas/ESO-CERN Symposium, Brighton (176)

1991

JANUARY

- 18 LMS Meeting, London
- 18 Edinburgh Mathematical Society Meeting, Heriot-Watt (176)

FEBRUARY

- 15 LMS Meeting, Lancaster
- 15 Edinburgh Mathematical Society Meeting, Edinburgh (176)

MARCH

- 15 LMS Meeting, London
- 15 Edinburgh Mathematical Society Meeting, Dundee (176)
- 25-29 British Mathematical Colloquium, Bath (176)

APRIL

- 23-26 Mathematical and Numerical Aspects of Wave Propagation Phenomena, France (172)

MAY

- 3 Edinburgh Mathematical Society Meeting, Stirling (176)
- 17-18 2-day LMS Meeting, Oxford

JUNE

- 1 Edinburgh Mathematical Society Meeting, St Andrews (176)
- 13 LMS Meeting, London

JULY

- 1-5 The Mathematics of Nonlinear Systems, Bath (168)(175)
- 7-12 Gregynog Symposium on Differential Equations, Gregynog (176)
- 8-12 British Combinatorial Conference, Surrey (165)
- 8-14 Radicals, Hungary (172)
- 13-16 British Congress of Mathematics Education, Loughborough (170)
- 22-26 Computational and Applied Mathematics Congress, Ireland (167)

SEPTEMBER

- 25-27 Numerical Methods in Fluid Mechanics, Switzerland (174)

OCTOBER

- 18 LMS Meeting, London

NOVEMBER

- 15 LMS Meeting, London

1992

JUNE

- 29-1 July Joint AMS/LMS Meeting, Cambridge (155)

AUGUST

- 16-23 International Congress on Mathematical Education, Canada (175)

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, to arrive before the first day of the month prior to publication. Telephone 071- 437 5377, Fax 071-439 4629, E-mail lms@uk.ac.kcl.cc.oak.
