# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 180

### February 1991

#### FORTHCOMING SOCIETY MEETINGS

Friday 15 February 1991, Lancaster A.G. O'Farrell, P.J. Rippon Friday 15 March 1991, Burlington House P.B. Kronheimer, G.B. Segal 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

#### **COUNCIL RETREAT 1991**

The Council of the Society will be holding an extended meeting at the Isle of Thorns over the weekend of 10th to 12th May 1991. Part of this meeting will be devoted to consideration of the long-term aims of the Society and means for their attainment.

The views of the members of the Society are an important part of the information which ought to be available to members of Council when they undertake this review of the Society's activities. If you have thoughts or opinions on directions in which the Society ought to be moving, suggestions of activities in which it ought to be involved, or comments on the role of the Society in the general context of mathematics in the UK or a wider community, please send your comments in writing to the President, Sir John Kingman, FRS, Senate House, Tyndall Avenue, Bristol BS8 1TH, preferably to reach him by 31st March 1991.

#### **1991 LMS INVITED LECTURES MECHANICS AND SYMMETRY**

The 1991 LMS Invited Lectures will be given by Professor J.E. Marsden of the University of California, Berkeley. The course of ten lectures on Mechanics and Symmetry will take place at the University of Southampton during the week 15th to 19th April 1991. Those wishing to reserve accommodation or to receive further details

The Society meeting on Friday the 15th of February 1991 will be held in the Physics Colloquium Room, University of Lancaster, commencing at 3.30 p.m. Buses from the City Centre stop in an underpass beneath Alexandra Square, which is the central square of the campus. The Physics Colloquium Room is located in a lecture theatre should contact Dr D.R.J. Chillingworth, Department of Mathematics, University of Southampton, Southampton SO9 5NH. Telephone (0703) 593677 (direct), e-mail drjc@uk.ac.soton.maths. Reservations for accommodation should be made no later than 15th February 1991.

#### SOCIETY MEETING IN LANCASTER

block about fifty yards north of Alexandra Square, along 'The Spine', a walkway which starts in the north-eastern corner of the square. Members should enter at the door marked 'Faraday Lecture Theatre', turn left at the top of a short flight of stairs and follow the signs for the Physics Colloquium Room.

#### ONE DAY COLLOQUIUM IN HONOUR OF DAME MARY CARTWRIGHT

A one day meeting will be held in Cambridge on the 20th of March 1991 to celebrate Dame Mary Cartwright's 90th birthday. There will be four one hour talks intended for a general mathematical audience. Professor James Lighthill and Dr Caroline Series will be two of the speakers. The meeting will be informal and everyone is welcome. (Just turn up at the Department of Pure Mathematics and Mathematical Statistics 16 Mill Lane Cambridge between 10.30am and 11am.) A more detailed notice will appear later.

#### LONDON MATHEMATICAL SOCIETY **PUBLICATIONS PERSONNEL-1991**

PUBLICATIONS SECRETARY D.A. Brannan (1986-). PUBLICATIONS COMMITTEE D.A. Brannan (Convener): I.N. Baker, G.D. James: W.D. Evans, J. Wiegold; J.D. S.Jones, J.H. Rawnsley; D.A. Rand; P. Holgate: E.C. Lance, H.G. Dales: PROCEEDINGS EDITORS W.D. Evans, J. Wiegold (1986-91); A.C. Sharp (Executive Editor, 1974-) I.N. Baker, G.D. James (1989-94); E. Philpott-Kent (Executive Editor, 1980-) J.D.S. Jones, J.H. Rawnsley (1990-95); A. Cadle (1990-) D.A. Rand (LMS), J.D. Gibbon (IOPPL) (1988-92)P.M. Cohn (1980-94), H.G. Dales (1988-92) T.J. Lyons, S.K. Donaldson, A.A. Kirillov, S.J. Patterson J.W.S. Cassels (1983-94) G.R. Allan, P.M. Cohn C.M. Series (1990-94). E.G. Rees, M.A. Ronan, P. Diaconis, M. Micallef. S.M. Oakes P. Holgate (1991-1996). J.V. Armitage (1973-92). E.J.F. Primrose (1980-91): D.L. Johnson (Deputy)(1989-94) L.W. Longdon (LMS)(1973-); joint editor. W.D. Evans, J. Wiegold (1987-91).

J.F.C. Kingman (Chairman), C.J. Mulvey, J.D.M. Wright (Treasurer), D.A. Brannan (Secretary; Publications Manager).

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# LONDON MATHEMATICAL SOCIETY

Friday 15th February 1991 at 3.30 p.m.

A.G. O'Farrell (St Patrick's College, Maynooth) Polynomial Hulls: Examples and Problems

**P.J. Rippon (The Open University)** Asymptotic Values of Analytic Functions

> The meeting will be held in The Physics Colloquium Room, University of Lancaster.

All interested are very welcome Tea will be served at 4.30 p.m.

Enquiries may be addressed to Professor N.J. Young, Department of Mathematics, University of Lancaster, Lancaster LA1 4YF. Telephone 0524-65201

### PLEASE NOTE CHANGE OF VENUE

#### TRANSACTIONS OF THE MOSCOW MATHEMATICAL SOCIETY

The Transactions of the Moscow Mathematical Society was founded in 1963, jointly by the London Mathematical Society and the American Mathematical Society. It is a cover-to-cover translation of the Russian mathematics journal TRUDY MOSKOVSKOGO MATEMATICHESKOGO OBSHCHESTVA. It contains papers that give a clear and insightful account of significant research on a wide variety of aspects of contemporary mathematics, including aspects that arise in certain areas of applied mathematics and theoretical physics."

TMMS is published annually, in one volume. Its Editors are L.W. Longdon, Abingdon, and B. Silver, Providence.

Correspondence concerning subscriptions and inspection copies should be sent to: American

Mathematical Society, P.O. Box 1571, Annex Station, Providence, R.I. 02901-9939, U.S.A.

The prices for Volume 53 (1991) are: US\$193 (list), and US\$154 (institutional). The following amounts for postage should be added to the previous prices, as appropriate: Surface delivery to destinations outside USA and India US\$5; surface delivery to India US\$13; expedited delivery to destinations in North AmericaUS\$7; expidited delivery other destinations US\$10.

A copy of the journal is lodged in the Society's Library in University College, London. Society members are encouraged to encourage their Librarians to take out subscriptions to the journal.

> D.A. Brannan Publications Secretary

#### **BRITISH MATHEMATICAL COLLOQUIUM**

The closing date for applications to attend the U. Ma 43rd British Mathematical Colloquium in Bath is the 28th February. The dates of the conference are Tuesday 26th to Thursday 28th March 1991. The invited speakers are as follows: S.I. Adian

(Steklov, Moscow, Algorithmic problems for groups and semigroups), H. Březis (Paris, Partial differential equations), I. Ekeland (Paris, Partial differential equations), I. Ekeland (Paris, Hamiltonian systems), A.M. Odlyzko (AT&T Bell Labs, Zeros of the Riemann zeta function: conjectures and computations), A.J. Macintyre (Oxford, Logic and analytic functions), D. Preiss (UCL, Real analysis), G.R. Brightwell (LSE, Combinatorics), C.J.B. Brookes (Cambridge, Groups and quasiisometries of trees), A.P. Carbery (Sussex, Problems in harmonic analysis related to curvature), C.M. Goldie (QMW, Renewal theory for measures satisfying convolution equations), F.C. Kirwan (Oxford, Algebraic geometry), W. Ledermann (Sussex, Issai Schur and his work). U. Martin (RHBNC, Orderings and termination proofs), M.J. Micallef (Warwick, Differential geometry), R.W.K. Odoni (Glasgow, Galois groups and wreath-products), J.N. Ray (Manchester, Sequences of polynomials in topology, combinatorics and formal calculus), D.A. Salmon (Warwick, Dynamical systems), R.S. Ward (Durham, Completely solvable partial differential equations and Lie algebras).

There will also be a civic reception, a demonstration of the use of mathematical software on Sun workstations and other computers, and a discussion session on mathematics education led by D.N. Burghes (Exeter).

Booking forms are obtainable from 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.

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#### **EUROPEAN CONGRESS OF MATHEMATICS**

On the occasion of its foundation meeting, the EMS (European Mathematical Society) agreed on the principle of a European Congress of Mathematics to be held every fourth year. The first of these congresses will take place from 6th to 10th July 1992 in Paris. A Scientific Committee and an Organising Committee have already been established and have set to work under the responsibility of the Executive Committee of the EMS (cf. annexe).

Here is a report on the present state of advancement of the project.

#### 1. Objectives of the Congress

They are manifold:

- a) to present to a large public new and important aspects of pure and applied mathematics;
- b) to encourage a prospective reflexion on the relations between mathematics and society in Europe in the spirit of the "Mathematiques' a venir" Conference of 1987;
- c) to stimulate *cooperation* between all European states (East and West) in the spirit of the general policy of the EMS.

#### 2. Place, date and programme of the Congress

The Congress will take place at the Sorbonne and on the Jussieu Campus (Univertities Paris VI and Paris VII) from July 6th to July 10th 1992. The programme will include:

- a) 9 plenary conferences in the Sorbonne's Grand Amphithêatre (which has a seating capacity of 2000);
- b) 32 conferences held in parallel in 4 conference rooms of the Jussieu campus;
- c) a dozen *round tables* on themes corresponding to the second objective of the Congress.

#### 3. Form of the conferences

In keeping with the general objectives stated above, the speakers will be encouraged to make an effort towards being understood by a large public, particularly by the young. Talks of the 'survey' type will be encouraged. The conferences will be recorded on videotape: it will be possible to view them at another time during the Congress, within the limits of the material resources placed at the disposal of the organisers. These tapes will be available for sale after the Congress. The speakers are selected by the Scientific Committee.

#### 4. Form and contents of the round tables

The round tables will be led by 5 to 10 European personalities and will be devoted to topics of interest to mathematicians in their interrelation with the world around them. These topics, grouped under the title 'Mathematics and Society', are the following:

Exchange programmes and joint-work programmes for students from various European countries.

Harmonisation of degrees

The role of mathematics in educational policies Mathematical Europe: myth or historical reality? Euromath

European scientific (mathematical) politics Collaboration with developing countries Women and mathematics

Mathematical libraries in Europe

Mathematics and the public at large Mathematics and industry Mathematics and finance Mathematics and computer science Mathematics and biomedicine

Each subject, prepared long in advance by the organisers, will be the occasion of talks and of a *debate* between the moderators and the participants, a wide space being given to comparisons between different European countries. Their conclusions will be written down in a document included in the acts of the Congress. Their essential points will be widely publicised within the mathematical community and among those in charge of the scientific policies of Europe. The moderators of the round tables are chosen by the Organising Committee.

#### 5. Satellite Conferences

It is desirable that, before and after the Congress 'satellite' conferences and workshops be organised on specialised subjects in Universities close to Paris in France or other European countries. These satellite conferences will, as far as possible, be mentioned in the successive announcements of the Congress, if the organisers are informed sufficiently ahead of time.

#### 6. Prizes

In order to encourage new talent, 10 prizes will be awarded to young European researchers (age limit: 32)

#### 7. Financial help

Within the resources at the disposal of the organisers, *financial help* will be offered, when necessary, towards meeting travel costs and expenditure in Paris for some participants (young mathematicians and mathematicians from Eastern Europe in particular).

#### 8. Financing of the Congress

The Organising Committee relies on varied resources to cover the foreseeable expenditure;

Subsidy from the European Community Commission

Classical French public funding

Subsidies from various mathematical centres in the Paris region

French and European private sources

Contributions from the EMS and various national Mathematical Societies

Registration fees: the amount has been fixed at FF.800 per person; however a rebate of FF.400 will be granted to the individual members of the EMS

#### 9. Miscellaneous points

The Organising Committee, which already includes 24 people, is open to any person wishing to take part in its work through suggestions or help on specific matters. One should contact the Organising Committee of the European Congress of Mathematics (ACEM), College de France (Annexe), 3 rue d'Ulm, 75005 Paris. Electronic mail: eucm@frmap711.bitnet

#### 10. Annexes

#### Members of the Scientific Committee:

M. Atiyah (Cambridge), J. Ball (Edinburgh), C. Cer-

cignani (Milan), I. Daubechies (Bell Laboratories), A. Connes (Paris), H. Follmer (Bonn), *Chairman*, F. Hirzebruch (Bonn), L. Hormander (Lund), F. Kirwan (Oxford), H. Lenstra (Berkeley), J.L. Lions (Paris), L. Lovasz (Budapest), Y. Manin (Moscow), J. Moser (Zurich), H. Neunzert (Kaiserslautern), C. Procesi (Rome), J. Tits (Paris).

#### Members of the Organising Committee:

P. Barrat (Paris), E. Bayer (Besancon), P. Berard (Grenoble), H. Berestycki (Paris), J. Coates (Cambridge), J.M. Deshouillers (Bordeaux), J. Dixmier (Paris), C. Goldstein (Paris), J.C.R. Hunt (Cambridge), J.P. Kahane (Paris), M. Karoubi (Paris), *Chairman*, N. El Karoui (Paris), A. Lahtinen (Helsinki), J.M. Lasry (Paris), J.M. Lemaire (Nice),

Dr John McDermott (Galway) will be undertaking a short lecture tour for a week in February 1991. This is partly financed by the London Mathematical Society under Programme Committee's Scheme 2. The tentative programme is as follows:

- 1. University of East Anglia (contact Dr D.M. Evans), Monday, 18th February at 2.30 pm 'Infinite permutation groups: a topological viewpoint'
- 2. Oxford University (contact Dr P.M. Neumann) Tuesday, 19th February at 5pm 'Infinite permutation groups'

P.L. Lions (Paris), Y. Maday (Paris), H. Neunzert (Kaiserslautern), C. Procesi (Rome), **R. Rentschler** (Paris), J.J. Risler (Paris), M.F. Roy (Rennes), J.L. Vicente (Seville), **M. Waldschmidt** (Paris). *The bold names are those of the Executive Board of the Committee*.

Members of the Executive Committee of the European Mathematical Society:

F. Hirzebruch (Bonn), *Chairman*, A. Figa-Talamanca (Rome) and C. Olech (Warsaw), *Vice-Chairmen*, C. Lance (Leeds), *Secretary*, A. Lahtinen (Helsinki), *Treasurer*, E. Bayer (Besancon), A. Kufner (Prague), P.L. Lions (Paris), L. Marki (Budapest), A. St Aubyn (Lisbon).

#### LECTURES BY DR J.P.J. MCDERMOTT

- 3.Mathematics Institute, Warwick (contact Professor R.W. Carter) Thursday, 21st February, 2 pm 'Some problems about infinite permutation groups'
- 4 Queen Mary & Westfield College, London (contact Dr H.D. Macpherson) Friday, 22nd February, at 11 am 'On "large" subgroups of infnite permutation groups'

Members of the London Mathematical Society and all other interested persons are cordially invited to attend any of these seminars

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Applications, by c.v. with the names of three referees, should be received not later than 8th February 1991, by The Director of Staffing Services (AS), The University, P.O. Box 147, Liverpool L69 3BX, from whom further particulars may be obtained.

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## NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF MATHEMATICS

Applications are invited for teaching appointments at the **Lecturer** or **Senior Lecturer** level from candidates who are able to teach in one or more of the following areas:

Pure Mathematics Applied Mathematics Operational Research Statistics

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The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of \$\$1,000 or \$\$2,000, subsidised housing at nominal rentals ranging from \$\$100 to \$\$216 p.m., education allowance for up to three children subject to a maximum of \$\$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 60% of their gross annual emoluments in a calendar year.

The Department of Mathematics is a department in the Faculty of Science. There are 8 faculties in the National University of Singapore with a current student enrolment of some 14,000. All departments are well-equipped with a wide range of facilities for teaching and research.

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Application forms and further information on terms and conditions of service may be obtained from:

The Director Personnel Department National University of Singapore 10 Kent Ridge Crescent Singapore 0511 NUS Overseas Office Singapore High Commission (Students Department) 16 Kinnerton Street London SW1X 8ES, U.K. Tel: (071) 235 4562

Enquiries may also be sent through BITNET to perpl@nus3090, or through Telefax: (65) 7783948.

#### THIRTEENTH BRITISH COMBINATORIAL CONFERENCE

The Thirteenth British Combinatorial Conference, organised jointly by the British Combinatorial Committee and the Department of Mathematical and Computing Sciences, University of Surrey, will be held in Guildford from Monday 8th July to Friday 12th July 1991. Accomodation and meals will be available in the University from Sunday evening to Saturday morning.

Nine invited lectures will be given: J.A. Bondy (Waterloo), "Graph Reconstruction:the State of the Art"; Z. Furedi (Budapest), "Turan Type Problems"; S.W. Golomb (Los Angeles), "Radar Signal Patterns from Combinatorial Designs"; G.Korchmaros (Potenza), "Old and New Results on Ovals of Finite Projective Planes"; I.G. MacDonald (London), "Schubert Polynomials"; R. Mathon (Toronto), "Computational Methods in Design Theory"; J. Nesetril (with M. Loebl) (Prague), "Unprovable Combinatorial Statements"; O. Pretzel (London), "Orientations and Edge Functions on Graphs"; P. Rowlinson (Stirling), "Graph Peturbations." In addition, there will be special sessions for contributed talks (normally of 20 minutes each) covering a wide range of topics in Combinatorial Theory.

The papers of the Invited Speakers are to published in the London Mathematical Society Lecture Note Series and will be available at the Conference. The contributed papers (subject to acceptance by appropriate referees) will be published in a special issue of Discrete Mathematics. It is expected that the Conference will receive financial support from the London Mathematical Society.

For further information please write to the Local Organisers: Dr. A.D. Keedwell and Mr. P.J. Owens, Department of Mathematical and Computing Sciences, University of Surrey, Guilford, Surrey, GU2 5XH, United Kingdom, from whom application forms should be available by January 1991. Applications should be in the hands of the local organisers by Friday 31st May 1991; an increased registration fee will apply thereafter.

#### SALEM PRIZE

The Salem Prize for 1990 was awarded to Dr S.V. Konyagin, from Moscow, for his solution of a famous problem on trigonometric series. The prize established in 1968, is given every year to a young mathematician who is judged to have done outstanding work in the field of interest of Raphäel Salem, primarily on Fourier series and related topics. The recipient was Dr Nicholas Varopoulos in 1968, Dr Richard Hunt in 1969, Dr Yves Meyer in 1970, Dr Charles Fefferman in 1971, Dr Thomas Korner in 1972, Dr E.M. Niklsin in 1973, Dr Hugh Montgomery in 1974, Dr William Beckner in 1975, Dr M.R. Herman in 1976, Dr S.B. Böckarev in 1977, Dr Bjorn E. Dahlberg in 1978, Dr Gilles Pisier in 1979, Dr Stylianos Pichorides in 1980, Dr Peter Jones in 1981, Dr Alexei B. Aleksandrov in 1982, Dr Jean Bourgain in 1983, Dr Carlos Kenig in 1984, Dr Th. H. Wolff in 1985, Dr N.G. Makarov in 1986, Drs Guy David and Jean Lin Jourńe in 1987 and Drs A.L. Vol'berg and J.C. Yoccoz in 1968. The jury consisted of Professor J. Bourgain, Professor V. Havin, Professor Y. Katznelson and Professor E.M. Stein.

#### **COMPUTATION AND APPLIED MATHEMATICS CONGRESS**

The 13th IMACS World Congress on Computation and Applied Mathematics will be held from 22nd to 26th July 1991 at Trinity College, Dublin, Ireland. The keynote speakers invited include: J. Babushka, College Park, U.S.A., J. Douglas Jr, West Lafayette, U.S.A., G. Fox, Pasadena, U.S.A., G.I. Marchuk, Moscow, U.S.S.R., T. Nishida, Kyoto, Japan, I. Prigogine, Brussels, Belgium, and K. Wilson, Columbus, U.S.A. The scientific programme will consist of Keynote Lectures. Invited Lectures, Software Forum, Sessions of Solicited Papers, Sessions of Contributed Papers and Poster Sessions.

For further information write to IMACS '91, Secretariat, 26 Temple Lane, Dublin 2, Ireland. Telephone 353-1-679-7655. Fax: 353-1-679-2469, E-mail: imiller@vax1.tcd.ie.

#### **COMPUTERS IN MATHEMATICS**

Keith Devlin has been elected columnist/editor of the "Computers in Mathematics" section of the American Mathematical Society Notices, and is actively soliciting contributions from mathematicians who use computers in their work in a significant way. Contributions preferably in LaTeX format (second choice TeX), by e-mail to Keith Devlin at Colby College Internet address: kjdevlin@colby.edu. Length between 2,500 and 5,000 words. Consult a past issue of the Notices to get an overall impression of the kind of article required. It is his intention to make this section of the Notices one of the major communications organs for computer use in mathematics.

## BRUNEL UNIVERSITY CHAIR OF MATHEMATICS

Applications are invited for the Chair of Mathematics in the Department tenable from 1st October 1991.

The University is seeking somebody with an outstanding research record in an area of mathematics which complements existing major strengths in the Department. These are Numerical Analysis and Computational Mechanics, and Mathematical Programming and Operational Research. The successful applicant will join a large Department and will be expected both to provide academic leadership and to build up a third area of research strength.

Salary will be in the professorial range with a minimum of £27,013 per annum, plus £1,767 per annum London Allowance.

Informal enquiries are welcome and interested persons are invited, in the first instance, to contact Professor J.R. Whiteman telephone (0895) 74000 ext 2270. Further particulars and application forms can be obtained from the Personnel Secretary, Brunel University, Uxbridge, Middx UB8 3PH, or telephone (0895) 812304 leaving your name and address. Completed forms should be returned by 8th February 1991.

## UNIVERSITY OF DURHAM Lectureship in Mathematical Sciences

Applications are invited for a Lectureship in Mathematical Sciences to be filled from 1st October 1991, or as soon as possible after that date. Candidates from any area of the Mathematical Sciences, including Statistics, are encouraged to apply. The department is committed to excellence in both research and teaching, and has active research groups in Pure Mathematics, Mathematical Physics, Numerical Analysis and Statistics. The salary is likely to be initially on the Lecturer A scale (£12,086 - £16,755).

Further particulars may be obtained from the Personnel Officer, University of Durham, Old Shire Hall, Durham DH1 3HP to whom applications (three copies including curriculum vitae and the names of three referees) should be sent not later than Wednesday, 13th February 1991, quoting reference 587.

#### **EUROPEAN WOMEN IN MATHEMATICS**

The next general meeting of EWM will be held at CIRM, Luminy, France from 9th to 13th December, 1991. The programme will include expository mathematical talks on selected themes and discussion on issues of interest to women mathematicians

For further details, contact Eva Bayer, Universite

#### WALTER LEDERMANN'S 80TH BIRTHDAY

There will be a meeting at the University of Sussex on Friday 22nd March 1991 to celebrate the 80th birthday of Walter Ledermann, Professor R.F. Churchhouse will speak at 3.00 pm on 'Simulation of Natural Fractals' and Professor J.A. Green at 4.30 pm on 'Invariants'. The lectures will take place in the Biology Lecture Theatre.

In the evening there will be a buffet dinner in the Mathematics and Physics Building, starting at 7,00 pm. Tickets for the dinner, at a cost of £10.00 each. can be obtained, by 1st March, from Dr M.J. Dunwoody, Mathematics Division, University of Sussex, Brighton BN1 9QH.

de France Comte, Faculte des Sciences, URA 741.

CNRS-Mathematiques, 16, Route de Grav,

25030 Besancon, France bayer@cguege11.bitnet

or Caroline Series, Mathematics Institute,

Warwick University, Coventry CV4 7AL,

cms@maths.warwick.ac.uk Tel 0203-523739

#### LYNNE D. JAMES

Dr Lynne D. James who was elected a member of the London Mathematical Society in 1985 died on 27th November 1990.

#### **ISSAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES**

The notice about the Issac Newton Institute for Mathematical Sciences in the January newsletter contained a misprint suggesting that the scientific activities of the Institute would begin in 1991. whereas they will begin in July 1992.

#### SIR MICHAEL ATIYAH

Sir Michael Atiyah was elected President of the Royal Society

at the Anniversary Meeting held on 30th November, 1990.

#### **CONFERENCE ON GEOMETRY AND PHYSICS**

A conference on Geometry and Physics will be held from the 19th to the 28th of March 1991 at Newbattle Abbey College, on the outskirts of Edinburgh. The conference is organised in conjunction with ICTP, Trieste. The speakers are: M. Ativah. R.L. Bryant, A. Connes, E. Corrigan, S. Donaldson, P. Goddard, G.M. Henkin, N.J. Hitchin, L. Mason, X. Gomez Mont, H. Morton, W. Nahm, M.S. Narasimhan, R. Penrose, A.K. Raina, T.R. Ramadas and

#### R.S. Ward.

Application forms, to arrive by the 30th January if possible, are available from Mrs. H. Cameron, ICMS, Department of Mathematics, University of Edinburgh, Mayfield Road, Edinburgh EH9 3JZ. E-mail icms@uk.ac.edinburgh.castle. The cost is £300 including full board, lodging and conference fee.

#### **VISIT OF DR. VICTOR SHULMAN**

Dr. Victor Shulman of the Polytechnic Institue of Vologda, USSR, will visit Britain between the 3rd and 24th of February 1991, with the help of a grant from the London Mathematical Society. Dr. Shulman works in the area of Banach algebras, operators and algebras of operators and has published extensively in these fields. During his visit he will be lecturing at the Universities of London, Leeds and Edinburgh.

For further details of the visit, please contact Dr. Edward Kissin, Department of Computing, Mathematics and Statistics, Polytechnic of North London, Holloway Road, London N7 8DB. Telephone at work: 071-607-2789 (ext. 7316), or at home in the evenings: 081-455-7339.

# NEW FROM OXFORD

### Sets: An Introduction

#### Michael D. Potter

The author develops the subject from first principles and presupposes little more than an elementary grounding in logic. Much attention is paid to the historical and philosophical background. 0 19 853388 8, 256 pp., illus., Clarendon Press, 1991 £35.00 £15.00

0 19 853399 3, paperback, 1991

### NEW IN PAPERBACK



### The Mathematics of Plato's Academy

A New Reconstruction

#### D. H. Fowler

A reinterpretation of early Greek mathematics, up to the work of Archimedes, with a discussion of the historical context and detailed and illustrated descriptions of some of our primary evidence.

0 19 853947 9, 424 pp., illus., paperback, Clarendon Press, 1991 £20.00

**Models of Peano Arithmetic** 

#### **Richard Kaye**

This book is an introduction to the developments of nonstandard models, and stresses the interplay between the first-order theory, recursion-theoretic aspects, and the structural properties of these models. Oxford Logic Guides no. 15

0 19 853213 X, 304 pp., illus., Clarendon Press, 1991

£35.00

### **Reaction-Diffusion Equations**

#### Edited by K. J. Brown and A. A. Lacey

This volume comprises a collection of articles from experts in their respective fields, providing a coherent perspective to the current state of research in this area. £27.50

0 19 853378 0, 234 pp., illus., Clarendon Press, October 1990



### **Ergodic Theory, Symbolic Dynamics,** and Hyperbolic Spaces

#### Edited by Tim Bedford, Michael Keane, and Caroline Series

The aim of this volume is to explore the rich interplay between ergodic theory and hyperbolic geometry and to present some of the new directions that research has taken. Suitable for postgraduate students coming to these subjects for the first time.

0 19 853390 X, 400 pp., illus., 1991 0 19 859685 5, paperback, 1991

£40.00 £13.95

## **Fundamentals of Measurable Dynamics**

**Ergodic Theory on Lebesgue Spaces** 

#### Daniel J. Rudolph

This textbook provides an introduction to the ergodic theory of Lebesgue spaces presenting a technically complete account which offers an in-depth understanding of the techniques of the field, both classical and modern.

0 19 853572 4, 178 pp., illus., Clarendon Press, November 1990

£25.00

## **DXFORD UNIVERSITY PRESS**

#### **GRANTS IN SUPPORT OF PUBLIC UNDERSTANDING OF SCIENCE**

Grants are available for new or continuing activities or initiatives directly concerned with the promotion of the public understanding of science (including mathematics, technology and engineering). Applications should be made as soon as possible on forms obtainable from Dr A. Evans, The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG. (Tel: 071-839 5561, ext 219).

Applicants will be asked to show clearly how their proposal relates to the public understanding of science, to submit a statement of the financial basis of their proposal, to specify any related schemes in the area of the public understanding of science of which they are aware and to give an assurance that the grant applied for is not for an activity in direct competition or conflict with existing schemes. Successful applicants will be required to submit a brief written report after the event on how the grant has been used.

All applicants must be resident in the U.K. The maximum sum available for an individual grant is £3000 and allocations will often be less than this amount. The closing dates for applications are **31st March** and **31st October** each year: late applications will be considered at the next round.

The Council of the Royal Society is advised on suitable recipients for grants by the Committee on the Public Understanding of Science (COPUS).

#### **1991 MATHEMATICS SUBJECT CLASSIFICATION**

The editors of Mathematical Reviews and Zentralblatt für Mathematik/Mathematics Abstract announce the adoption of the revised Mathematics Subject Classification for use in the publications beginning in 1991. The new classification contains significant changes in the areas:

- 13 Commutative Rings and Algebras
- 16 Associative Rings and Algebras
- 33 Special Functions
- 46 Functional Analysis
- 52 Convex Sets and Related Topics
- 81 Quantum Mechanics
- 82 Statistical Physics, Structure of Matter

#### 92 Biology and other Natural Sciences, Behavioral Sciences

Most of the other sections have been revised and expanded; approximately 600 more 5-digit classification lines represents a 14% increase in the size of the revised scheme. Section 19, K-theory, will be used for primary classification (it had been used only as a secondary classification in the 1985 version of the 1980 MSC).

Copies of the new classification can be found in the index volumes of Zentralblatt für Mathematik/Mathematics Abstracts beginning with volume 700. They also can be obtained from the editorial office on special request.

#### LONGSTANDING MEMBERS

The following is a list of mathematicians who had completed fifty years or more of membership of the London Mathematical Society at the end of 1990.

1921 Burkill, J.C. 1924 Oppenheim, A. 1925 Synge, J.L. 1928 Cartwright, M.L. 1929 Chowla, S.S. 1929 Edge, W.L. 1929 Estermann, T. 1929 Price, A.T. 1929 Temple, G.F.J. 1929 Verblunsky, S. 1929 Wright, E.M. 1930 Kuttner, B. 1930 Offord, A.C. 1930 Scholey, C.M. 1930 Wilson, A.H. 1930 Zygmund, A.

1931 McCrea, W.H. 1931 Shah, S.M. 1931 Tanner, R.C.H. 1931 Todd, J.A. 1932 Jeffreys, B. 1932 Lord, R.D. 1932 Potter, H.S.A. 1932 Walker, A.G. 1933 Cossar, J. 1933 Coxeter, H.S.M. 1933 Young, L.C. 1934 Babbage, D.W. 1934 Burnett, D. 1934 Chandrasekhar, S. 1934 Erdos, P. 1934 Meyler, D.S.

1935 Howlett, J. 1936 Neumann, B.H. 1936 Taussky, O. 1937 Harding, J.W. 1937 Pitt. H.R. 1937 Scott. D.B. 1938 Boas, R.P. 1938 Derry, D. 1938 Love, E.R. 1938 Smithies, F. 1939 Harmer, F.E. 1939 Spencer, D.C. 1940 Barrett, W. 1940 Fuchs, W.H. 1940 Good, I.J. 1940 Kendall, D.G. 1940 Willmore, T.J.

#### **DIFFERENTIAL EQUATIONS**

An international conference on Differential Equations will be held from 26th to 31st August 1991 in Barcelona, Spain. Those willing to present a communication of 15 minutes should submit an abstract of about 10 lines. The deadline for registration and submission of abstract is 28th February. For further information write to Professor C. Perello, Departament de Matematiques, Edifici C, Universitat Autonoma de Barcelona, 08193 Bellaterra, Barcelona, Spain. Telephone 34-3-5811304, e-mail d3macst0@eb0ub011.bitnet, fax 34-3-5812003.



Alfred Cardew Dixon (1865-1936) was educated at a Quaker school in Kendal before studying mathematics at Cambridge, where he graduated as Senior Wrangler in 1886. In 1888 he won the Smith's Prize and became a fellow of Trinity. In 1901 he became Professor at Queen's College, Belfast, where he was said to lecture with clockwork precision. He was known as a devout Methodist and was active in the Philharmonia Orchestra. His chief mathematical interest was in differential equations, and he did early work on Fredholm integrals independently of Fredholm. Elected an FRS in 1904, he was the Society's 35th President, from 1931-1933.

#### 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.

1991	
FEBRUARY	
15	LMS Meeting, Lancaster
15	Edinburgh Mathematical Society Meeting, Edinburgh (176)
MARCH	
15	I MS Meeting London
15	Edinburgh Mathematical Society Meeting, Dundee (176)
25-29	British Mathematical Colloquium, Bath (176)(177)(178)
1000	
APRIL	
8-12	Stochastic Analysis and Related Topics, warwick (179)
9-12	British Applied Mathematics Colloquium, Oxford (177)
15-19	J.E. Marsden, LMS Invited Lectures, Southampton (177)
23-26	Mathematical and Numerical Aspects of Wave Propagation Phenomena, France (1/2)
MAY	
3	Edinburgh Mathematical Society Meeting, Stirling (176)
7-14	Number Theory Workshop, Singapore (177)
9	Schrodinger Lecture, London (178)
17-18	2-day LMS Meeting, Oxford
27-29	Computing and Information Conference, Canada (177)
ILINE	
1	Edipburgh Mathematical Society Meeting, St Andrews (176)
9-14	Fixed Point Theory and Applications Conference, Canada (177)
13	I MS Meeting London
17	London Mathematical Society Popular Lectures Sheffield
23-30	Category Theory Meeting, Canada (179)
28	London Mathematical Society Popular Lectures, Imperial College, London
29-8.Jul	Prohabilistic Methods in Combinatorics, Durham (178)
20 0 0 0 0	
JULY	
1-5	The Mathematics of Nonlinear Systems, Bath (168)(175)(177)
1-19	Geometric Group Theory Symposium, Sussex (179)
7-12	Gregynog Symposium on Differential Equations, Gregynog (176)
8-12	British Combinatorial Conference, Surrey (165)
8-12	Australian Mathematical Society Annual Conference, Australia (177)
8-14	Hadicals, Hungary (1/2)
9-19	Conformal Field Theory, Durham (178)
13-16	British Congress of Mathematics Education, Loughborough (170)
20-30	Application of Categories in Computer Science, Durham (178)
22-20	Computational and Applied Mathematics Congress, Ireland (167)
29-9 Aug	Algebras and Orders, Canada (179)
AUGUST	
18-24	Number Theory Association Conference, Canada (177)
SEPTEMBER	
16-20	Minimal Models, Lie Groups and Differential Geometry, Spain (179)
25-27	Numerical Methods in Eluid Mechanics, Switzerland (174)
27-28	Symposium on Arithmetic in Honour of Bryan Birch, Oxford (178)
0010050	
10	INC Masting Lander
10	LMS Meeting, London
NOVEMBER	
15	LMS Meeting, London

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 WIV 0NL, to arrive before the first day of the month prior to publication. Telephone 071-437 5377, Fax 071-439 4629, E-mail Ims@uk.ac.kcl.cc.oak.