

# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 214

March 1994

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## FORTHCOMING SOCIETY MEETINGS

Friday 18 March 1994, Burlington House

N. Ray, J. Tits

Friday - Saturday, 13-14 May 1994, Leeds  
Ring Theory and Representation Theory

Friday 17 June 1994, Burlington House

B.J. Birch, J. Eells

Friday 21 October 1994, Burlington House  
Mathematical Biology

Friday 18 November 1994, Burlington House

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## COUNCIL DIARY

Council met on Friday 21 January 1994. As usual, some of our discussions touched on 'disturbing trends' and what the London Mathematical Society should be doing about them. One example was the picture appearing in departmental responses to the LMS questionnaire, that mathematics service teaching is under threat. We hope to hear details soon. A more familiar disturbing trend is that libraries have to cancel journals; an article about this will be appearing in this issue of the Newsletter.

Sir Ron Dearing's Review of the National Curriculum and Assessment Framework has recommended a cut of twenty per cent in the National Curriculum for Mathematics. Mathematicians are alarmed that this cut will hurt. Council has asked its Education Committee to advise what we should do to try to protect the previously agreed National Curriculum.

The progress of the four-year undergraduate degree remains high on the agenda. We learned that more than thirty universities and colleges in Britain already have this degree or have plans to introduce it within two years. Another packet of information and advice from the LMS has been sent direct to mathematics departments.

The Publications Secretary reported that it may soon be possible to submit papers to the LMS Bulletin in TeX or LaTeX. A LaTeX style file should be undergoing tests early this year.

Council discussed the situation of mathematics in Africa, in response to an appeal from the African Mathematical Union. African mathematicians often have to work with very little financial support, inadequate libraries and poor communications. There are not many ways in which the LMS can realistically help, but the President will be discussing some possibilities with the President of the African Mathematical Union.

Other business included nominations for lectureships and prizes, and a number of plans which are too tentative to report here. One very tentative item may interest some members: the question was raised whether the mention of 'London' in the Society's name causes more trouble than it's worth. Discussions about names are notoriously fruitless, and the LMS has already debated the matter within living memory. But Council members were invited to bring 'constructive thoughts on this matter' to a future meeting.

Wilfrid Hodges



## BRITISH APPLIED MATHEMATICS COLLOQUIUM

The British Applied Mathematics Colloquium will be held this year at Sheffield University, from 5 to 8 April, 1994. It incorporates the 36th British Theoretical Mechanics Colloquium. In the past, the colloquium has covered the traditional areas of British applied mathematics, such as fluid and solid mechanics. In the last few years, though, an attempt has been made to broaden the scope of the colloquium, by including areas such as mathematical biology. This year in Sheffield, we continue this move into new areas by encouraging submissions in the areas of differential equations and dynamical systems, control theory, signal processing, mathematical biology, fracture mechanics and the dynamics of the atmosphere and

oceans.

These areas are also represented in the choice of topics of the five plenary speakers, who are: Professor R. McNeill Alexander, FRS (Leeds); Professor Alberto Isidori (Rome), Professor Tony Perry (Melbourne); Professor Karl Sigmund (Vienna) and Professor Mary Wheeler (Houston).

The meeting is generously supported by the London Mathematical Society and is open to all members of the LMS. Further details and a registration form can be obtained by writing to: The Secretary, BAMC '94, School of Mathematics and Statistics, (Applied Mathematics Section), University of Sheffield, PO Box 597, Sheffield S3 7RH, or by an e-mail request.

## THE CANADIAN MATHEMATICAL SOCIETY

The Canadian Mathematical Society (CMS) was originally conceived in June 1945 as the Canadian Mathematical Congress. Seeking to end confusion with the quadrennial mathematical congresses, a name change was considered for many years. Finally, upon its incorporation as a non-profit charitable organization in 1979, a new name was adopted - the Canadian Mathematical Society. The mission of the CMS is three-fold: to promote research in mathematics; to assist in improving the teaching of mathematics in Canadian universities and schools; and to encourage and assist in the development of mathematics and mathematics education.

The CMS publishes the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin. Other publications include the CMS Conference Proceedings Series, a joint venture with the American Mathematical Society, and the Wiley Interscience/CMS Series, a series of advanced mathematics books. The CMS organizes 3-4 day semi-annual meetings, usually held in June and December, and a 2-week annual seminar, usually held in June or July. Members are given the opportunity to organize special sessions at the semi-annual meetings.

The CMS administers the Canadian Mathematical Olympiad, Canada's premier annual national mathematics competition for high school students. Compilations of problems and solutions featured in the Olympiad are published. The CMS also publishes *Crux Mathematicorum*, an international problem solving journal at the senior secondary and undergraduate levels.

Benefits of membership include reduced fees at the CMS semi-annual meetings, a free subscription to the CMS Notes (the primary medium of communication between the CMS and its members), a free copy of the CMS Membership Directory, and significant reductions in the regular rates for CMS journals and other periodical publications.

The CMS has a reciprocity agreement with the London Mathematical Society. For a membership application, please contact the LMS Office or contact the CMS directly at the following address: Canadian Mathematical Society, 577 King Edward, Suite 109, POB 450, Station A, Ottawa, Ontario, Canada K1N 6N5; telephone: (613) 564-2223; fax: (613) 565-1539; e-mail: [lpalmer@acadvm1.uottawa.ca](mailto:lpalmer@acadvm1.uottawa.ca).

# LONDON MATHEMATICAL SOCIETY

FRIDAY 18 MARCH 1994

N. Ray (Manchester)  
will speak at 3.30 on

**Henry Smith, Antoine's Eyeglasses and Fatou Dust;  
the Totally Disconnected Connection**

J. Tits (Collège de France)  
will speak at 5.00 on

**Hyperbolic Metrics in Buildings and Applications**

Tea will be served at 4.30

The meeting will be held at the Linnean Society,  
Burlington House, Piccadilly, London W1

All interested are very welcome



## MATHEMATICS SURVEY 1993

This was the first year when the 'New' Universities were invited to respond to the annual questionnaire - 11 responses were received to the 33 which were sent out. This may be disappointing, but it is not clear as yet how many are heavily involved in mathematics teaching and also that others may find it difficult to disaggregate their mathematics numbers from those of computing. Until the position stabilises, it will probably be wise to deal with these figures separately from those of the 'Old' Universities. However, comparisons between the two sectors can be interesting.

The Society is grateful to all Universities, Old and New, who completed the questionnaire - it is appreciated that this is yet another demand on those responsible who are these days overwhelmed by paperwork. The response overall was again excellent, but for a survey of this kind to be complete we must aim for a 100% response. Some universities, whose numbers are crucial in that they are amongst our largest and strongest, have not always responded, but I am pleased that after a special plea we have now attained a 90% response.

The full report will soon be sent to all Heads of Departments; I now highlight some of the main features.

1. There are not many dramatic changes from year to year, but there are small drifts which over a period are substantial. An example is that *Staff-Student Ratios* have moved from 14.04 in 90/91 to 14.94 in 92/93. The comparable figure in the Zeeman report in 86/87 was 11.50.

2. **Service Teaching** There has been great concern recently that some departments who have been traditionally heavily involved in service teaching have been under strong pressure, engineering especially, but not exclusively, agitating to take over the teaching. So far, the survey does not show that there has been a substantial loss. However, current discussions in many of our large departments suggest that there are major difficulties ahead. With this teaching supporting such a high percentage of our

staff in some of our most highly rated departments any further losses could be catastrophic for the subject. It is difficult to suggest any positive steps when the decisions will not be made on rational grounds.

3. **Fee Banding** This was a matter of great contention this year with the Society, together with others, active in trying to persuade the Department for Education and the Funding Councils to move mathematics from Band 1 to the higher Band 2 fee. Although this may no longer be an issue of as great importance with the lowering of the fee levels and also by the action of the Funding Councils to dissuade universities from taking fee-only students, I note that 10% of Old Universities and 25% of New Universities were already in Band 2. These universities can be identified and, if it again becomes important, may be able to advise others on how this higher level can be attained.

4. **Unit of Resource** In 'Old' Universities, this increased from last year's figure of £2632 per FTE to £2669 (a decrease in real terms). The corresponding figure for the 'New' Universities who responded was £2191.

5. **Resource Allocation System** Over the years, there has been a definite move away from historical funding to full formula funding. By now, in the 'Old', 61% tended towards full formula funding with only 5% claiming to be on historical funding. Surprisingly (for me), the 'New' did not show the same phenomenon.

6. The total number of UK PhD students over 3 years were Pure (149), Applied (220), Statistics (82). These compare with an overall requirement in a recent survey for an average 173 per annum in the near future to replace retiring staff. These figures are especially relevant at a time when there is a danger that these numbers could be drastically decreased as a result of the White Paper.

7. **Computers etc.** The position for mathematicians is quickly improving. In the 'Old' Universities 92% of full time academics are now connected via JANET and 54% have access to departmental



workstations. The position seems to be even better in the 'New'.

**8. Expenditure on Periodicals** In both Old and New Universities, approximately 80% reported that expenditure on periodicals is either inadequate or seriously inadequate. This position is serious. I will not dwell on the subject here but will report in a separate article below. In next year's survey we will attempt to obtain a clearer picture, for example, we could ascertain the number of institutions who

take certain central general journals.

On behalf of the Society, I again express their gratitude to all who have been involved in completing the Survey, which we believe continues to be useful. We understand that other learned societies are now considering whether they should follow our lead. Any suggestions on other issues which could be covered by the questionnaire would be welcome.

Alun O Morris  
January 1994

## PERIODICAL SUBSCRIPTIONS

In recent years there has been an increasing number of reports that mathematics departments in the UK are being forced for financial reasons to cancel their subscriptions to periodicals - some of which are regarded as the most prestigious, but also unfortunately, the most expensive. That this is so has been confirmed by the most recent survey of Mathematics Departments in the UK which showed that up to 80% of those who responded reported that expenditure on periodicals was either inadequate or seriously inadequate. At one time, it was believed that this malady was restricted to British Universities and resulted from the inadequacy of funding from government sources. However, more recently it has become more apparent that our problems are shared not only elsewhere in the EEC but also in the USA, which had been assumed to be immune from such problems.

The problems are apparent:

- the rapid rate of inflation in periodical prices mainly, but not exclusively, from commercial publishers, well in excess of the increase in the retail price index;
- the cancellation of the journal itself adding to that inflation with publishers further increasing their prices to maintain profit levels;
- the increasing selectivity in the distribution of research funding by the Funding Councils;
- the decline in the proportion of recurrent income spent on library services by

universities;

- the presumed pressure to publish at all costs from successive Research Assessment Exercises;
- the reaction of commercial publishers of specialised journals to this pressure by increasing the number of issues per annum without warning, further inflating the prices;
- the addition of so many new specialised journals - there was a 14% increase between 1988 and 1991.

Is there any action we can take, either as learned societies or individuals to remedy the situation? Readers of the Notices of the American Mathematical Society will see that our colleagues in the USA are becoming more militant. For example, Robert Lazarsfeld and Murray Schacher (UCLA) (October 1993 issue) suggest that we should write to all editors of the cancelled journals informing them of their decision and explaining its rationale. In the same issue, Paul Weichsel (Illinois) called upon 'the members of the editorial boards of each mathematical journal to meet and evaluate the justification given by the publishers for the current crop of price rises. If they conclude that the publisher is behaving irresponsibly, they should resign their positions.' What other action is possible? Should we consider not submitting our articles to the most blatant offenders? Should learned societies, possible collaboratively, not consider launching numerous specialised journals in direct competition with such journals currently



published by commercial firms? Can we persuade more of the prestigious journals to accept manuscripts in TeX dramatically decreasing production costs?

The Council of the London Mathematical Society has been approached by a number of mathematics departments to ask whether it could take action to remedy the serious situation which has now arisen in many universities. It is difficult to see what practical action the Council could take. There is little evidence that the problem is more serious for mathematics than for other subjects. In fact, it was the growing problems for University Libraries in general which persuaded the Joint Funding Councils to set up a Libraries Review Group chaired by Professor Sir Brian Follett which recently reported in December 1993.

This report gives a clear and comprehensive analysis of the general problems for University Libraries and in particular, the problems alluded to above. It is important that those who are mainly concerned with the purchase of periodicals in mathematics departments should read the report - if nothing else, to ensure that they benefit from some of its positive recommendations. I now draw your attention to some of these, and also to some of the main points made in the report.

One of the main conclusions is that it is neither feasible nor even desirable to expect each institution to provide itself for all the research needs of its staff and users. Instead, in order to provide for specialised or very expensive needs, networks of research libraries should be encouraged to develop at national or regional level, which might be discipline-based or cover a number of subject areas. The Report makes three recommendations in support of this:

1. The Funding Councils should set aside up to £10 million a year of their research funding to distribute recurrently outside the main formula allocation (although this is mainly aimed at the humanities, the arguments are equally applicable to mathematics).

2. £1.1 million per annum should continue to be allocated to the deposit libraries of Oxford and Cambridge.

3. A more strategic approach to provide library facilities in support of research in all subjects needs to be developed at national levels - to this end a Working Group involving HEI, National Libraries, Research Councils, etc., has been established to report quickly.

Other proposals include:

- Institutions should review their level of spending on libraries;
- The CVCP Purchasing Unit should investigate the scope for further cooperative purchasing of library materials.
- The CVCP should cooperate with the Association of American Universities and others to find practical ways of influencing the periodicals market in a manner which provides value for money for purchasers and a fair return for publishers.

Many of these global arguments are equally applicable at local mathematical level, where the Society is already active. The Society's library is a valuable resource for the UK mathematical community which meets some of the above aims. The recently negotiated special terms for purchase of *Zentralblatt für Mathematik* by Institutional Members of the Society is a good example of cooperative purchasing. Should the Society, with other learned societies, also not be more positively involved in influencing the periodicals market?

There is no doubt that the pressure on publications will continue. It is important that we ensure that we are in a position to take advantage of any positive proposals which may result from the Follett Report. The Society is anxious to give its members maximum support in this respect. It would welcome any constructive suggestions from its members on anything that can be done to alleviate our growing problems.

Alun O Morris  
Vice-President & Chairman  
of Funding Committee



## EUROCONFERENCES IN MATHEMATICS

The Department of Mathematics at the University of Crete announces the first two conferences of the series Euroconferences in Mathematics, sponsored by the Human Capital and Mobility of the Commission of the European Communities.

**Combinatorial Geometry**, 10 - 16 July 1994. The main speakers are: C. Lee (University of Kentucky, USA), P. Mani (Bern, Switzerland), P. McMullen (London, UK), J. Wills (Siegen, Germany), G. Ziegler (Berlin, Germany).

**Actions of Lie Groups and Discrete Subgroups on Manifolds**, 17 - 23 July 1994. The main speakers are: H. Abels (Bielefeld, Germany), A. Katok (Pennsylvania State University, USA), F. LaBourie (Ecole Polytechnique, France), G. Margulis (Yale University, USA), R. Zimmer (University of Chicago, USA).

The conferences will take place at the Academic Village of Anogeia, a conference centre located at Anogeia which is about 45

minutes from Iraklion. The living expenses (accommodation plus meals) per day for a person are estimated at about 30 ECU in a single room, and 22 ECU in a double room.

The Human Capital and Mobility Programme financially supports young researchers from the countries of the European Community to enable them to attend the conference. It is expected that financial support will be extended to young researchers from some countries of Central and Eastern Europe.

The conference series will continue in the next years with topics which will be decided by the next meeting of the international scientific committee in Spring 1994. Suggestions for topics for future conferences and requests for information about the 1994 conferences should be sent to: Susanna Papadopoulou, Department of Mathematics, University of Crete, Iraklion, Crete, Greece, fax: 81-234516, e-mail: souzana@talos.cc.uoh.gr.

## 25 YEARS OLD!

To help mark 25 years of the Open University, the Mathematics faculty at the OU would like to hear from OU mathematics graduates who have carried on in some way with mathematics; for example, by taking a higher degree.

They would be grateful to receive details, however brief, of anyone whom

members might know of who is in this category (including themselves, if appropriate). Please send information to: Derek Goldrei, Open University Southern Region, Foxcombe Hall, Boars Hill, Oxford OX1 5HR, tel: 0865-327000, e-mail: d.c.goldrei@uk.ac.open.

## MATHEMATICAL MODELLING

An international conference on Mathematical Modelling will take place at the University of Brunei Darussalam from 29 May to 1 June 1995. The conference will address various Physical, Biological, Engineering and Social Systems. Models for specific situations will be presented. Invited and plenary lectures will present the state of the art of Mathematical Modelling in some of the main areas with particular reference to the problems of developing nations, and of Brunei Darussalam. Research papers developing Mathematical, Statistical and Computational

Models including identification, estimation and control problems are invited for Oral/Poster presentation. Papers accepted for presentation will be published in the Conference Proceedings which will be ready for distribution to all participants during the Conference. For further information contact the Organising Secretary, International Conference on Mathematical Modelling, Department of Mathematics, University Brunei Darussalam, Gadong 3186, Negara Brunei Darussalam. The deadline for receipt of registration forms and abstracts is 31 March 1994.

## Schur Algebras and Representation Theory

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## THE MATHEMATICAL THEORY OF PHASE TRANSITIONS A SUMMER WORKSHOP

A Summer Workshop on "*The Mathematical Theory of Phase Transitions*" organised by C.M. Elliott and Q. Tang, will take place at The University of Sussex from 5 to 10 July 1994.

The meeting will concentrate on the mathematical and numerical analysis of phase transition problems arising in the physical sciences. Topics will include crystal growth, phase field equations, geometric motion of phase boundaries, Cahn-Hilliard equations, Ginzburg-Landau equations and superconductivity.

The Workshop is supported by the London Mathematical Society, Univer-

sity of Sussex 'Centre for Mathematical Analysis and Its Applications' and, to be confirmed, the European Science Foundation. Speakers will include: G. Caginalp, P. Fife, J.R. Ockendon, H.M. Soner, C. Verdi. It is open to all members of the London Mathematical Society and to others interested in the theme of the meeting.

Registration details and further information may be obtained from: Christine Coles, Centre for Mathematical Analysis and Its Applications, School of Mathematical and Physical Sciences, University of Sussex, Brighton BN1 9QH, tel: 0273 678108, e-mail: cmaia@sussex.ac.uk.

## YOUNG SCIENTIST OF THE SOUTH AWARD FOR THE YEAR 1993

The Third World Academy of Sciences at Trieste, Italy has conferred its annual award Young Scientist of the South for the Year 1993 to Dr Qaiser Mushtaq. The investiture ceremony was held in Islamabad under the auspices of the Pakis-

tan Academy of Sciences. Dr Mushtaq is a former student of Professor G. Higman and is currently an Associate Professor of Mathematics at University Brunei Darussalam.

## University of Liverpool DEPARTMENT OF PURE MATHEMATICS Lecturer in Pure Mathematics

Applications are invited for a lectureship, tenable from 1 October 1994.

Initial salary within the range £13,601 - £25,107 per annum (under review).

Applications, by c.v. should be received not later than **28 March 1994** by the Director of the Personnel Department (AS), The University, PO Box 147, Liverpool L69 3BX, from whom further particulars may be obtained. Applicants should arrange for 3 supporting references to be received by the same date. Informal enquiries to Professor J.W. Bruce (tel. 051-794-4062, fax. 051-794-4061).

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## ISAAC NEWTON INSTITUTE

In the February issue of the Newsletter it was reported that the programmes at the Isaac Newton Institute for Mathematical Sciences for the period January to June 1994 are on "Geometry and Gravity" and "Cellular Automata, Aggregation and Growth". The Scientific Steering Committee has now selected six more programmes for the next two years: for July to December 1994, "Symplectic Geometry" (organizers: S.K. Donaldson, D. McDuff, D. Salamon, C.B. Thomas) and "Topological Defects" (organizers: A.J. Bray, T.W.B. Kibble, R.S. Ward); for January to June 1995, "Exponential Asymptotics" (organizers: M.V. Berry, C.J. Howls, M.D. Kruskal, F.W.J. Olver) and "Financial Mathematics" (organizers: M.H.A. Davis, S.D. Hodges, I. Karatzas, L.C.G. Rogers); for July to December 1995, "Semantics of Computation" (organizers: S. Abramsky, G. Kahn, J.C. Mitchell, A.M. Pitts) and "From Finite to Infinite Dimensional Dynamical Systems" (organizers: P. Constantin, J.D. Gibbon, J. Hale, C.T. Sparrow).

For further information, contact the Deputy Director, Professor P. Goddard, Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge CB3 0EH; telephone 0223 335999; e-mail [i.newton@newton.cam.ac.uk](mailto:i.newton@newton.cam.ac.uk).

There will be a NATO Advanced Study Institute on "Scale Invariance, Interfaces and Non-Equilibrium Dynamics", 20-30 June 1994. The meeting will discuss and explore the recent theoretical advances in the study of complex structures in systems far from equilibrium. The Organizing Committee members are M. Droz (Geneva), A. McKane (Manchester), J. Vannimenus (Paris) and D. Wolf (Duisberg). Participation is by invitation only. For further information, contact the Deputy Director, Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge CB3 0EH (e-mail [i.newton@newton.cam.ac.uk](mailto:i.newton@newton.cam.ac.uk)) from whom application forms can be obtained. The closing date for applications is 15 March 1994. Limited financial support will be available for some participants.

## VECTOR BUNDLES ON ALGEBRAIC CURVES

A workshop on Vector Bundles on Algebraic Curves will be held at the University of Liverpool from 6 to 10 April 1994. This is part of the programme of activities of Europroj (European Network of Projective Geometry) and is being supported by Europroj under a Human Capital and Mobility Contract with the EU. It is also supported by AGE and

an application for additional support has been made to the London Mathematical Society. For further information, contact Dr P.E. Newstead, Department of Pure Mathematics, The University of Liverpool, PO Box 147, Liverpool, L69 3BX (preferably by e-mail to [newstead@liverpool.ac.uk](mailto:newstead@liverpool.ac.uk)).

## ADAMS LECTURER

A visiting lectureship has been established at the University of Manchester in memory of Frank Adams. This year's lecturer is Professor Robert L. Devaney of Boston University.

Professor Devaney will visit Manchester from 23 May to 2 June 1994. He will give a short series of lectures on "The Dynamics and Topology of Complex Analytic Maps" in the period

from Tuesday 24 May to Friday 27 May. For further details, please contact the organisers, Dr Nigel Ray ([nige@ma.man.ac.uk](mailto:nige@ma.man.ac.uk)) or Dr Grant Walker ([grant@ma.man.ac.uk](mailto:grant@ma.man.ac.uk)), Department of Mathematics, University of Manchester, Oxford Road, Manchester M13 9PL.

The Adams Lectureship is supported by KPMG Peat Marwick.

## PACIFIC RIM GEOMETRY CONFERENCE

### First Notice

The Pacific Rim Geometry Conference, organized by the Department of Mathematics of the National University of Singapore, will be held from 12 December to 17 December 1994 at the National University of Singapore, Republic of Singapore. A previous conference in this series took place in Hong Kong in December 1992.

The following Invited Speakers have accepted invitations to give 50-minute lectures: R. Bott (Harvard), A. Chang (UCLA), S.Y. Cheng (CUHK/UCLA), H.I. Choi (Seoul), J. Eells, F.T. Farrell (SUNY, Binghamton), K. Fukaya (Tokyo), R. Hamilton (UCSD), J.X. Hong (Fudan, China), P. Li (UC Irvine), C.S. Lin (CCU, Taiwan), N. Mok (Paris), T. Mrowka (Caltech), L. Simon (Stanford), K. Ueno

(Kyoto), S.T. Yau (Harvard). There will also be sessions for shorter, contributed talks.

The registration fee for the conference will be US\$200. The fee could be waived for hardship cases. Details of the social programme will be given in the Second Notice. Refereed proceedings of the conference will be published.

For further information about the conference (including financial assistance to regional participants), please send your enquiries to: Pacific Rim Geometry Conference, Department of Mathematics, National University of Singapore, Singapore 0511, Republic of Singapore, e-mail: [matprgc@nusunix.nus.sg](mailto:matprgc@nusunix.nus.sg)

## MATRIX GEOMETRY AND PHYSICS

The LMS Invited Lectures will be given by Dr John Madore at King's College, London from Monday 21st March until Friday 25th March. Full details can be obtained from Dr

David Robinson, Department of Mathematics, King's College, Strand, London WC2R 2LS, tel: 071 873 2221, e-mail: [d.robinson@uk.ac.kcl.cc.bay](mailto:d.robinson@uk.ac.kcl.cc.bay).

## MATHEMATICS RESEARCH CENTRE UNIVERSITY OF WARWICK

The following events will be held at Warwick during 1994.

**Symposium on The Dynamics of Zn-actions and their Connections with Commutative Algebra, Number Theory and Statistical Mechanics** - September 1993 to July 1994. Organisers: W. Parry, K. Schmidt and P. Walters. As part of the Symposium there will be the following two Workshops:

**Workshop on Algebraic and Number Theoretic Aspects of Ergodic Theory** - 11-15 July 1994.

**Workshop on Lattice Dynamics, Statistical Mechanics and Ergodic Theory** - 18-22 July 1994.

In addition there will also be:

**Electron-Phonon Workshop**, organiser R.S. MacKay - 5-16 September 1994.

**Open Taniguchi Symposium** - 28-30 September 1994. This will be funded by the Taniguchi Foundation, organisers: S. Kusuoka, I. Shigekawa, K.D. Elworthy. Speakers will include: S. Aida, D. Bakry, B. Driver, T. Funaki, L. Gross, E.P. Hsu, K. Ito, T. Kumagai, S. Kusuoka, R. Leandre, T. Lyons, S. Shigekawa, H. Sugita, S. Watanabe, N. Yoshida.

For further information on any of the above please contact Elaine Shiels, Mathematics Research Centre, University of Warwick, Coventry CV4 7AL, fax: (0203) 523548.



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## DIARY

The diary lists Society meetings and other events publicized 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.

1994

### MARCH

- 2-3 Chaos and Forecasting, Discussion Meeting, Royal Society, London (213)
- 3 What is the Circumference of a Circle?, Gresham Geometry Lecture, London (212)
- 5-6 Celebration of Women in Mathematics Conference, Cambridge, Massachusetts (212)
- 7-25 Workshop on Fluid Mechanics, ICTP, Trieste, Italy (207)
- 11 Edinburgh Mathematical Society Meeting, Dundee (209)
- 17 Seventh Schrödinger Lecture, Dr M.F. Perutz, Imperial College, London (210)
- 18 London Mathematical Society Meeting, London
- 18-27 National Science Festival (210)
- 19-20 Nonlinearity Meeting, Imperial College, London (212)
- 21-22 LaTeX2e Event, Warwick University (213)
- 21-25 L-functions Conference, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)
- 21-25 Matrix Geometry and Physics, LMS Invited Lectures, King's College, London (207)
- 21-25 Symplectic Geometry of Moduli Spaces Conference, France (209)
- 21-1 Apr Stochastic Partial Differential Equations, University of Edinburgh (210)
- 28-31 British Mathematical Colloquium, University of Wales, College of Cardiff (210)(212)
- 28-31 Classical and Quantum Gravity Survey Conference, Isaac Newton Institute, Cambridge (213)

### APRIL

- 5-15 Instructional Conference on Harmonic Analysis & PDEs, ICMS, Edinburgh (210)
- 11-15 Workshop on L-functions and Automorphic Forms, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)
- 15 Midlands and Northern Universities Statistical Group Meeting, Sheffield Hallam University (213)

### MAY

- 6 Edinburgh Mathematical Society Meeting, Aberdeen (209)
- 13-14 Two-day London Mathematical Society Meeting, Leeds
- 16-20 Groups and Geometry Conference, University of Auckland, New Zealand (212)
- 16-27 Workshop on Commutative Algebra and its Relation to Combinatorics and Computer Algebra, ICTP, Trieste, Italy (207)
- 31 Fermat's Last Theorem, Gresham Geometry Lecture, London (212)

### JUNE

- 1-7 Algebraic Topology Conference, Barcelona, Spain (201)
- 4 Edinburgh Mathematical Society Meeting, St Andrews (209)
- 5-11 Workshop on Harmonic Analysis, Oscillatory Integrals & Applications to PDEs, ICMS, Edinburgh (210)
- 13-17 Elliptic & Parabolic Problems Conference, Pont-a-Mousson, France (204)
- 13-17 Hyperbolic Problems - Theory, Computations & Applications Conference, Stony Brook, New York, U.S.A. (204)
- 17 London Mathematical Society Meeting, London

### JULY

- 1-11 Quantum Concepts in Space and Time, LMS Durham Symposia (211)
- 4-7 Conference on Nonlinear Dynamics and Pattern Formation in the Natural Environment, The Netherlands (210)
- 11-16 Quantum Communication and Measurement Workshop, University of Nottingham (212)
- 11-22 Topological Methods in Differential Equations and Inclusions Seminar, University of Montreal Canada (212)

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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.bay.

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Printed by Boyatt Wood Press, Southampton (0703) 333132

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