# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

**No. 233** **December 1995**

## FORTHCOMING SOCIETY MEETINGS

***Friday-Saturday 16-17 February 1996, Bath University***
Differential Equations
H. Brézis, E.B. Davies, E.H. Lieb,
P.H. Rabinowitz, C.A. Stuart, T. Weidl

***Friday-Saturday 10-11 May 1996, University of Glasgow***
Joint Meeting with the Edinburgh Mathematical Society
Algebra
A. Lubotsky, K. Goodearl, G. Levitt, J. Rickard, C. Maclachlan

***Friday 21 June 1996, Linnean Society, London***

***Friday 18 October 1996, Linnean Society, London***

***Friday 15 November 1996, Linnean Society, London***

## LMS COUNCIL DIARY

Council met on Friday 20 October. After debating the Annual Report and Accounts (on which see elsewhere in this Newsletter) and appointing people to committees, we turned to the more inspiring topics of education and Russia.

From the Education Committee we had the final version of the mathematics careers pamphlet, which is now being distributed to schools. We also had the Report on 'Tackling the mathematics problem', from the working party which the Society set up jointly with the Institute of Mathematics and its Applications and the Royal Statistical Society. This report states clearly, and with evidence, that 'the United Kingdom faces extremely serious problems relating to the supply and the mathematical preparation of entrants to university courses in mathematics, science, engineering and technology', and proposes some urgent responses.

We heard that some universities implementing the four year MMath degrees had sent questions to the Education Committee. The Society has not been collecting data on the progress and takeup of these degrees, but it is possible we shall do this next year as part of the statistical questionnaire which will go to heads of mathematics and statistics departments.

The Society now has frequent contacts with mathematical life in Russia. The translation journals which we publish keep our Publications Secretary in a state of constant negotiation. Three years ago Council set up an 'fSU committee' to advise Council on how best to support Russian and fSU mathematics in the wake of the breakup of the Soviet Union, and one consequence was the fSU grant scheme. At this meeting we disbanded the fSU committee, which has served its purpose, but we continued the fSU grant scheme until (at least) August 1998 since it plainly still meets a need.

Wilfrid Hodges

## LONDON MATHEMATICAL SOCIETY 1995 COUNCIL ELECTIONS

At the Annual General Meeting on 17 November 1995, the following members were elected to Council: N.J. Hitchin (President); W.A. Hodges, E.G. Rees (Vice-Presidents); A.O. Morris (Treasurer); R.Y. Sharp (Council and General Secretary); D.J.H. Garling (Meetings and Membership Secretary); D.A. Brannan (Publications Secretary); J.A. Erdos (Librarian); K.A. Brown, P.T. Saunders (Members-at-Large, 2-year terms); J.M. Ball, U. Martin, J.C. Robson, M.J. Taylor (Members-at-Large, 1-year terms). R.A. Bailey, A.R. Camina, A.D. Gardiner, J.D.S. Jones, J.F. Toland and C.T.C. Wall are Members-at-Large whose terms expire in 1996.

R.Y. Sharp
Council and General Secretary

## ANNUAL REPORT AND ACCOUNTS

Council has approved the Society's combined Annual Report and Accounts. Members who wish to receive a copy should send a request to The Administrator, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, e-mail: lms@kcl.ac.uk. A version will be deposited in the Society's archive on the World Wide Web/at http://www.qmw.ac.uk/~lms/lms.html

## OLGA TAUSSKY

Professor Olga Taussky, who was elected a member of the London Mathematical Society on 16 January 1936, died on 7 October 1995. She served on the LMS Council from 1944-47.

## SIR ALAN WILSON

Sir Alan Wilson, FRS, who was elected a member of the London Mathematical Society on 6 February 1930, died on 30 September 1995.

## SIZE OF THE LMS BULLETIN

LMS Council has decided that the size of the ***Bulletin*** be increased so that each issue is 112 pages long, with effect from the January 1996 issue (that is, from the first issue of Volume 28). It was also agreed that there would be no corresponding increase in the price of the ***Bulletin.***

D.A. Brannan
Publications Secretary

## DEPARTMENTAL NEWS

**East Anglia University** Professor Zalesskii has now taken up the post of Professor of Mathematics.

**Plymouth University** Promotions to Reader: Dr Stephen A Huggett - Reader in Mathematical Physics; Dr Marian Aron - Reader in Continuum Mechanics. New Appointments: Dr David I. Graham - Lecturer in Mathematics; Dr Colin J. Christopher - Lecturer in Mathematics (both one year posts).

**Ulster University** Dr K. Farahmand has been promoted to a Readership with effect from October 1995.

**Warwick University** J.D.S Jones was appointed to a Professorship as of 1 October 1995.

## MATHEMATICS AS A METAPHOR

We're all used to the idea of metaphors from sport. Any mathematician in this country would know what you meant if you said that a participant in an academic argument "scored an own goal" or "kept a straight bat", or (for North American readers) "never got to first base". It seems the compliment is now being returned. This is how one member of the USA Rugby League team explained their 64-6 loss to the Cook Islands: "You can have a population of 250 million, but if none of them have been taught maths, they are going to struggle against a country of five people, if all of those have been taught maths."

P.T. Saunders

## 48th BRITISH MATHEMATICAL COLLOQUIUM
### Second Announcement

The 48th BMC, supported by a grant from the LMS, takes place at UMIST from 9-12 April 1996. The principal speakers are confirmed as A. Casson (Berkley), A. Wiles (Princeton) and E. Zel'manov (Yale). There will be special sessions in Combinatorics and Differential Geometry/Mathematical Physics.

**Applications** An application form is being distributed with this Newsletter and directly to UK Mathematics Departments. It is also available by e-mail on request from bmc@umist.ac.uk.

**Postgraduate Students** The LMS grant is being used to subsidise the expenses of postgraduate students attending the Colloquium. We strongly urge postgraduate students to take advantage of this. Applications should be made on the separate postgraduate application form which will be distributed to Mathematics Departments, and is also available by e-mail as above.

**Further Information** Further updates on the BMC will appear in future Newsletters. Enquiries should be made to: Dr. M. D. Coleman, Department of Mathematics, UMIST, PO Box 88, Manchester M60 1QD; e-mail: bmc@umist.ac.uk

M.D. Coleman

## FRACTAL 97
### Call for Papers

The 4th International Working Conference on "Fractals in the Natural and Applied Sciences" will be held from 8 to 11 April 1997 at Denver, Colorado, USA. The conference is intended to provide a forum for the dissemination of the latest research findings in the broad field of fractals. Interdisciplinary submissions are strongly encouraged. Conference topics (amongst others) are: Applications, diffusion, disordered systems, Dynamical systems, Fractal surfaces, Growth phenomena, Image analysis, Multifractal formalism, Pattern formation, Phase transitions, Self organisation, Turbulence, Visualisation.

Four copies of a full paper in English, typed on one side only and limited to 5000 words (11 pages in total), should be sent by post to arrive no later than 5 August 1996. No e-mail or fax submissions will be accepted. Submission of a paper implies that the work has not been previously published nor is currently under consideration for publication elsewhere. In order to be considered, the first page should contain the title, authors' names and affiliations, phone and fax numbers, full electronic and postal addresses, an abstract of not more than 200 words, and at most five keywords. All papers will be refereed and those accepted and presented will be published

The Conference is promoted by the International Federation for Information Processing through its Specialist Group on Fractals and Chaos, SG15, organised by Kingston University, UK and hosted by University of Denver, USA. The Conference Chairman is M.M. Novak (UK) and the Organising chairman is T.G. Dewey (USA).

Deadline for full papers: 5 August 1996; Notification of acceptance: 14 October 1996; Camera ready copy: 8 November 1996. The latest information is available on http://www.kingston.ac.uk.aps412. Please submit your paper to: Miroslav M. Novak, School of Physics, Kingston University, Surrey KT1 2EE; e-mail: novak@kingston.ac.uk: fax: +44 181 547 7562: tel: + 44 181 547 2000.

## FORDER LECTURESHIP 1997

The 1997 Forder Lecturer will be Professor I.N. Stewart, of the University of Warwick. The Forder Lecturer is appointed biennially by the London Mathematical Society and the New Zealand Mathematical Society. The Lecturer is a member of the London Mathematical Society normally resident in the United Kingdom who visits New Zealand for a period of about four weeks. The Lectureship was instituted in 1986 in honour of the late Professor H.G. Forder, formerly of the University of Auckland and a benefactor of the London Mathematical Society.

## SCHOOL MATHEMATICS

Last January the London Mathematical Society Council commissioned a position paper on the state of mathematics in the schools. A working group was set up under the chairmanship of Professor G. Howson, with members drawn from the Institute of Mathematics and its Applications and the Royal Statistical Society, as well as from the LMS. Its report, "Tackling the Mathematics Problem", was published on 31 October.

A brief summary of the main points was issued as a press release and is reproduced below. Copies of the full report are being sent to all UK university mathematics departments; members who would like one for their own use should contact the LMS Administrator at Burlington House (preferably by e-mail: lms@kcl.ac.uk).

The report attracted considerable attention in the media; in fact, some items about it appeared even before it was published. Members of the Working Group were interviewed on the radio and TV. Mathematics, it seems, is still news.

So far, so good. The report demonstrates beyond doubt that there is a serious problem, and offers some suggestions as to the directions in which we might look for answers. There has been enough about it in the media to ensure that it can't be ignored, especially since it was published on behalf of the three societies together, and the Engineering Council has expressed its support as well.

Whether it will lead to the sorts of changes that are necessary is another matter. The mathematical community will have to keep watch to see that it does, and must also be ready to help with the work. One way or another, school mathematics is going to be on our agenda for some time.

### TEXT OF THE PRESS RELEASE

There are serious problems in this country concerning education in mathematics. As a result, too few students are entering university to read mathematics, science and technology, and many of those that do are inadequately prepared.

## PRESS CONFERENCE

A. M Lepper A.D. Gardiner N.J. Hitchin A.G. Howson J.C. Robson I.J. Goddard

In particular, teachers in higher education are acutely aware of:

- A serious lack in technical fluency, the ability to carry out numerical and algebraic calculations with ease and accuracy.
- A marked decline in the ability to solve problems that require more than one step.
- A changed idea of what mathematics is - in particular of the essential place within it of precision and proof.

To improve the situation will require some fundamental changes in the curriculum. There is also a need to look carefully at the way in which mathematics teaching post-14 is organised and assessed and at teacher recruitment and training.

While it is not for university mathematicians to decide what should happen in the schools, their specialist knowledge and experience gives them unique authority to comment on issues affecting the mathematical life of the nation. The present system for decision making effectively excludes them, and others as well, from effective participation.

**The report recommends:**

1. The DFEE should set up a standing committee, with substantial representation from higher education, to provide an overview of education in mathematics from primary school through to university, and to ensure that sound advice and adequate support are provided to those involved in its organisation and delivery.
2. The government should establish, as a matter of urgency, a Committee of Enquiry, on which higher education is strongly represented, with the express task of examining the current curricula in mathematics, both ages 5-16 and ages 16-19, and making proposals in time to allow carefully considered action at the end of the current moratorium on change in the National Curriculum.

The Committee's brief should include the aims and content of the curriculum, the manner in which it should be specified, principles underlying the ways in which the needs of all types of students can be met, and means of assessment. Its concerns should also include mathematics and numeracy provision overseen by NCVQ.

**Proposals for discussion:**

1. As a third of all students progress to higher education and most of these use some mathematics in their degree courses, there needs to be more emphasis on important basic topics and on the techniques that will form a firm foundation for further study.
2. The exactness of mathematics and its notion of proof should not be distorted and close attention should be paid to accuracy and clarity of oral and written mathematical communication, including the setting out of logical arguments in good English.
3. The recent substantial cut in time spent on mathematics, especially at ages 11-16, must be urgently reviewed.
4. Until major changes can be made, the decision to allow Grade B to be obtained on GCSE intermediate mathematics papers, other than in exceptional circumstances, should be reconsidered.
5. Methods of dealing with A- and AS-level students with different needs, ability and attainment must be given serious attention. Consideration should also be given to the size and detail of the "core" and to a reduction in the number of different A-level syllabi.
6. The government should consider alternatives to A-level, which in its present form discourages too many students from opting for courses in which mathematical and scientific studies form a coherent component.
7. Steps must be taken to counter the unfortunate effect of "market forces" on standards and also on the courses themselves.
8. Measures must be taken to improve the supply of highly qualified mathematics teachers at all levels.
9. Universities should provide courses or modules suitable for potential school teachers of mathematics. They must also consider their provision for incoming students, especially in the short term before changes can be made at secondary level.

**Other points:**

1. Comparative studies indicate that we lag behind many of those countries with which we have to compete, both in expectations and in outcomes. More attention must be paid to what is being attained in other countries and how this is achieved.
2. The working group was not concerned primarily with standards as such, but with the question of whether the mathematics that students are learning is appropriate to their needs and those of the country. Nevertheless, it did investigate the claim frequently made by officials and others that "what little evidence there is" indicates that standards may even have improved. It examined the evidence on which this is based (and the more significant evidence which it ignores) and concluded that it cannot attach any weight to it.
3. The School Curriculum and Assessment Authority claims to consult widely, but its currently preferred mechanism, primarily large-scale 'consultation' exercises and ad hoc committees, provides the bodies with whom SCAA should be cooperating with no systematic representation, no continuity and no stake in agenda setting.

P.T. Saunders

## GRESHAM COLLEGE GEOMETRY

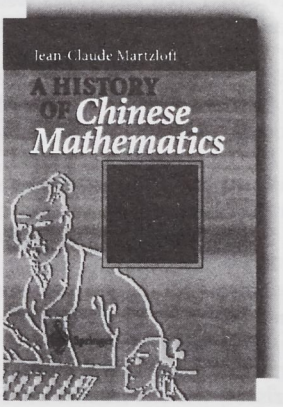
During the 1996 Spring semester three Public Lectures in Geometry will be given by Professor Ian Stewart (Gresham Professor of Geometry)'Furiously Flashing Fireflies' Wednesday 7 February at 1.00 pm at Gresham College, 'Fibonacci's Fractional Flowers: Mathematical Patterns in Seeds and Petals' Thursday 14 March at 5.30 pm at Bethnal Green High School, Gosset Street, London E2 and 'From Footballs to Fullerenes' Tuesday 14 May at 1.00 pm at Gresham College. Admission is free and without tickets. Further details of the lectures are available from Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH, telephone 0171-831 0575.

## EUROPEAN POST-DOCTORAL INSTITUTE FOR THE MATHEMATICAL SCIENCES

Three European Mathematical Research Institutes, the Institut des Hautes Etudes Scientifiques (Bures-sur-Yvette, France), the Isaac Newton Institute for Mathematical Sciences (Cambridge, England) and the Max Planck Institut für Mathematik (Bonn, Germany) are joining together to create a European Post-Doctoral Institute for the Mathematical Sciences. This Institute was inaugurated at Bures-sur-Yvette on Friday 13 October in the presence of M. de Boishue, Secretary of State for Higher Education. The principal objects of this european institute will be *'to expose postgraduates to the highest standards of centres of excellence while preparing them for a career in the academic or industrial world, to make visible and attractive a European space in mathematical sciences and to establish an explicit long-term collaboration between these three distinguished mathematical institutes'.*

The Institute hopes to award each year up to 20 two-year bursaries to european mathematicians, one or two years after they obtain their doctorates. The recipients will spend up to a year in one of the three institutes and the rest of their time in another european institution (Research Centre, University or Industrial Company). At least half the time must be spent outside their home country. The recipients will be selected by a Scientific Committee of 10 members, consisting of the three Directors of the Institutes, three other mathematicians one associated with each Institute, and four mathematicians chosen from outside France, Germany and Great Britain. The institutes will seek support from industry, foundations and national and international bodies for this programme and its developments. Further information can be obtained from the Institut des Hautes Etudes Scientifiques at Bures-sur-Yvette, tel: (1)69074853 or fax: (1)69073997.

# Springer – making mathematical history




J.-C. Martzloff

## A History of Chinese Mathematics

1995. Approx. 430 pages.
Hardcover DM 78,–
ISBN 3-540-54749-5
Due December 1995

Devoted to the history of Chinese mathematics from its origins to the beginning of the 20th century, this book draws directly from original sources as well as from the most recent Chinese, Japanese and Western research on the subject. It uses throughout a critical and comparative approach, setting each development clearly within its intellectual and socio-cultural context and explaining HOW and WHy the Chinese mathematical tradition developed in such a radically different way to its Western counterparts.

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*Annals of Science*

W. S. Anglin, J. Lambek

## The Heritage of Thales

1995. X, 282 pages. 23 figures (Undergraduate Texts in Mathematics).
Hardcover DM 58,–
ISBN 0-387-94544-X

This book on the history, philosophy and foundations of mathematics is mainly intended for undergraduate mathematics students, but also for students in the sciences, humanities and education with a strong interest in mathematics. It proceeds in historical order from about 1800 BC to 1800 AD and then presents some selected topics of foundational interest from the 19th and 20th century.

E. Hairer, G. Wanner

## Analysis by Its History

1995. X, 373 pages. 183 figures (Undergraduate Texts in Mathematics. Readings in Mathematics).
Hardcover DM 68,–
ISBN 0-387-94551-2
Due November 1995

**Analysis by Its History** presents first year calculus roughly in the order in which it first was discovered. The text is complemented by a large number of examples, calculations and mathematical pictures.

Prices subject to change without notice.
In EU countries the local VAT is effective.

Springer

# EPSRC MATHEMATICS PROGRAMME
# STOCHASTIC MODELLING IN SCIENCE AND TECHNOLOGY

The Mathematics Programme has earmarked funds of up to £1.2M in the current session for research in statistics with a firm bias towards stochastic modelling applied to industrially relevant problems. The SMST Programme aims to encourage genuinely collaborative and interdisciplinary research, facilitating the transfer and development of complex stochastic systems methodologies into other academic disciplines and industry, as well as contributing to the vitality of UK statistics research.

**Assessment Criteria** Stochastic Modelling in Science and Technology (SMST) operates in biased responsive mode. The Programme will consider all statistics applications within the remit of the EPSRC Mathematics Programme. Applications are especially sought which are demonstrably motivated by substantive problems in other disciplines and in industry which will further the understanding of the new methodologies. Priority will be given to research proposals which involve collaboration between statisticians and scientists from other disciplines, from either academia or industry.

Applications will be assessed according to the following criteria:

- quality and timeliness of the proposed research;
- abilities of the proposed research team and, where appropriate, their past record;
- current relevance of the research to identified users or the potential contribution to statistical science;
- potential for commercial application of the results within the UK.

Applications should be received by **12 January 1996.** All applications should be made on the EPS(RP) form available from university registrars or research grant offices and should be clearly marked SMST (MATHEMATICS PROGRAMME). The accompanying case for support should conform to the guidelines set out in the notes for guidance which accompany the application form, including a clear statement of objectives and milestones for the research programme and the relevance to the SMST Programme. It is envisaged that decisions will normally be made by the end of April 1996. Contact Dr Philippa Hemmings, Programme Manager, Applied Mathematics and Statistics, EPSRC, Polar House, North Star Avenue, Swindon SN2 1ET; tel: 01793 444162; e-mail: Philippa.Hemmings@epsrc.ac.uk.

**Grants Funded by Stochastic Modelling in Science and Technology Programme in 1994-95**

Professor P. Green (Bristol) *Reversible Jump MCMC Computation and Bayesian Model Determination*

Dr G. Nason, Professor B. Silverman (Bristol) *Wavelet Methods in Statistics*

Professor D. Titterington, Professor J. Chapman, Dr I. Molchanov (Glasgow) *Aspects of Statistical Image Analysis Applied to the Behaviour of Magnetic Materials*

Professor P. Brown (Kent), Dr T. Fearn (UCL) *Feature Selection with many Variables*

Professor P. Young, Dr J. Whittaker, Dr A. Chotai (Lancaster) *Identification, Estimation, and Forecasting Methods for a Class of Nonlinear Stochastic Time Series*

Professor K. Mardia, Professor J. Kent, Dr C. Taylor, Dr I. Dryden, Dr R. Akroyd (Leeds) *Multi-scale Approaches to Shape Change and Image Warping*

Professor A. O'Hagan (Nottingham) *Bayesian Uncertainty Analysis and Calibration of Complex Computer Models*

Dr D. Balding, Dr R. Nichols (QMWC) *Extending Stochastic Genetic Models to Allow Inference from Highly Variable Molecular Data*

Professor W. Kendall (Warwick) *Stochastic Calculus in AXIOM Using Molecules of Stochastic Differentials*

Professor J. Smith (Warwick) *Dynamic Probabilistic Expert Systems*

Professor H. Wynn, Mr T. Shaw (Warwick) *Algebraic Geometry for the Design of Experiments*

## THE EUROPEAN MATHEMATICAL SOCIETY LECTURESHIP 1997

Bids for the EMS Lectureship 1997 are invited, following the rules outlined below, and should be sent to the secretary of the EMS, at the following address, not later than **1 January 1996:** Professor Peter Michor, Institut für Mathematik, Universität Wien, Strudlhofgasse 4, A-1090 Wien, Austria; e-mail: Peter.Michor@esi.ac.at. The possibility to give the same lecture on two sites is welcome. See also the report on the EMS Lectureship 1995 in the September issue of the EMS Newsletter.

**1. Nature and purpose** The idea of the EMS Lectureship is, in each odd-numbered year, to invite a distinguished mathematician to visit an institution within the area covered by the EMS, to give a series of from three to five lectures of an advanced expository nature on a topic of current research interest. The lecturer should subsequently provide a written version, which should be submitted for publication, normally to the 'Journal of the European Mathematical Society', when it will be established. In the selection of the venue for the lectures, preference should be given to institutions which might not otherwise be able to host such a meeting. If the lecturer agrees, the lectures should be repeated at one other location, also within the area covered by the EMS but remote from the first.

**2. Financial arrangements** The EMS will pay travel expenses for the lecturer, and will also pay a lecture fee upon receipt of the manuscript. The host institution will be responsible for the lecturer's accommodation and living expenses, and for ensuring appropriate hospitality.

**3. Timing and selection** For the lecturer in year n, there will be an announcement in the September issue of the Newsletter in year n-2, inviting members to bid for a visit to their department by a named lecturer. At its first meeting in year n-1, the Executive Committee will agree on an ordered list of the top three choices for the combination of lecturer and location. The President of the EMS will invite the lecturer to be the EMS Lecturer for year n. If the lecturer declines the invitation, then the second (and if necessary the third) choice will be approached. The host institution will then become responsible for making the detailed arrangements for the lectures, and making appropriate publicity for the event.

## DURHAM SYMPOSIA

The Durham Symposia exists through its support of conferences, workshops and instructional courses to stimulate and enhance mathematics in the UK. In recent years the Durham Symposia has hosted numerous successful conferences and workshops on a wide range of topics including Quantum Gravity, Group Theory, Mathematical Models of Liquid Crystals, etc. In 1996 it will hold Conferences on Partial Differential Equations and Spectral Theory, Galois Representations and Arithmetic Algebraic Geometry, and Model Theory of Fields. In addition there is to be an instructional conference in Functional Analysis.

From this year the Durham Symposia committee has been charged to initiate, on behalf of Council and with an operating budget, proposals for research conferences, workshops and instructional conferences. As in the past support is also sought from other funding bodies; particularly the EPSRC. In this connection readers should be aware that application to EPSRC for support of symposia and workshops will only be considered once a year. Such applications should be submitted to EPSRC by 1 December 1995 and annually thereafter. It is expected that decisions will be available by the end of March 1996.

Enquiries about any aspect of the Durham Symposia should be made to Professor B.D. Sleeman, Department of Applied Mathematics, University of Leeds, Leeds LS2 9.TT; tel. 0113 233 5188; fax 0113 242 9925; e-mail: bds@amsta.leeds.ac.uk, who would welcome proposals for symposia, workshops and instructional conferences.

B.D. Sleeman

## MEETING ON GEOMETRIC GROUP THEORY

As part of a regular (twice-annual) series of joint meetings, the London-Sussex-Southampton Topology Seminar will hold a two-day meeting on 15 and 16 December at King's College London with partial financial support provided by the London Mathematical Society (under a Scheme 3 award to the research group in Geometric Group Theory). The theme will be Geometric and Combinatorial Methods in Group Theory; it is intended that a good part of the material covered will be accessible to second year graduate students. Principal speakers include J. Gilman (visiting IHES), R.H. Gilman (visiting IHES) and V. Sergiescu (Grenoble). Time slots will be available for short (30 minute) talks by participants. A conference banquet is planned for the Friday evening. All are welcome to attend. Please contact either the organisers or the following e-mail address: topsem@bay.cc.kcl.ac.uk if you wish to receive information about the schedule of talks and arrangements for overnight accommodation. Local organisers are W.J. Harvey (KCL) and I.M. Chiswell (QMW).

## SEMINAIRE DE MATHEMATIQUES SUPERIEURES NATO Advanced Study Institute

A Seminar on "Graph Symmetry: Algebraic Methods and Applications" will be held at the Université de Montréal from 1 - 12 July 1996. The Seminar is held with the support of NATO, and the Université de Montréal. The principal speakers are B. Alspach (Simon Fraser), P. Cameron (London), A.D. Gardiner (Birmingham), C.D. Godsil (Waterloo), G. Hahn (Montreal), R. Klasing (Paderborn), A. Lubotzky (Jerusalem), B. Mohar (Ljubljana), C. Praeger (Western Australia), R. Scapellato (Politecnico di Milano), D. Sotteau (Paris-Sud), M.E. Watkins (Syracuse). Partial financial assistance will be available. Priority will be given to graduate students. Requests for participation or financial assistance must be received before 20th February 1996. Further information is available from G. David, Coordinator SMS, Département de Mathématiques et de Statistique, Université de Montréal, CP 6128-Centre-ville, Montréal, Québec, Canada H3C 3J7, fax (514) 343-5700.

## LONGSTANDING LMS MEMBERS

The following is a list of mathematicians who will have completed fifty years or more of membership of the London Mathematical Society at the end of December 1995.

1924 Oppenheim, A.
1928 Cartwright, M.L.
1929 Chowla, S.S
1929 Edge, W.L
1929 Verblunsky, S.
1929 Wright, E.M.
1930 Offord, A.C
1931 McCrea,W.H
1931 Shah, S.M.
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 Burnett,D
1934 Erdös, P.
1934 Meyler, D.S.
1935 Howlett, J.
1936 Neumann, B.H.
1937 Pitt, H.R.
1938 Derry, D.
1938 Love, E.R
1938 Smithies, F.
1939 Spencer, D.C.
1940 Barrett, W.
1940 Fuchs, W.H.J.
1940 Good, I.J.
1940 Kendall, D.G.
1940 Willmore, T.J.
1942 Edmonds, S.M.
1942 Goddard, L.S.
1943 Dyson, F.J.
1943 Kings Norton
1944 Kneebone, G.T.
1944 Weston, J.D.
1944 Wilkes, E.W.
1944 Williams, A.E.
1945 Barnard, G.A.
1945 Bradburn, M.
1945 Collard, K.
1945 Henstock, R.
1945 Ollerenshaw, K.
1945 Prior, L.E.
1945 Rogers, C.A.
1945 Tropper, A.M.
1945 Tutte, W.T.

## Geometry from a Differentiable Viewpoint

JOHN MCCLEARY

Offers a new treatment of differential geometry which is designed to make the subject approachable for advanced undergraduates. Professor McCleary considers the historical development of non-Euclidean geometry, placing differential geometry in the context of geometry with which students will be familiar from earlier courses

£32.50 net HB 0 521 41430 X 336 pp. 1995
£14.95 net PB 0 521 42480 1

## Equivalence, Invariants and Symmetry

PETER J. OLVER

This book presents an innovative synthesis of methods used to study problems of equivalence and symmetry which arise in a variety of mathematical fields and physical applications. A valuable resource for students and researchers in geometry, analysis, algebra, mathematical physics and related fields.

£24.95 net HB 0 521 47811 1 541 pp. 1995

## Lectures on Lie Groups and Lie Algebras

ROGER CARTER, IAN MACDONALD and GRAEME SEGAL

An excellent introduction to the theory of Lie groups and Lie algebras from an LMS/SERC sponsored short course in 1993. Together these lectures provide an elementary account of the theory that is unsurpassed.

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£13.95 net PB 0 521 49922 4

London Mathematical Society Student Texts 32

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## A Guide to Quantum Groups

V. CHARI and A. N. PRESSLEY

This book gives a comprehensive view of quantum groups and their applications. The authors build on a self-contained account of the foundations of the subject and go on to treat the more advanced aspects concisely and with detailed references to the literature.

£22.95 net PB 0 521 55884 0 672 pp. 1995

## Stochastic Partial Differential Equations

Edited by ALISON ETHERIDGE

Stochastic partial differential equations can be used in many areas of science to model complex systems that evolve over time. Their analysis is currently an area of much research interest. This book consists of papers given at the ICMS meeting held in 1994 on this topic and it brings together some of the world's best known authorities on stochastic partial differential equations.

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# Mathematical Biology Research Training Studentships

This scheme is for individuals who wish to develop a career in research, applying mathematical disciplines to biomedical problems. The Trust wishes to stimulate research in mathematical biology and in particular to promote the flow of well-trained research workers into this field.

Research Training Studentships are available for graduates, with an upper second or first class degree in any mathematical or biological subject, who wish to study for a PhD degree in the UK or the Republic of Ireland. Overseas students may apply provided that they can demonstrate that their degree is equivalent to at least an upper second class honours degree from a UK or Irish university.

Support will be available for a course lasting up to four years. This is to allow those with mathematical training to apply their knowledge to the study of a biomedical project, and to allow those who graduated in a biological subject additional time to develop mathematical skills.

It should be noted that the Trust's remit is primarily to support research in medicine, veterinary medicine and related biological sciences. **The Trust does not support research on cancer.** Studentships may not normally be held in cancer research institutes.

Applications should be made jointly by the intended student and supervisor. Studentship stipends start at £10,593 per annum (£11,980 per annum in London). Research expenses of £4,000 per annum will be provided. All approved university and college fees will be met by the Trust at the home rate only.

Appropriate forms are available on written request from: **Miss Margaret Hurley, (Grants Section), The Wellcome Trust, 183 Euston Road, London NW1 2BE. Fax: 0171-611 8687.**

Applications must be submitted by 26 February 1996.

**LATE APPLICATIONS WILL NOT BE ACCEPTED.**

Please quote reference: BIOMATH/S/96.


**The Wellcome Trust is a Registered Charity (No: 210183) and seeks to support research in biomedical sciences and the history of medicine by means of grants and other activities**

## 1st CROATIAN MATHEMATICAL CONGRESS
### First Announcement

The Croatian Mathematical Society is pleased to announce the First Croatian Mathematical Congress, to be held in Zagreb, Croatia, from 18 - 20 July 1996. The Congress will have a strong international component, and it is open to all areas of mathematics. Congress activities will start on Thursday morning, 18 July and will end on Saturday afternoon, 20 July 1996. We would like to emphasise that Sunday 21 July 1996 is also the arrival date for the 2nd European Congress, to be held in nearby Budapest, Hungary.

The chairman of the Scientific Committee is Branko Najman (University of Zagreb). The tentative list of invited speakers includes: J. Azema (Paris), J. Bertoin (Paris), A. Bourgeat (Saint-Etienne), R.J. Daverman (Knoxville), Z. Janko (Heidelberg), A. Ivic Weiss (York, Canada), A. Mikelic (Lyon), D. Mikelic (Salt Lake City), S.J. Patterson (Göttingen), M. Rao (Gainesville, Florida), J.R.M. Sanjurjo (Madrid), K. Veselic (Hagen), M.V. Wickerhauser (St Louis). Those interested in receiving additional information should contact us prior to 1 January 1996. All correspondence may be addressed to: Branko Najman, Department of Mathematics, University of Zagreb, Bijenicka 30, 10 000 Zagreb, Croatia; tel: 385 1 4555 7201; fax: 385 1 432 484; e-mail: congress@math.hr.

## ANALYTIC AND ELEMENTARY NUMBER THEORY
### 18-20 July 1996

A satellite conference to ECM '96 will be held in honour of E. Hlawka's 80th birthday at the University of Vienna and University of Natural Resources Vienna, Austria. Organizers: W.G. Nowak and J. Schoissengeier (Vienna). Plenary Speakers: M. Huxley (Cardiff), M. Jutila (Turku), E Kräzel (Jena/Vienna), W.M. Schmidt (Boulder), W. Schwarz (Frankfurt). Deadline for abstracts of contributed 20-minute talks: 1 May 1996. Information: J. Schoissengeier, Institute for Mathematics, University of Vienna, Strudlhofgasse 4, A-1090 Vienna, Austria; e-mail (preferably) nowak@mail.boku.ac.at.

## CONFERENCE ON HYPERBOLIC PROBLEMS
### First Announcement

The Sixth International Conference on Hyperbolic Problems, Theory, Numerics and Applications will be held from 15 to 19 June 1996 in Hong Kong. This conference is to provide a high-standard forum for mathematical scientists to present their latest progress on nonlinear hyperbolic problems It aims at bringing together senior scientists and young researchers for academic interaction. Titles and abstracts of contributed papers must be received by 31 January 1996. The abstracts should be typed by LaTeX, not to exceed one page, and sent by floppy disk to Dr Tong Yang, Department of Mathematics, City University of Hong Kong, 83 Tat Chee Avenue, Kowloon, Hong Kong or e-mail (mago@cityu.edu.hk). For further information and registration, contact Colette Lam, e-mail: mago@cityu.edu.hk, fax: (852) 2788 8561.

## INTERNATIONAL RESEARCH SYMPOSIUM: NONSTANDARD ANALYSIS AND ITS APPLICATIONS

An International Research Symposium will be held in Edinburgh from 11 - 17 August 1996. The organisers are N.J. Cutland (Hull), L. Arkeryd (Goteborg), C.W. Henson (Illinois). It will be hosted by the International Centre for Mathematical Sciences (ICMS) at the University of Edinburgh. Invited speakers and contributed talks will report on recent developments in Nonstandard Analysis and its Applications. For further information contact: ICMS, 14 India Street, Edinburgh EH3 6EZ; e-mail: icms@maths.ed.ac.uk; fax (+44)-(0)131-220- 1053); WWW:http://www.ma.hw.ac.uk/icms/.

## VISIT OF PROFESSOR J.-C. HAUSMANN

Professor Jean-Claude Hausmann (Geneva) will be visiting the UK under the London Mathematical Society Scheme 2 for Visitors' Grants, and will speak on "The topology and symplectic geometry of polygon spaces" at the following places and times: Monday 19th February, 2.15 pm, Mathematical Institute, Oxford University; Wednesday 21st February, 2.00 pm, Mathematics Institute, Warwick University; Friday 23rd February, 3.30 pm, Department of Mathematics and Statistics, Edinburgh University; Monday 26th February, 2.15 pm, Department of Mathematics, Durham University.

## NATO ASI ON NONSTANDARD ANALYSIS AND ITS APPLICATIONS

A NATO Advanced Study Institute (ASI) will be held in Edinburgh, 1-13 July 1996. The organisers are N.J. Cutland (Hull) (Director); L. Arkeryd (Goteborg); C.W. Henson (Illinois). This intensive Instructional Conference will be hosted by the International Centre for Mathematical Sciences (ICMS), at the University of Edinburgh. It is aimed at the postdoctoral level, but will be accessible to good research students. The aim is to teach the basics of nonstandard analysis and to make the wide range of applications more widely known amongst research mathematicians. There will be courses and tutorial sessions covering: Foundations of nonstandard analysis and nonstandard models, nonstandard real analysis, topological applications, Loeb measure theory, applications in probability and stochastic analysis, functional analysis, differential equations (ODEs, PDEs, SDEs and SPDEs), applications in mathematical physics and mathematical finance theory. The lecturers will be: L. Arkeryd, E. Benoit, M. Capinski, N.J. Cutland, C.W. Henson, R. Jin, H.J. Keisler, P.E. Kopp, T. Lindstrom, P.A. Loeb, D.A. Ross, M. Wolff.

Financial support for suitable participants from NATO countries and NATO Cooperation Partner countries is available. The deadline for applications is 31 January 1996. Further information may be obtained from: ICMS, 14 India Street, Edinburgh EH3 6EZ; e-mail: icms@maths.ed.ac.uk; fax (+44)-(0)131-220- 1053); WWW:http: //www.ma.hw.ac.uk/ icms/.

## NINTH SCHRÖDINGER LECTURE

Dr David H. Hubel, Nobel Laureate, from the Department of Neurobiology, Harvard Medical School, will give the Ninth Schrödinger Lecture on "Form, Colour and Depth: Perception and the Brain", on Wednesday 13 March at 5.30 pm in the Great Hall of Imperial College, London SW7. For tickets contact Mr J. Vandridge-Ames of Imperial College Registry.

## EXECUTIVE EDITING

The London Mathematical Society invites tenders from suitably qualified persons for the executive editing of mathematical periodicals in 1996. Further information may be obtained from the Societys Publications Secretary at Burlington House, Piccadilly, London W1V 0NL. The closing date for receipt of tenders is **21 December 1995.**

## WORKSHOP ON JORDAN TRIPLES

A 2-day meeting on Jordan Triples and related topics will be held at University College, Dublin on Monday 8th January and Tuesday 9th January 1996. Participants include C-H Chu, L.J. Bunce, S. Dineen, R. Ryan, C.M. Edwards, P. Mellon and R.M. Timoney. Further information is available from P. Mellon Department of Mathematics, University College, Dublin 4, Ireland.

# Mathematical Biology Postdoctoral Research Training Fellowships

This scheme is for individuals who wish to develop a career in research, applying mathematical disciplines to biomedical problems. The Trust wishes to stimulate research in mathematical biology and in particular to promote the flow of well-trained research workers into this field.

Postdoctoral Research Training Fellowships are open to graduates in either mathematics or biology who have worked for the past three years in a British or Irish university, or who did so before taking up an appointment overseas. Mathematicians completing a PhD degree can be funded to pursue independent studies applying their mathematical skills to important biomedical problems. Alternatively, scientists with a doctorate in a biological subject can be funded to develop mathematical skills in relation to their biological interest.

Prospective fellows should apply within four years of completion of their PhD degree. Applicants should note that these fellowships are primarily intended for the acquisition and development of skills in mathematical biology rather than to sustain the careers of those with an established research background in their discipline.

It should be noted that the Trust's remit is primarily to support research in medicine, veterinary medicine and related biological sciences. **The Trust does not support research on cancer.** Fellowships may not normally be held in cancer research institutes.

Fellowship support can be requested for up to five years and can include funding, where appropriate, to attend an MSc course on the subject, or to obtain experience at a suitable centre abroad, or both. Normally, candidates would be expected to have two supervisors, one from each of the biological and mathematical sciences, whose laboratories or departments must be in the UK or Republic of Ireland. The stipend for these fellowships will be on the Trust's own fellowship scales, which are linked to University Lecturer scales, and will be in the range £14,317 to £26,430 per annum (including enhancement premium) according to age and experience. Essential research expenses may be requested. Short-listed candidates will be invited for interview in May 1996.

Appropriate forms are available on written request from: **Miss Margaret Hurley (Grants Section), The Wellcome Trust, 183 Euston Road, London NW1 2BE. Fax: 0171 611 8687.**

Applications must be submitted by 29 January 1996.

**LATE APPLICATIONS WILL NOT BE ACCEPTED.**

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**The Wellcome Trust is a Registered Charity (No: 210183) and seeks to support research in biomedical sciences and the history of medicine by means of grants and other activities**

# MATHEMATICIANS VISITING THE UK IN 1995/96

**BATH UNIVERSITY**

Dr J. Faraway (Michigan University) Statistics: Model uncertainty, non-parametrics, 1 Jul - 31 Dec '95

**BIRMINGHAM UNIVERSITY**

Professor S. Eguchi (Institute of Statistical Mathematics, Tokyo) Differential geometry in statistics, 11 Feb - 1 May '96

**BRUNEL UNIVERSITY**

Professor I. Maros (Hungarian Academy of Sciences, Budapest) Linear programming network optimization, Jan - Sep '96

Professor B. Nygreen (NTH, Trondheim, Norway) Discrete optimziation and scheduling problems, Jan - July '96

**CAMBRIDGE UNIVERSITY - DPMMS**

Professor M. A. Al-Gwaiz (King Saud University, Riyadh) Analysis, 1 Sep '95 - 31 Dec '96

Professor P.L. Bowers (Florida State University) Complex Analysis 31 Jan '96 - 1 May '96

Professor Y.J. Choie (Pohang University of Science & Technology, Korea) Number Theory 1 Mar '96 - 28 Feb '97

Dr D. Cubric (University of Ottawa) Logic, 1 Oct '95 - 30Sep '96

Dr H. Cui (Capital Normal University, Beijing) Category Theory, 1 Oct '95 -30 Sep '96

Dr J.-N.B. Dordain (Ecole Normale Superieure, Paris) Number Theory, 1 Oct '95 -30 Sep '96

Dr P. Grinspan (Ecole Normale Superieure, Paris) Number Theory, 1 Oct'95 - 10 - 30 Oct '96

Dr A. Langer (University of Koln, Germany) Number Theory, 1 Oct '95 -2 Dec '95

Dr D. Lu (University of Science & Technology of China) History of Western Physics, 1 Feb '96 - 31 Jan '97

Professor S.J. Montgomery-Smith (University of Missouri) Functional Analysis, 1 Oct '95 - 30 Sep '96

Miss J. Paterson (University of Melbourne) Topology, 1 Oct '95 - 30 Sep '96

Dr M. Ruszinko (Mathematical Research Institute of the Hungarian Academy of Sciences, Budapest) Combinatorics, 16 Oct '95 - 16 Apr '96

Professor K. Stephenson (University of Tennessee) Complex Analysis, 31 Jan '96 - 1 May '96

Professor H. Tropp (Humbolt State, Arcata, CA) History of Mathematics, 3 Oct - 1 Dec '95

Professor I-H. Tsai (National Taiwan University) Differential Geometry, 1 Apr '96 - 31 Mar '97

Dr H. Yamane (Osaka University, Japan) Topology, 2 May '95 - 27 Feb '96

**CITY UNIVERSITY**

Dr S.R.T. Kudri (Universidade Feral do Parana) Topology, 1 Oct '95 - 30 Sep '96

Professor R. Steinlage (University of Dayton) Topology, 1 Jan - 30 Apr '96

**DUNDEE UNIVERSITY**

Dr D. Kaminsi (Lethbridge University, Canada) Asymptotic analysis, Aug '95 - July '96

**DURHAM UNIVERSITY**

Professor N. Grossman (University of California) Asymptotics, Sep '95 - Oct '96

Dr Z.M. Sheng (Zhejiang University, China) Particle theory, Jan '95 - Jan '96

**ESSEX UNIVERSITY**

Dr P. Edwards (Monash University, Australia) Econometrics and management statistics, Jan - Mar '96

**EXETER UNIVERSITY**

Dr S. Wang (Zhejiang University of Technology) Analysis, Jan - Dec '96

**GLASGOW UNIVERSITY**

**Mathematics**

M.E. Antunes Simoes (Lisbon University) Ring theory, 15 Jan - 15 Feb '96

N.V. Dung (Mathematics Institute, Hanoi, Vietnam) Ring theory, 1 Feb '96 - 1 Mar '97

V. Guba (Vologda, Russia) Combinatorial group theory, combinatorial semigroup theory, Nov - Dec '95

A. Lakhtakia (Pennsylvania State University) Electromagnetic theory, Chaos theory, 14 Sep - 15 Dec '95

A. Viola-Prioli (Simon Bolivar University,

Venezuela) Ring theory, 15 Nov - 6 Dec '95

J. Viola-Prioli (Simon Bolivar University, Venezuela) Ring theory, 15 Nov - 6 Dec '95

**HERIOT-WATT UNIVERSITY**

Dr Y. Du (University of New England, Armidale, Australia) Reaction diffusion equations and bifurcation theory, 16 May - 10 Jul '96

Dr J. Kristensen (Aalborg University) Calculus of variations, 1 Sept '95 - 30 Aug '96

**HULL UNIVERSITY**

Dr M. Capinski (Jagiellonians, University, Krakow, Poland) Stochastic analysis, 1 Oct '95 - 30 Sep '96

Professor J. Putz (Alma College, Michigan, USA) Mathematics, music and perception, 1 Jan - 31 Aug '96

**KENT UNIVERSITY**

Dr E.A. Catchpole (University of New South Wales Australian Defence Force Academy) Statistical ecology, Bush fire modelling, Nov - Dec '96

Dr B. Finkenstaedt (Free University of Berlin) Nonlinear time series and econometrics, Oct '95 - Mar '96

Dr P. Gordo (Universidad de Salamanca, Spain) Symmetry methods and Painlevé analysis, Jan - Dec '96

Dr G. Maercker (Universite Libre de Bruxelles) Nonlinear time series, Mar - Jun '96

Dr N.C.K. Phillips (Southern Illinois University) Combinatorial computing, Jan - Jun '96

Dr D.M. Smith (University of New England, Australia) Discrete data, Statistical computing, Jan - Feb '96

Professor J.V. Zidek (University of British Columbia) Bayesian covariance structures, Jan - Jun '96

**KING'S COLLEGE LONDON**

Professor D. Levine (University of Texas at Arlington) Neural networks and dynamical systems, 1 Aug - 22 Dec '95

Professor M. Nouri (Penn State University) Mathematics and neural networks, Systems and control, 15 Sep - 22 Dec '95

**LANCASTER UNIVERSITY**

Dr A. Papritz (ETH, Zurich) Geostatistics, Jan - Jun '96

Dr S. Wang (Zhejiang University of Technology, Hangzhou) Fourier analysis, 1 Mar ' 1 Mar '97

Professor Z.Y. Wang (East China University of Science & Technology, Shanghai) Operator theory, 1 Jan - 1 Jul '96

**LEEDS UNIVERSITY - Applied Mathematical Studies**

Professor M. Ibiejugba (University of Ilorin, Nigeria) Control theory, Oct '95 - Jul '96

**LEEDS UNIVERSITY - Pure Mathematics**

Professor D. Haskell (College of the Holy Cross, Massachusetts) Model-theoretic algebra, Sep '95 - Jun '96

Professor S. Lempp (University of Wisconsin) Mathematical logic, 1 Jan - 31 Aug '96

Professor G. Martin (University of Massachusetts, Dartmouth) Model-theoretic algebra, Feb - May '96

Dr Y.-L. Ou (Guanxi University for Nationalities, Nanking, China) Riemannian geometry, Harmonic maps and morphisms, Feb '95 - Jan '96

Professor M.P. Thomas (California State University, Bakersfield) Banach algebras, Aug - Dec '95

**LEEDS UNIVERSITY - Statistics**

Dr F.J. Alonso (University of Granada, Spain) Spatial temporal modelling, Oct - Dec '95

Professor J.L. Rosenberger (Penn State University) Design of experiments, Statistical computing, Jan - May '96

**LEICESTER UNIVERSITY**

L. Greenberg (University of Maryland). Eigenvalue problems for ordinary differential equations, Jun - Jul '96

A. Kushpel (Institute of Mathematics, Kiev) Approximation theory, Jul '95 - Jul '96

D. Ragozin (Washington University, USA) Approximation theory, Nov - Dec '95

S. Gomes (Universidade de Compinas, Brazil) Approximation theory, Nov '95 - Feb '96

**LIVERPOOL UNIVERSITY - Applied Mathematics**

Professor A. Mavraganis (National Tech-

nical University of Athens, Greece) Celestial mechanics, Dynamical systems, 1 May - 31 Aug '96

**LIVERPOOL UNIVERSITY - Pure Mathematics**

Dr P.S. Donelan (Victoria University of Wellington, New Zealand) Generic Euclidean kinematics, Nov '95 - Jun '96

Professor H. Murakami (Osaka City University) Low dimensional topology, Knot theory, Apr '95 - Mar '96

**LONDON SCHOOL OF ECONOMICS**

Professor T. Walsh (University of Quebec at Montreal) Discrete mathematics, Sep '95 - Aug '96

Professor P. Winkler (AT&T Bell Labs, Theoretical Computer Science) Discrete mathematics, 1 Jan - 30 Apr '96

**LOUGHBOROUGH UNIVERSITY**

Dr N. Kuznetsov (Institute of Problems of Mechanical Engineering, St Petersburg) Water waves, 3 Sep - 25 Oct '95

**MANCHESTER UNIVERSITY**

Professor J.L. Barlow (Pennsylvania State University) Numerical analysis, 1 Jan - 30 Jun '96

Professor V. Buhstaber (Moscow State University) Topology, Jun '96

Professor C. Dimitracopoulos (University of Greece, Athens) Philosophy of logic, foundations of exact reasoning, Jan '96

Professor I. Gladwell (Southern Methodist University, USA) Parallel numerical algorithms, Dec '95

Professor L.A. Lambe (Rutgers University, New Jersey, USA) Algebraic topology, Symbolic computation, May '96

Professor R. Pail (Shkrodas University, Albania) Logic, Oct - Dec '95

Professor P. Sanjurjo (Universidade Complutense de Madrid, Spain) Topology, Mar - Aug '96

**OXFORD UNIVERSITY - Statistics**

Professor M.P. Jones (University of Iowa, USA) Statistics - Survival analysis, Jul '95 - Jun '96

Professor J. Koval (University of Western Ontario) Statistics, Aug '95 - Jul '96

**QUEEN MARY & WESTFIELD COLLEGE**

Professor S. Bachmuth (California) Pure Mathematics, 8 Nov '95 - 31 Jul '96

Dr P. Johnson (Eindhoven) Pure Mathematics, 1 Nov '94 - 21 Dec '95

Dr J. Lowenstein (New York) Dynamics, 1 Sep '95 - 31 May '96

Professor M.A. Maller (Cornell) Statistics, 17 Dec '95 - 21 Jan '96

Dr R. Zalaletdinov (Usbekistan) Relativity, 10 Feb '95 - 10 Feb '96

**READING UNIVERSITY**

Dr J. Hench (Academy of Sciences of Czechoslovakian Republic) Numerical linear algebra and systems and control, 23 Oct '95 - 31 Jan '96

Dr D.R. Stocks (University of Alabama, Birmingham, USA) 23 Sep - 23 Dec '95

**SALFORD UNIVERSITY**

Professor F. Van der Duyn Schouten (Department of Economics, University of Tilbury) Operational research, Mar '96

**SHEFFIELD UNIVERSITY**

Mr B. Robinson (University of Tasmania, Australia) Theory and applications of cluster analysis, 21 Aug '95 - 16 Feb '96

**SOUTHAMPTON UNIVERSITY Mathematics**

Professor E. Molina (Simon Bolivar University) Statistics, 8 Jan - 1 Jul '96

Dr T. Tautenhahn (Otto-Von-Guericke University) Operational research, 11 Oct '95 - 4 Apr '96.

**SOUTHAMPTON UNIVERSITY Social Statistics**

Professor K. Brewer (Retired ex Australian Bureau of Statistics) Survey sampling, 20 Sep '95 - 31 Jan '96

Dr A. Gray (Australian National University) Statistical demography, 1 Feb - 20 Mar '96

Dr D. Steel (University of Wollongong) Survey sampling, 1 Jul '95 - 31 Jan '96

Dr N. Park (Mcquarie University, Sydney) Statistical demography, 1 Jan - 20 Feb '96

Ms L. Tickle (Mcquarie University, Sydney) Actuarial science, 25 Sep - 23 Dec '95

**ST ANDREWS UNIVERSITY**

Dr P.N. Anh (Hungary) Semigroups, category theory, ring theory, May - June '96

Dr V. Bodi (Hungary) Group rings, May - June '96

Dr P. Csorgo (Budapest, Hungary) Group theory, May - June '96

Dr P. Demoulin (Paris Observatory) MHD, Apr '96
Professor M. Goossens (Leuven, Belgium) MHD, Apr - May '96
Professor J. Heyvaerts (Strasbourg Observatory) MHD, Apr '96
Dr P. Kortesi (Miskolc University, Hungary) Ring theory, May - June '96
Professor J. McKay (Concordia University, Montreal) Combinatorics, Groups, Jan - May '96
Professor J. Pelikan (ELTE, Budapest, Hungary) Group theory, May - June '96
Dr T. Szantai (Hungary) Operational research, statistics, computers, May - June '96
Dr J. Szigeti (Miskolc University, Hungary) Ring theory, identities, May - June '96
Dr V. Titov (Program Systems Institute, Moscow) MHD, May - Jul '96
Dr A. Van Ballegooijen (Harvard) MHD, Nov '95
Professor J. Weisheit (Rice University) MHD, Sep '96
Dr F. Wettl (Budapest, Hungary) Finite geometry, May - June '96

**STRATHCLYDE UNIVERSITY**

Professor Tang Tao (Simon Fraser University, Vancouver) Numerical solution of partial differential equations, 1 Apr - 31 Jul '96

**UNIVERSITY COLLEGE LONDON**

Dr I. Barany (Maths Institute, Budapest) Geometry, Sep - Dec '95
Professor L. Dalla (University of Athens) Pure mathematics, Sep '95 - Jun '96
Dr C. Zong (Institute of Mathematics, Beijing) Packing, Jan - Jun '96

**UMIST**

Professor P. Cassou-Nogues (Bordeaux University, France) Algebraic number theory, 20 Jan - 10 Feb '96 mid May - mid Jun '96
Professor G.H. Golub (Stanford University) Numerical analysis, 1 Oct - 31 Nov '95
Dr R.B. Howlett (Sydney University) Coxeter groups, Representation theory, 21 Oct '95 - 31 Jan '96
Dr K.C. Indukumar (CMC, Hydrabad, India) Signal processing and wavelet methods, 19 Apr '95 - 18 Mar '96

**UNIVERSITY OF WALES, ABERYSTWYTH**

Professor V.G. Romanovsky (Belarus State University) Nonlinear differential equations, Dec '95 - Jan '96

**UNIVERSITY OF WALES, CARDIFF**

Professor V.I. Burenkov (Friendship of Nation University, Moscow) Analysis, 1 Nov '94 - 1 Nov '96
Professor J. Donig (Duisburg) Differential equations, 7 Jan - 7 Apr '96
Professor M. Gol'dman (Moscow State Institute of Radiotechnics, Electronics & Automation) Analysis, 1 Mar - 10 May '96
Dr A. A. Ilyin (Hydrometeorological Institute, Moscow) Differential equations, 1 Nov '94 - 1 Nov '96
Professor E. I. Hkukhro (Novosibirsk) Group theory, 20 Nov '95 - 20 Nov '97

**WARWICK UNIVERSITY**

Professor C. Ananad (McGill University) Algebraic geometry, 1 Aug '95 - 31 Jul '97
Professor A. Bondal (Steklov Mathematics Institute) Algebraic geometry, 19 Feb - 16 Mar '96
Professor U. Bruzzo (Universita di Genova) Algebraic geometry, 12 Feb - 29 Mar '96
Professor A. Corti (University of Chicago) Algebraic geometry, 16 Oct - 26 Dec '95
Professor I. Dalgachev (University of Michigan) Algebraic geometry, 1 Jun - 30 Jul '96
Professor L. Ein (University of Chicago) Algebraic geometry, 20 Jun - 20 Jul '96
Professor K. Fukava (Kyoto University) Algebraic geometry, 25 Mar - 19 Jun '95
Professor A. Gorodentsev (Steklov Mathematics Institute) Algebraic geometry, 19 Feb - 16 Mar '96
Professor P. Gurrola (Universitat de Barcelona) Algebraic geometry, 1 Feb - 24 May '96
Professor V.A. Iskhovskikh (Steklov Mathematics Institute) Algebraic geometry, 17 Nov - 17 Dec '95
Professor Y. Ito (Tokyo University) Algebraic geometry, 17 Sep - 17 Dec '95
Mr T. Iwami (Kyushu University) Algebraic geometry, 16 Sep - 25 Dec '95
Professor Y. Kawamata (Tokyo University) Algebraic geometry, 17 Nov - 17 Dec '95

Professor H. Konno (Tokyo Metropolitan University) Algebraic geometry, 1 Mar - 31 May '96

Professor S. Kuleshov (Steklov Mathematics Institute) Algebraic geometry, 19 Feb - 16 Mar '96

Professor Y. Miyaoka (RIMS, Kyoto) Algebraic geometry, 1 - 22 Dec '95

Professor Y. Namikawa (Max-Planck-Institut fur Mathematik) Algebraic geometry, 1 Oct - 20 Dec '95

Professor K. Oguiso (Ochanomizu University) Algebraic geometry, 10 Dec '95 - 6 Jan '96

Professor K. Oh (University of Missouri - St. Louis) Algebraic geometry, 30 Aug '95 - 5 Aug '96

Professor K. Ono (Ochanomizu University) Algebraic geometry, 25 Mar - 20 Apr '96

Professor D. Orlov (Steklov Mathematics Institute) Algebraic geometry, 19 Feb - 16 Mar '96

Professor Yu. Prokhorov (Moscow University) Algebraic geometry, 16 Nov - 16 Dec '95

Professor A. Pukhlikov (Moscow University) Algebraic geometry, 7 Sep - 21 Dec '95

Professor T. Takakura (Fukuoka University) Algebraic geometry, 2 Mar - 29 May '96

Professor A. Tsuchiya (Nagoya Institute of Technology) Algebraic geometry, 15 Feb - 15 Apr '96

Professor C. Voisin (Ecole Normal Supèrieure de Cachan) Algebraic geometry, 1 - 31 Jul '96

Professor S. Zube (Lithuanian Academic of Sciences) Algebraic geometry, 5 Feb - 5 Mar '96

## BRAZILIAN ALGEBRA MEETING

The XIVth Brazilian Algebra Meeting will be held at the Institute of Pure and Applied Mathematics, Rio de Janeiro, Brazil from 30 July - 8 August 1996. Each even year the Brazilian researchers in Algebra organize with the support of the Brazilian Mathematical Society (SBM) a National Meeting in Algebra. It is a broad meeting including all areas of research such as Commutative and Non-Commutative Algebra, Ring and Group Theory, Algebraic Geometry, Number Theory and Representation Theory. It also aims to attract potential graduate students, so there are usually mini-courses of different levels. Participants are welcome from all other countries who are willing to give a talk and prepare a paper for publishing in the Proceedings of the Meeting.

Organizing Committee: Arnaldo Garcia (IMPA) coordinator; Eduardo Esteves (IMPA); Amilcar Pacheco (Universidade Federal do Rio de Janeiro); Abramo Hefez (Universidade Federal Fluminense); Jairo Goncalves (Universidade de Sao Paulo); Antonio Engler (Universidade de Campinas). Any correspondence should be addressed to the coordinator at: IMPA, Estrada Castorina 110, 22460-030 Rio de Janeiro, RJ, Brazil; e-mail: algebra@impa.br; fax: (5521) 512-4115.

## EDINBURGH MATHEMATICAL SOCIETY'S ST ANDREWS COLLOQUIUM 1996

The sixteenth four yearly colloquium will take place at the University of St Andrews from 13 - 20 July 1996. The morning sessions in the programme will consist of the following courses, each of five lectures: Geoffrey Grimmett (Cambridge), "Probability theory and critical phenomena"; Don Zagier (Bonn), "Number theory around the equation A + B = C". The final morning course is the fourth series of Copson Memorial Lectures to be given by Persi Diaconis (Harvard), "Patterns in Eigenvalues". Afternoon sessions will include seminars on Algebra and Combinatorics and on Analysis and Geometry.

The colloquium expects to receive the support of the LMS and UK members of the Society will find a billet enclosed with this Newsletter. Some further details of the contents of these courses can be found on the World Wide Web at: http://www-theory.dcs.st-andrews.ac.uk/~mda/colloquium.html and from the Colloquium secretaries: M.D. Atkinson and J.J. O'Connor, Mathematical Institute, North Haugh, St Andrews, Fife KY16 9SS; tel: 01334 46 3701; fax: 01334 46 3748; e-mail: joc@st-andrews.ac.uk

U. DINI
Honorary Member 1901

# 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.

### DECEMBER 1995

**8** Edinburgh Mathematical Society Meeting, Edinburgh (232)
**14-18** Functional Analysis and Related Topics Seminar, Chinese University of Hong Kong (225)

### JANUARY 1996

**12** Edinburgh Mathematical Society Meeting, Edinburgh (232)

### FEBRUARY 1996

**9** Edinburgh Mathematical Society Meeting, Dundee (232)
**16-17** Differential Equations, London Mathematical Society Two-Day Meeting, Bath University

### MARCH 1996

**8** Edinburgh Mathematical Society Meeting, Stirling (232)
**15** Science, Engineering and Technology Week (231)

### APRIL 1996

**9-12** British Mathematical Colloquium, UMIST (231)
**15-19** LMS Invited Lectures - Professor F.J. Almgren, University College London (228)
**15-3 May** School on Nonlinear Functional Analysis and Applications to Differential Equations, ICTP Trieste (230)

### MAY 1996

**10-11** Algebra, Joint Two-Day London Mathematical Society Meeting with the Edinburgh Mathematical Society, Glasgow University
**31** Edinburgh Mathematical Society Meeting, Aberdeen (232)

### JUNE 1996

**21** London Mathematical Society Meeting, Linnean Society, London
**22** Ali Fröhlich's 80th Birthday Meeting, Robinson College, Cambridge (230)
**24-4 July** Partial Differential Equations and Spectral Theory, LMS Durham Symposium, Durham University (232)
**26-28** Homotopy Theory Mini-Conference, Mathematical Institute, Oxford (230)

### JULY 1996

**8-19** Galois Representations in Arithmetic Algebraic Geometry, LMS Durham Symposium, Durham University (232)
**14-19** Computational Techniques in Spectral Theory and Related Topics Workshop, Gregynog Hall, University of Wales (230)
**21-25** Affine Geometry of Convex Sets Conference, Dalhousie University, Canada (232)
**22-26** 2nd European Congress of Mathematics, Budapest, Hungary
**21-1 Aug** Model Theory of Fields, LMS Durham Symposium, Durham University (232)

### AUGUST 1996

**12-30** School on Algebraic Groups & Arithmetic Groups, ICTP Trieste (230)
**25-31** International Congress of Theoretical and Applied Mechanics, Kyoto, Japan (226)

### SEPTEMBER 1996

**9-27** School on Numerical Simulation of Partial Differential Equations: Methods, Algorithms, Applications, ICTP Trieste (230)

### JULY 1997

**7-11** British Combinatorial Conference, Queen Mary & Westfield College, London (230)

### AUGUST 1998

**18-28** International Congress of Mathematicians, Berlin, Germany

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 0171-437 5377, fax 0171-439 4629, e-mail lms@kcl.ac.uk. The London Mathematical Society is registered with the Charity Commissioners.

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