# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

**No. 255** **December 1997**

## FORTHCOMING SOCIETY MEETINGS

***Friday-Saturday 20-21 February 1998 - University of Southampton***
Hyperbolic Geometry
***Friday-Saturday 22-23 May 1998 - London***
Joint meeting with the Irish Mathematical Society
Complex Analysis and Dynamical Systems

## LMS COUNCIL DIARY

The beginning of the Council meeting on Friday 17 October was devoted to a discussion about buildings. The working party charged with looking for suitable premises for the Society had found a building which they felt might be right for the LMS. Many members of Council went to look at the building before the meeting began. The general impression of the building was favourable, but Council members raised a number of issues and a considerable amount of time was spent exploring these issues. The conclusion was that the working party should continue with its negotiations over this particular building noting with some care the comments made by Council. It would be improper to say more at this point as commercial transactions can be quite sensitive.

In the report of Programme Committee we considered some proposals to be more proactive in charitable spending and to increase the Society's support for mathematics. One of the proposals that met with favour was to extend meetings for research students, especially those which are organised by research students. There are already regular meetings in Statistics and Combinatorics and it was felt that it was better to aim at fairly large groupings rather than be too specialised. Attempts will be made to encourage people to start such meetings and Council hopes that they will gather their own momentum with the LMS providing financial support.

The Treasurer reported on the financial situation. At the time of the meeting the Society's reserves amounted to about 9 million pounds, though since I write this on the 28 October it has to be assumed that this figure has decreased. The financial advisors, with Council's support, have transferred more of the Society's assets into shares.

The Charity Commissioners are concerned about charities which have large balances. The Society has to be seen to be spending the income and balances to support the charitable purposes of the Society or showing very clearly what proposals there are for the use of the reserves. Council sees this high level of reserves as essential to maintain, or even increase, the Society's support for mathematical activity in the medium term, since there is a growing need for increased professional support for Council and the Officers and the income from periodicals may decrease under the impact of electronic publication. The Treasurer will continue to monitor the situation.

Sometimes interesting discussions take place over lunch. We were told about an article by Baroness Blackstone, the Higher Education minister in the new UK Government, which had appeared that morning. It had a strong anti-science bias and many people are concerned that the new government's ministers in education are unwilling to see more resources going into Science. This is not a happy thought as the UK goes forward into the next millennium. We also discussed briefly a plan suggested in a letter to Council to have a millennium commission to come up with some new "Hilbert Problems". The Council was not overwhelmed with enthusiasm for this proposal. As a frivolous thought I do wonder what the non-Christian world makes of the fuss about the millennium.

Alan Camina

## LMS GRANTS FOR ATTENDING THE INTERNATIONAL MATHEMATICAL CONGRESS 1998

Mathematicians from the UK attending International Congresses have traditionally been awarded grants through the Royal Society. For the more recent Congresses, a sum of money has been set aside by the Royal Society for this purpose, and this has been augmented by a grant from the LMS. The Royal Society has now discontinued this scheme (for all scientific disciplines).

Those wishing to obtain grants from the Royal Society to attend the 1998 Congress will need to apply for one of its standard Conference Grants. Application forms are available from The Royal Society (Attention Mrs Sandra Goodall), 6 Carlton House Terrace, London SW1Y 5AG (e-mail: ezmb013@mailbox.ulcc.ac.uk; www: http://www.royalsoc.ac.uk/; phone: 0171-451-2540). The last closing date, which will be in time for the Congress, is 1 March, but applicants are advised that as forms must be accompanied by references they need to have acted well before that date. Results should be known in May. One of the criteria for obtaining these grants is that applicants should be giving lectures or presenting posters at the Congress; the Congress organisers will be giving information about how to do that in their Second Announcement (http://elib.zib.de/ICM98/).

The LMS will be making some funds available to UK mathematicians who are unsuccessful in obtaining grants from The Royal Society or who are ineligible to apply. More details will be given later, but applications - which may be copies of the applications to the Royal Society - will be requested by early June, and the results should be known by late June.

## MATHEMATICS IN SCHOOLS

It's now over two years since Tackling the Mathematics Problem (TMP) was published. In that time, it has become generally accepted that there is a problem in mathematics in schools in the UK. Hardly anyone is now likely to say (in public, at least) that all is well. On the other hand, not enough has been done towards improving the situation, and what there is has been piecemeal. Unfortunately, we have not been able to convince the Department for Education and Employment that the very nature of mathematics demands that the subject be looked at as a whole. The Presidents of the three societies that produced TMP have been trying to meet with ministers or officials to explain this, but so far they have met with only negative responses. We will keep you informed of future developments through the Newsletter. In the meantime, members are assured that we are still actively pursuing the issue. It is not easy to influence the DfEE, but we mean to keep trying until we do.

Peter Saunders

## LIBRARY CLOSURE

The mathematics section of the University College Library, which houses the Society's Library, will be closed from 12 December 1997 to 5 January 1998, for removal of asbestos from the ceiling space.

# LONDON MATHEMATICAL SOCIETY

# INVITED LECTURE SERIES 1998

## Professor Don Zagier
## Max Planck Institute, Bonn

### Aspects of SL(2,Z): binary quadratic forms and modular forms

A series of ten lectures on the modular group and related topics will be given by Professor Don Zagier of the Max Planck Institute during the week 20-24 April 1998 in the Department of Mathematics, University of Exeter.

The lectures will be addressed to a wide audience of experts and non-experts, and should be accessible to research students in most areas of Pure Mathematics.

**Accommodation** Some university accommodation, costing £20.21 per night for bed and breakfast, has been reserved from 19 to 24 April 1998. A smaller number of better rooms with en-suite facilities are also available at £31.06 per night. Lunch (Monday-Friday) and dinner (Sunday-Thursday) are also available at £6.21 and £8.47 respectively. Some financial assistance will be available for postgraduate students at universities in the UK. Prospective participants should register their interest as soon as possible, as unreserved rooms may have to be released in mid-January.

**Registration** Prospective participants are encouraged to register by e-mail or letter to the address below. Early registration (by 16 January 1998) would be greatly appreciated by the organizer, but later registration is also possible.

**Contact address** For further details, registration and arrangement of accommodation, please contact Dr J.E. Cremona preferably by e-mail to cremona@maths.ex.ac.uk, or by writing to him at the Department of Mathematics, University of Exeter, Laver Building, North Park Road, Exeter EX4 4QE. Further information, including an online registration form, will be available from the web site http://www.maths.ex.ac.uk/~cremona/lms/.

# FACULTY OF MATHEMATICS
# UNIVERSITY OF CAMBRIDGE
## UNIVERSITY LECTURESHIP IN MATHEMATICS

Applications are invited for this Lectureship, established as a joint post in the Department of Pure Mathematics and Mathematical Statistics and the Department of Applied Mathematics and Theoretical Physics.

Applicants should work in one of the areas of strong interaction between the two Departments: these include Geometry and the Geometrical Aspects of Theoretical Physics; Dynamical Systems; Partial Differential Equations.

Salary will be age-related on the scale for University Lecturers (£19,371-£29,875 p.a.). Appointment will be for three years in the first instance, from 1 April 1998 or as soon as convenient thereafter.

Further particulars may be obtained from Dr V. Chamberlain, Faculty Office, DAMTP, Silver Street, Cambridge CB3 9EW, to whom applications (including curriculum vitae, publications list and names, addresses and e-mail addresses of not more than 3 referees) should be sent so as to arrive no later than **23 February 1998.**

The University follows an Equal Opportunities policy.

# NATIONAL UNIVERSITY OF SINGAPORE

## Postdoctoral Research Fellowship in Algebraic Topology and *K*-Theory

Applications are invited for the above position, tenable for ten months commencing autumn 1998.

The appointee will work with a team (Professor A.J. Berrick - Principal Investigator, Associate Professor Judith Packer and Drs Lee Soo-Teck and Kai Xu) to study problems involving the interaction of algebraic topology, *K*-theory of rings and group representation theory. The large, active Mathematics Department of NUS offers good opportunity for research.

For further details, please see:

http://www.maths.nus.sg/~officet/top_postdoc

or e-mail

top_postdoc@maths.nus sg

Review of applications begins on **15 March 1998** and continues until the post is filled.

## VISIT OF PROFESSOR V. BAVULA

Professor V. Bavula of Kiev University will be visiting the Universities of Sheffield and Edinburgh in December, supported by an LMS fSU grant. He works on non-commutative rings and has published several papers on generalizations of Weyl algebras. Further details can be obtained from David Jordan (d.a.jordan@sheffield.ac.uk) or Tom Lenagan (tom@maths. ed.ac.uk).

## VISIT OF PROFESSOR A. BENDIKOV

Professor A. Bendikov from Rostov-Don, Russia, will be visiting Imperial College in December 1997. His visit is jointly supported by an LMS grant under the fSU scheme and by Imperial College. Professor A.D. Bendikov is an expert in potential theory and harmonic analysis on locally compact groups. His name is connected with the full description of invariant harmonic sheafs and Brownian motion on such groups. Professor Bendikov will give seminars on his recent works at Imperial College and at King's College, London. For further information contact Dr Alexander Grigor'yan (a.grigoryan@ ic.ac.uk).

## VISIT OF PROFESSOR A.A. BEILINSON

Professor A.A. Beilinson, of Massachusetts Institute of Technology has been awarded an EPSRC research fellowship grant to visit the United Kingdom in January 1998. He will visit the Universities of Nottingham and Cambridge and give a series of lectures on the Geometric Langlands programme, a theory developed recently by him and Drinfeld. For further information please contact Professor I. Fesenko, Department of Mathematics, University of Nottingham (e-mail: ibf@maths.nott.ac.uk) and Professor J.H. Coates, DPMMS, University of Cambridge (e-mail: j.h.coates@dpmms.cam.ac.uk).

## VISIT OF PROFESSOR S.V. DUZHIN

Professor S.V. Duzhin from Pereslavl, Russia will be visiting the Department of Mathematical Sciences at the University of Bath from 3 to 24 January 1998, supported by an LMS fSU grant. He is a specialist in knot theory (particularly Vassiliev invariants) and in computer algebra. Further details can be obtained from Dr Nicola Vorobjov (mnv@maths.bath.ac.uk).

## VISIT OF PROFESSOR J. ROSENBERG

The London Mathematical Society is supporting a visit in January 1998 by Professor Jonathan Rosenberg of the University of Maryland. He is a leading figure in geometric functional analysis applying K-theory and $C^*$-algebra theory to problems in geometry and topology. He will be lecturing in Manchester on 13 January, in Edinburgh on 16 January and in Oxford on 19 January as part of a 'K-Theory Day' also sponsored by the LMS. For further details please contact John Roe (jroe@jesus.ox.ac.uk).

## KUNIHIKO KODAIRA

Professor Kunihiko Kodaira, who was elected an Honorary Member of the London Mathematical Society on 15 June 1979, died on 26 July 1997 aged 82.

## FREDERICK COOK

Dr Frederick Cook, who was elected a member of the London Mathematical Society on 21 March 1980, died on 7 August 1997.

## ERIC C. MILNER

Professor Eric Charles Milner, who was elected a member of the London Mathematical Society on 19 December 1963, died on 20 July 1997 aged 69.

## THE ARITHMETIC AND GEOMETRY OF ALGEBRAIC CYCLES NATO ASI

A NATO ASI on 'The arithmetic and geometry of algebraic cycles' will be held from 7-19 June 1998 at Banff, Alberta, Canada. Organizing Committee: J.D. Lewis (Alberta), N. Yui (Queen's), B. Gordon (Oklahoma), S. Müller-Stach (Essen), S. Saito (Tokyo). This institute will offer an in-depth account of the Arithmetic and Geometry of Algebraic Cycles from several points of view, including arithmetic methods, transcendental methods, topological methods, and motives and $K$-theory methods.

The speakers are: A. Beilinson (IAS), S. Bloch (Chicago), J-L. Colliot-Thélène (Paris-Sud), H. Esnault (Essen), E. Friedlander (Northwestern) [tentative], P. Gajer (Johns Hopkins), B. van Geemen (Torino), H. Gillet (Illinois), B. Gordon (Oklahoma), M. Green (UCLA), U. Jannsen (Köln), A. Langer (Münster), B. Lawson (Stony Brook), J. Lewis (Alberta), S. Müller-Stach (Essen), K. Murty (Toronto), J. Nekova (Cambridge), D. Ramakrishnan (Cal Tech), W. Raskind (Southern Cal), Masahiko Saito (Kobe), Shuji Saito (Tokyo), Takeshi Saito (Tokyo), C. Schoen (Duke), A. Scholl (Durham), C. Soulé (IHES), V. Voevodsky (Northwestern), N. Yui (Queen's), D. Zagier (MPIM Bonn), Y. Zarhin (Penn State).

Information and application forms are available from: Louis Pelletier, CRM, Université de Montreal, C.P. 6128, Succ. Centre-ville, Montréal (Quebec), Canada H3C 3J7; e-mail: banff98@CRM.UMontreal.ca; web: http://www.CRM.UMontreal.ca/Banff98.html.


*Announcing the publication of:*

**Fields Medallists' LECTURES**

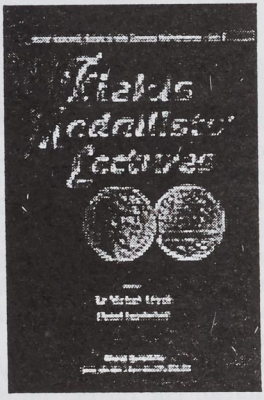
*World Scientific Series in 20th Century Mathematics—Vol 5*

Edited by Michael Atiyah *(Trinity College, Cambridge)* and Daniel Iagolnitzer *(CE-Saclay)*

The Fields Medal has been representative of the greatest achievements in mathematics since 1936. In this collection, 22 Fields Medallists present articles of their own choice. This is the first time such a collection has been available. Students and researchers in mathematics and mathematical physics will find in this volume a highly interesting and varied picture of the field of mathematics over the last sixty years.

*The recipients of the Fields Medal featured in the book are:*
L. V. Ahlfors (1936); L. Schwartz (1950); K. F. Roth, R. Thom (1958); L. Hormander (1962); M. F. Atiyah, S. Smale (1966); A. Baker, S. Novikov (1970); D. Mumford (1974); G. A. Margulis (1978); A. Connes, W. P. Thurston (1982); S. K. Donaldson, M. H. Freedman (1986); V. F. R. Jones, S. Mori, E. Witten (1990); and J. Bourgain, P. L. Lions, J. C. Yoccoz, E. I. Zelmanov (1994).

644pp Nov '97
981-02-3102-4 hbk £60 / 981-02-3117-2 pbk £33

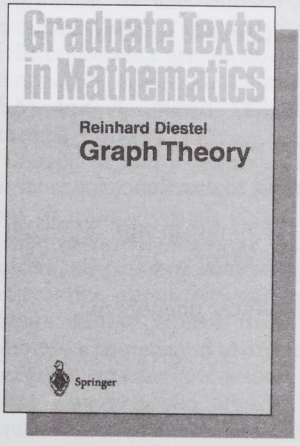



*Please order through booksellers or directly from:*
**World Scientific Publishing (UK) Ltd.,**
57 Shelton Street, London WC2H 9HE UK
*Tel:* 0171 836 0888 *Fax:* 0171 836 2020
*E-mail:* sales@wspc2.demon.co.uk
*Worldwide Web:* http://www.wspc.com.sg

**World Scientific**
An International Publisher

# New from Springer

## Graduate Texts in Mathematics




*Volume 173*
R. Diestel
### Graph Theory
1997. XIV, 286 pages. 103 figures. Softcover £ 21 ISBN 0-387-98211-6

**Also available as hardcover**
1997. XIV, 286 pages. 103 figures. Hardcover £46.50 ISBN 0-387-98210-8

A fresh introduction to graph theory, offering a modern reassessment of the theorys main fields, methods and results. Viewed as a branch of pure mathematics, the theory of finite graphs is developed as a coherent subject in its own right. The book may be used at various different levels: it contains all the standard basic material for a first undergraduate course, complete with detailed proofs and numerous illustrations, while for a graduate course, the book offers more advanced results. For the professional mathematician the book affords an overview of graph theory as it stands today: with its typical questions and methods, its classic results, and some of those developments that have made this subject such an exciting area in recent years.

**More information under:**
**http://www.springer-ny.com/supplements/diestel**
**http://www.tu-chemnitz.de/mathematik/books/graph.theory**

*Volume 175*
W. B. R. Lickorish
### An Introduction to Knot Theory
1997. Approx. 230 pages. 114 figures.
Hardcover approx. £ 38.50
ISBN 0-387-98254-X

A selection of topics which graduate students have found to be a successful introduction to the field, employing three distinct techniques: geometric topology manoeuvres, combinatorics, and algebraic topology. Each topic is developed until significant results are achieved and each chapter ends with exercises and brief accounts of the latest research. While the author describes important discoveries throughout the twentieth century, the latest discoveries such as quantum invariants of 3-manifolds as well as generalisations and applications of the Jones polynomial are also included, presented in an easily intelligible style. Basic knowledge of the fundamental group and simple homology theory is assumed, although there are numerous, excellent explanations throughout the text.

*Volume 172*
R. Remmert
### Classical Topics in Complex Function Theory
1997. Approx. 340 pages. 19 figures. Hardcover £ 34
ISBN 0-387-98221-3

An ideal text for an advanced course, this book leads readers to experience function theory personally and to participate in the work of the creative mathematician. The author includes numerous glimpses of the function theory of several complex variables, which illustrate how autonomous this discipline has become. In addition to standard topics, Remmert elegantly interweaves compact proofs and historical comments throughout the text, and presents the material in short clear sections. The abundance of examples, exercises, and historical remarks, as well as the extensive bibliography, combine to make an invaluable source for students and teachers alike.

**Please order from**
Springer-Verlag London Ltd.
Fax: + 44 / 14 83 / 41 51 51
e-mail: alex@svl.co.uk
or through your bookseller

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

Springer

Springer-Verlag, P. O. Box 31 13 40, D-10643 Berlin, Germany

Jak.4377/MNT/SFa

**INSTITUTE OF MATHEMATICS AND STATISTICS**

# CHAIR IN PURE MATHEMATICS

A Chair in Pure Mathematics in the Institute of Mathematics and Statistics at the University of Kent at Canterbury is available from 1st September 1998 or such a date as may be arranged.

The successful candidate will have a strong research record in an area of Computational Pure Mathematics and a commitment to excellence in teaching. The present research interests of the Mathematics group include symbolic computation, asymptotics, computational and algebraic number theory, differential geometry, nonlinear phenomena, differential equations and soliton theory. Preference may be given to a person with interests in one or more of these areas.

Informal enquiries should be directed to Professor Peter A Clarkson (Head of the Mathematics group). Tel: +44 (0) 1227 827781 (direct line), Fax: +44 (0) 1227 827932, E-mail: P.A.Clarkson@ukc.ac.uk.

Information about the Institute of Mathematics and Statistics may also be found on the World Wide Web: http://www.ukc.ac.uk/ims/

Salary will be in the professorial range (minimum £33,517 per annum).

Further particulars and application details are available from
The Personnel Office,
The Registry, University of Kent,
Canterbury, Kent CT2 7NZ.
Tel: (01227) 823674 (and Minicom) or (01227) 827837 (24 hours). Please quote reference number A98/26.
Closing date: 9 January 1998.

The University is committed to implementing its Equal Opportunities Policy.

**UNIVERSITY OF KENT**
**AT CANTERBURY**

## GROUPS OF FINITE MORLEY RANK

The Department of Mathematics of the University of Crete announces a conference in the series Euroconferences in Mathematics on Crete, sponsored by the Training and Mobility of Researchers Programme of the Commission of the European Union. Programme organisers of the conference are: A. Borovik (UMIST, Manchester, UK), G. Cherlin (Rutgers, USA) and A. Nesin (Bilgi University, Istanbul, Turkey).

Groups of finite Morley rank arise in model theory as a structurally significant class of groups which contains all finite groups and all algebraic groups over algebraically closed fields. It has been conjectured, about 20 years ago, that all infinite simple groups in this class are algebraic. The conjecture is still open; a concerted attack on it which is currently under way is based on ideas and techniques from the classification of finite simple groups. The aim of the conference is to introduce group and model theorists (and especially young researchers) to the surprising richness of results and open problems arising in the theory of groups of finite Morley rank and in the adjacent areas of model theoretic algebra. It is expected that conference participants will represent two different areas of Mathematics: model theory and theory of groups. For this reason the work of the Conference will be built around a number of survey talks covering a wide range of subjects.

The Conference will take place from 22-26 June 1998 at the Anogia Academic village, about 45 minutes by car from Heraklion. The living expenses (accommodation plus meals) per day for a person is estimated at about 35 ECU in a double room or 43 ECU in a single room.

The Training and Mobility of Researchers Programme financially supports young researchers from the countries of the European Economic Area to enable them to attend the conference. There is a possibility that financial support can be extended to young researchers from some countries of Central and Eastern Europe. For additional information contact: Susanna Papadopoulou, Department of Mathematics, University of Crete, Heraklion, Crete, Greece (fax (+30) 81-234516, e-mail: souzana@math.uch.gr) or Alexandre Borovik, Department of Mathematics, UMIST, PO Box 88, Manchester M60 1QD (fax (+44) 161 200 3669, e-mail: alexandre.borovik @umist.ac.uk).

## 1998 BRITISH APPLIED MATHEMATICS COLLOQUIUM

The colloquium, which is also the 40th British Theoretical Mechanics Colloquium, will take place at Brunel University from the afternoon of Monday 3 April until lunchtime on Thursday 9 April. The six invited lecturers are: Sir James Lighthill (UCL), I.D. Abrahams (Manchester), R.H.J. Grimshaw (Monash), J.R. King (Nottingham), A.N. Norris (Rutgers), and N. Riley (UEA) who will deliver the Keith Stewartson Memorial Lecture. Besides the contributed lectures, which will run in five parallel sessions, minisymposia will take place within the colloquium on Computational Solid Mechanics, Industrial Applied Mathematics, Inverse Problems, and Quantum Chaos. An ancillary meeting is planned before the colloquium on Asymptotic and Numerical Methods in Wave Propagation. The Colloquium and its minisymposia are supported financially by the London Mathematical Society, The Quarterly Journal of Mechanics and Applied Mathematics, The Stewartson Memorial Fund, The Society for Industrial and Applied Mathematics, The Institute of Mathematics and its Applications, Basic Research Institute in the Mathematical Sciences (Hewlett-Packard). Further details, including registration forms and instructions for submission of abstracts, may be accessed at: http://www.brunel.ac.uk/depts/ma/bamc/. Enquiries can be addressed to: bamc@brunel.ac.uk .

UNIVERSITY OF CAMBRIDGE
Department of Pure Mathematics and Mathematical Statistics

# STATISTICAL LABORATORY

## LECTURESHIP AND FELLOWSHIPS

*Applications are invited for the following positions, which will be filled from 1st October 1998 or before.*

**Temporary Lectureship**. A two-year fixed-term position at Assistant Lecturer level, open to candidates with interests in any area of probability, mathematical statistics, mathematics of operations research, or ergodic theory. The successful applicant will be expected to contribute to the teaching and research programmes of the Laboratory. Current age-related salary scale £16,045–£21,016. It is normal (but not obligatory) for staff to undertake supervision of undergraduates for the Colleges of the University, thereby supplementing their salaries.

**UBS Research Fellowship in Financial Mathematics**. A two-year post-doctoral research fellowship, funded by the Union Bank of Switzerland (UBS). The position is associated with a collaboration between UBS, the Statistical Laboratory, and the Department of Mathematics of the ETH, Zürich, and provides an excellent opportunity for candidates with an interest in the application of theory to the market environment. It is expected that the person appointed will be a recent PhD with an outstanding record and direct research experience in financial mathematics or expertise in an appropriate area of applicable mathematics. Remuneration will be competitive.

**Post-Doctoral Fellowships in Stochastic Analysis**, funded jointly by the Isaac Newton Trust and the TMR Programme of the European Union (within the EU programme on Stochastic Analysis and its Applications). The successful applicant will work on one or more aspects of probability and stochastic analysis. Each fellowship will last for between six months and two years, and it is anticipated that at least two years of funding will be available in all for fellowships in Cambridge. Applicants must come from a member state of the EU or an Associated State. *UK residents may not apply to Cambridge*. Applicants are encouraged to consult the web page given beneath for details of eligibility and method of application.

**Research Assistantship in Dynamics of Non-Expanding Maps**. A three-year EPSRC funded post-doctoral research assistantship to work with Dr Colin Sparrow (Cambridge) and Dr Jeremy Gunawardena of the Basic Research Institute in the Mathematical Sciences (BRIMS), Hewlett-Packard. The project aims to make progress in understanding the theory and applications of non-expanding maps. Applicants should have, or expect shortly to receive, a PhD in a relevant area of mathematics. The successful applicant will be based in Cambridge, and will visit BRIMS on a regular basis. Appointment will be made on the age-related RA 1A scale (£15,159–£21,016).

---

*The Statistical Laboratory is a sub-department of the Department of Pure Mathematics and Mathematical Statistics. It was the unique body in the UK to be awarded the highest grade of 5* in the 1996 Research Assessment Exercise under the subject heading of Statistics and Operational Research.*

---

Applicants should state clearly which positions they are applying for, and should send a curriculum vitae, including nationality and date of birth, together with a list of publications, to

**The Director, Statistical Laboratory, 16 Mill Lane, Cambridge CB2 1SB, UK.**

The closing date for applications is **31st January 1998**. Applicants should arrange for three academic referees to send letters of recommendation directly to the Director, to arrive by **7th February 1998**. Further information about the Laboratory and these vacancies may be found on the web at **http://www.statslab.cam.ac.uk/**.

---

*The University aims to achieve the highest quality in teaching and research.*
*The University is an Equal Opportunities Employer.*

## WARWICK SYMPOSIUM ON SYMPLECTIC GEOMETRY

There will be a Workshop on Symplectic Topology from 23rd March to 3rd April 1998 at the Mathematics Institute, University of Warwick. The principal themes for this workshop are symplectic invariants, Floer homology, J-holomorphic curves, Seiberg-Witten-invariants, relations with physics and TQFT, mirror symmetry, contact geometry, Lagrangian submanifolds. Invited speakers include Bauer, Bryan, Chaperon, Fukaya, Getzler, Giroux, Lalonde, Laudenbach, LeHong, McDuff, Milinkovich, Mukai, Oh, Ono, Rade, Sikorav, Sevennec, Stipsicz, Viterbo.

The concluding Workshop of the Symposium will take place from 13th to 24th July 1998. Further details can be obtained from the web page http://www.maths.warwick.ac.uk/mrc/1997-98/ or by writing to Peta McAllister, Mathematics Research Centre, University of Warwick, Coventry CV4 7AL or by e-mail (peta@maths.warwick.ac.uk).

## MEETING OF THE SOCIETY

A meeting on Mathematical Aspects of Numerical Analysis of Partial Differential Equations was held on Friday 17 and Saturday 18 October 1997 at the Scientific Societies' Lecture Theatre, New Burlington Place, London. About 80 members and visitors were present for all or part of the meeting.

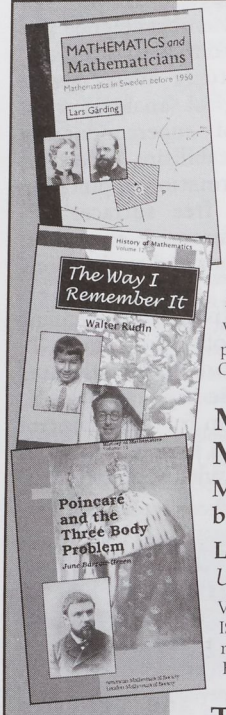
Twelve people were elected to *Ordinary Membership:* S-Y. Ahn, M. Apostolides, C.F. Barenghi, N.F. Britton, G. Derks, J.G. Gaines, O. Garcia-Prada, F.P. Kelly, FRS, S. Siksek, R.H. Tew, N. Vorbjov, P.R. Weller; three people were elected to *Associate Membership:* S.D. Baxter, V.O. Ferreira, G.R. Sharp; and nine people were elected to *Reciprocity Membership:* C. Bessenrodt (DMV), A. Cossidente (UMI), M. Haralampidou (AMS), T. Holm (DMV), S.K. Jain (AMS), P-L. Kang (AMS), J.S. Kauta (AMS), S. Oluyemi (NMS), G. Peskir (AMS). Three Members signed the book and were admitted to the Society.

The following lectures were given: C.M. Elliott, 'Numerical analysis of a mean field model of superconducting vortices'; T. Hou, 'Stabilising effect of surface tension and formation of pinching singularities in fluid free surfaces'. P-L. Lions, 'Partial differential equations, Monte-Carlo simulations and applications to finance', E. Suli, 'A posteriori error analysis of adaptive finite element methods for hyperbolic problems'; B. Cockburn, 'A posteriori error estimates for nonlinear parabolic equations'; R.C. Rannacher, 'A paradigm for error control and mesh-size selection in solving partial differential equations, with applications'.

## EPSRC POSTDOCTORAL FELLOWSHIPS IN MATHEMATICS AND THEORETICAL PHYSICS

The Mathematics and Physics Programmes are introducing a Postdoctoral Fellowship Scheme for Mathematics and Theoretical Physics. About ten Fellowships will be awarded to those candidates who can demonstrate excellence and originality in research, and is aimed at enabling such candidates to establish an independent research career. The Fellowships will be awarded for up to 3 years; EPSRC will provide funding for the Fellow's salary and up to £8k for equipment, consumables and travel. Applications should be submitted by 8 January 1998. Decisions will be announced by the end of March 1998. Fellowships will normally begin on 1 October 1998. Enquiries on the scheme should be addressed to Stephen New (phone 01793 444257, e-mail: stephen.new@epsrc.ac.uk). Application forms and further information are available on the web (http://www.epsrc.ac.uk/progrs/science/maths/mathtext.htm).

AMERICAN MATHEMATICAL SOCIETY




# History of Mathematics

## Jacques Hadamard, A Universal Mathematician

**Vladimir Maz'ya** and **Tatyana Shaposhnikova**, *Linköping University, Sweden*

Volume 14; 1997; approximately 507 pages; Hardcover; ISBN 0-8218-0841-9; Order code HMATH/14LMS

## Mathematics and Mathematicians

### Mathematics in Sweden before 1950

**Lars Gårding**, *Lund University, Sweden*

Volume 13; 1997; 268 pages; Hardcover; ISBN 0-8218-0612-2; List $75; Individual member $45; Order code HMATH/13LMS

## The Way I Remember It

**Walter Rudin**, *University of Wisconsin, Madison*

*It is a real pleasure to read this book and to admire the charming personal style we have come to know from Rudin's textbooks, monographs and articles. The book is strongly recommended not only to analysts, but also to all mathematicians [and] historians.*

*—European Mathematical Society Newsletter*

*Of noteworthy significance.*

*—Zentralblatt für Mathematik*

*With this memoir, Rudin gives the entire mathematical community a chance to make his acquaintance both mathematically and personally, and a very worthwhile acquaintance it is. The biographical section … is fascinating … this book is a delight to read and will also help to inspire and guide young analysts in the path of wisdom. You will not want to miss a single page of it … recommend it to everyone.*

*—Mathematical Reviews*

Volume 12; 1997; 191 pages; Softcover; ISBN 0-8218-0633-5; List $29; All AMS members $23; Order code HMATH/12LMS

## Poincaré and the Three Body Problem

**June Barrow-Green**, *The Open University, Milton Keynes, UK*

*This is a superb piece of work and it throws new light on one of the most fundamental topics of mechanics … can be thoroughly recommended.*

*—Mathematical Reviews*

Volume 11; 1997; 272 pages; Softcover; ISBN 0-8218-0367-0; List $39; All AMS members $31; Order code HMATH/11LMS

## Sources of Hyperbolic Geometry

**John Stillwell**, *Monash University, Clayton, Victoria, Australia*

**History of Mathematics**, Volume 10; 1996; 153 pages; Hardcover; ISBN 0-8218-0529-0; List $39; All AMS members $31; Order code HMATH/10LMS

Beginning with Volume 4, *History of Mathematics* is co-published with the London Mathematical Society. Members of the LMS may order directly from the AMS at the AMS member price. The LMS is registered with the Charity Commissioners.

All prices subject to change. Charges for delivery are $3.00 per order. For optional air delivery outside of the continental U. S., please include $6.50 per item. Prepayment required. Order from: **American Mathematical Society**, P. O. Box 5904, Boston, MA 02206-5904, USA. For credit card orders, fax (401) 455-4046 or call toll free 800-321-4AMS (4267) in the U. S. and Canada, (401) 455-4000 worldwide. Or place your order through the AMS bookstore at http://www.ams.org/bookstore/. Residents of Canada, please include 7% GST.

AMS and LMS members may order through Oxford University Press and receive their member discounts: fax +44 (0) 1865 267782 or email at science.books@oup.co.uk

## APPLICATIONS TO THE EPDI:THIRD CALL

The European Post-Doctoral Institute for the Mathematical Sciences offers, for the third consecutive year, 5 two year grants (1998-2000) to young European scientists interested in fundamental mathematics or in applications of mathematics and who obtained their PhD in 1996 or later.

**Description of grants** The programme will be organised as follows:

- Six to twelve months in one of the three founder institutes (Max-Planck-Institut für Mathematics, Institut des Hautes Études Scientifiques, Isaac Newton Institute for Mathematical Sciences);
- Twelve to eighteen months in another European institution (research centre, university, corporation, etc).

Domains to be considered in this call for applications: mathematical sciences in the wide sense (pure mathematics, applications of mathematics, mathematical physics).

**Conditions for application** European citizenship (European Union, associated countries), Switzerland and Eastern European countries. PhD or equivalent in Mathematical Sciences obtained in 1996 or later (no matter where, in Europe or elsewhere).

**How to apply** Obtain an application form by e-mail (application-epdi@ihes.fr) and return it, together with the documents listed, by 21 December 1997 to: IPDE, 35 route de Chartres, F-91440 Bures-sur-Yvette, France.

**Selection of the applicants** Applications will be examined and selected in January 1998 by an international Scientific Committee. Candidates will be informed of the results by mid-February 1998 and scholarships will begin in September or October 1998.

## NEW COLLEGE, OXFORD
## in association with the
## LONDON MATHEMATICAL SOCIETY

# G.H. HARDY JUNIOR RESEARCH FELLOWSHIP IN MATHEMATICS

The College, in association with the London Mathematical Society, invites applications for this Fellowship, tenable for three years from 1 October 1998. The person appointed will be expected to engage in advanced research in any branch of mathematics. Applicants must have completed at least three years of postgraduate research by 1 October 1998.

Application forms and further particulars, giving full details of the terms and conditions of the Fellowship, are available from the Senior Tutor, New College, Oxford OX1 3BN (tel: 01865 279596, fax: 01865 279590, e-mail: tuition@new.ox.ac.uk).

The closing date for applications is **Friday 19 December 1997.**

CAMB

25% Off LMS Books For LMS Memb

## Arrow Logic and Multi-Modal Logic

**Edited by Maarten Marx, László Pólos and Michael Masuch**

Arrow logic started as an attempt to give a general account of the logic of transitions. It provides applications ranging from philosophy to computer science.

**£40.00** HB 1 57586 025 2 264 pp. 1997
**£14.95** PB 1 57586 024 4
*Studies in Logic Language and Information*

## Finite Fields

**Second Edition**

**Rudolf Lidl and Harald Niederreiter**

The theory of finite fields is a branch of algebra that has come to the fore because of its applications in such areas as combinatorics and coding theory.

**£60.00** HB 0 521 39231 4 769 pp. 1996
*Encyclopedia of Mathematics and its Applications 20*

## A Shorter Model Theory

**Wilfrid Hodges**

This is an up-to-date textbook of model theory taking the reader from first definitions to Morley's theorem and the elementary parts of stability theory.

**£22.95** PB 0 521 58713 1 320 pp. 1997

## The Laplacian on a Riemannian Manifold

**S. Rosenberg**

This text on analysis on Riemannian manifolds is a thorough introduction to topics covered in advanced research monographs on Atiyah–Singer index theory.

**£35.00** HB 0 521 46300 9 183 pp. 1997
**£12.95** PB 0 521 46831 0
*London Mathematical Society Student Texts 31*

## Algebraic Group

**A Volume of Papers in H**

**Edited by G. I. Lehrer**

This volume contains o leading researchers in al and geometric, althoug

**£32.50** PB 0 521
*Australian Mathematical Sc*

## *MATHEMATICA*® 3

**Wolfram Research Tech**

This book describes the with the full versions of technical staff, itgives us advantage of *Mathemati*

**£40.00** HB 0 521
**£19.95** PB 0 521

## Stochastic Flows Differential Equa

**H. Kunita**

The main purpose of th theory of stochastic diff diffeomorphisms, and t stochastic flows.

**£19.95** PB 0 521
*Cambridge Studies in Advan*

## Arithmetic Geom

**Edited by F. Catanese**

This book contains pap in Cortona. The contrib

**£40.00** HB 0 521
*Symposia Mathematica 37*

**Cambridge books are available from good bookshops, alternatively phone UK + 44 (0)1223 3 or fax UK +44 (0)1223 325152. For further information, please email Giulia Williams on Worldwide Web server http://www.cup.cam.ac.u**

CAM UNIVE

The Edinburgh Build

# BRIDGE

mbers

**up and Lie Groups**

**n Honour of the Late R. W. Richardson**

**ter**

ns original research articles by many of the world's
n algebraic and Lie groups. Its inclination is algebraic
ough analytical aspects are included.

0 521 38532 5 380 pp. 1997
*al Society Lecture Series 9*

**a® 3.0 Standard Add-on Packages**

**Technical Staff**

the 1000+ additional functions that are distributed
s of *Mathematica* 3.0. Created by Wolfram Research
es users the in-depth information needed to take full
*matica* 3.0.

521 55586 4 531 pp. 1997
521 55585 6

**ws and Stochastic**
**quations**

**Now in Paperback**

f this book is to give a systematic treatment of the
differential equations and stochastic flow of
nd through the former to study the properties of

521 59925 3 360 pp. 1997
*Advanced Mathematics 24*

**ometry**

**ese**

papers from a conference on arithmetic geometry held
ntributors are leading authorities in this field.

521 48133 3 310 pp. 1997
*a 37*

**23 3588 to order direct using your credit card,**
**on science@cup.cam.ac.uk or browse our**
**c.uk**

**ORDER FORM**

To order please send this form to Richard Knott at the address below, 'phone 01223 325916 or fax 01223 315052.

| Qty | Author | ISBN | Price |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | Total | |

☐ I enclose a sterling cheque/eurocheque (payable to Cambridge University Press)

☐ Please debit my credit card (Access/Mastercard/VISA/Amex)* **Please delete as applicable*

Card no. _____

Expiry Date _____

Signature _____

Name of cardholder _____

Address _____

_____

_____

_____

**Please return coupon to**
FREEPOST, The Edinburgh Building, Cambridge CB2 1BR
E-mail: science@cup.cam.ac.uk

# MBRIDGE
# VERSITY PRESS

uilding, Cambridge CB2 2RU

# A Selection of Important New Titles from Gordon and Breach

## ADVANCED MATHEMATICS FOR APPLIED AND PURE SCIENCES

**C.F. Chan Man Fong**, **D.De Kee** and **P.N. Kaloni**, all of *Canada*

Covers applicable mathematics that should provide a text, at the third year level and beyond, appropriate for students of both engineering and the pure sciences. The emphasis is on helping the student develop an understanding of mathematics and its applications.

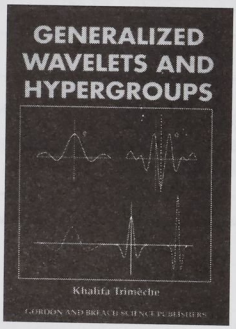
1997 • 904pp • Cloth • ISBN 90-5699-607-X • US$150 / £98 / ECU125
Paperback • ISBN 90-5699-614-2 • US$75 / £49 / ECU63

## ADVANCES IN DIFFERENCE EQUATIONS

Edited by **S. Elaydi**, *USA*, **I. Györi**, *Hungary* and **G. Ladas**, *USA*

The recent surge in research activity in difference equations and applications has been driven by the wide applicability of discrete models to such diverse fields as biology, engineering, physics, economics, chemistry, and psychology. The 68 papers contained in this volume offer a comprehensive review of the state of the art in this exciting field.

1997 • 704pp • Cloth • ISBN 90-5699-521-9
US$85 / £55 / ECU71




## GENERALIZED WAVELETS AND HYPERGROUPS

**K. Trimèche**, *Tunisia*

Hypergroups provide a very general and flexible context in which many of the classical techniques of harmonic analysis can be fruitfully employed. It is, therefore, natural to seek to exploit the newer techniques of wavelet analysis in this area. This text addresses itself to this challenge in some depth, providing a thorough and authoritative account of wavelet methods applied to hypergroups.

1997 • 358pp • Cloth • ISBN 90-5699-080-2
US$120 / £78 / ECU100

## INTEGRAL TRANSFORMS OF GENERALIZED FUNCTIONS AND THEIR APPLICATIONS

**Ram Shankar Pathak**, *India*

*"...an in-depth and up-to-date survey of much of the analysis concerning distributional and ultradistributional integral transforms...a valuable addition to the literature."*

— **Richard D. Carmichael**, *Department of Mathematics and Computer Science, Wake Forest University, USA*

For those who have a background in advanced calculus, elementary topology and functional analysis, this work provides a comprehensive analysis of the many important integral transforms and renders particular attention to all the technical aspects of the subject. The author presents the last two decades of research and includes important results from other works.

Late 1997 • 344pp • Cloth • ISBN 90-5699-554-5
US$85 / £55 / ECU71

**Gordon and Breach Science Publishers**
**A member of The Gordon and Breach Publishing Group**

## THE INTERNATIONAL MATHEMATICAL OLYMPIAD

The 38th International Mathematical Olympiad (IMO) was held in Mar del Plata, Argentina during the period 18-31 July 1997. It proved to be a hugely enjoyable experience. The organisation was superb, the accommodation good, the weather very pleasant and the ambience excellent. Away from the cut and thrust of battle, there were lots of things to do, with plenty of opportunities to renew old friendships and make new ones with people from all over the world. This year 82 countries were represented, the largest ever.

In many Eastern European countries there is a long tradition of mathematical competitions for high-school pupils. From such historical roots, the idea of an IMO developed and the first IMO, a relatively small-scale affair, took place in Romania in 1959. Since then more and more countries have joined in, so that giants like China, Russia and the USA now rub shoulders with Trinidad and Tobago, Puerto Rico and Sri Lanka. The UK first competed in 1967.

Countries are invited to send teams of up to six contestants. Each contestant must be under 20 years of age at the time of the competition and must not have started a full-time university course. The competition itself consists of two 4-1/2-hour papers which take place on consecutive days. Each paper contains just three problems. In the days that follow, the contestants go on sightseeing excursions and have the chance to enjoy the social side of an IMO.

The process of selecting the UK team extends over several months and involves a number of competitions, the organisation and co-ordination of which is now the responsibility of the United Kingdom Mathematics Trust (UKMT). Details of the UKMT were given in an article by Tony Gardiner in an earlier Newsletter (No. 243, November 1996).

Things got under way in November 1996 with the UK Senior Mathematics Challenge, a 1-1/2-hour paper containing 25 multiple-choice questions. Around 35,000 pupils, mainly aged 16-18, took part and, on the basis of their scores, over 700 progressed to the first round of the British Mathematical Olympiad. This was a 3-1/2-hour paper with five questions, held in mid-January. Thereafter, 100 pupils were invited to take part in the second round of the BMO, held at the end of February. From this group, exactly 20 were selected for a four-day residential Training Session at Trinity College, Cambridge. Selection for the Training Session was based on several criteria. In addition to the strongest contenders for this year's IMO team, some younger students were blooded as an investment for the future. After Cambridge, a squad of seven embarked on a correspondence course, during which they received sets of 8-10 problems every 10 days. Towards the end of May, our selection was finalised.

**Team**

Mansur Boase (St Paul's School, London)
Michael Ching (Oundle School, Peterborough)
Toby Gee (John of Gaunt School, Trowbridge)
Adrian Sanders (King's College School, Wimbledon)
Amit Shah (Haberdashers' Aske's School, Elstree)
Bennet Summers (St Paul's School, London)

**Reserve**

Colin Phipps (Bristol Grammar School)

**Team Leader**

Dr Adam McBride (University of Strathclyde)

**Deputy Leader**

Mr Philip Coggins (Bedford School)

**Observer**

Mr Michael Davies (Westminster School)

Of the team, Michael and Toby went to the 1996 IMO in Bombay while Adrian and Bennet were last year's reserves. Sending an Observer to the IMO allows interested parties to see what is involved in being either the Leader or the Deputy

Leader. On this occasion Michael Davies shadowed Philip Coggins. Both Michael and Philip were heavily involved in marking the scripts and in presenting our case persuasively to a panel of neutral co-ordinators.

The squad gathered for four days in Birmingham in early July, as part of the National Mathematics Summer School being run there by Tony Gardiner. This formed our final preparation prior to departure. By comparison with other major countries, resources available for training are meagre. That we manage to do so well is a tribute to the small band of enthusiasts who so willingly give up what little spare time they have to lead sessions and make up sheets of problems. Many thanks to them all.

A total of 460 contestants from 82 countries took part. The UK team finished 16th with 144 points (out of a possible 252). Individual scores (out of 42) and medals gained were as follows: Mansur Boase 28 (Silver); Michael Ching 25 (Silver); Toby Gee 18 (Bronze); Adrian Sanders 21 (Bronze); Amit Shah 14; Bennet Summers 38 (Gold). Bennet's score put him 15th equal (out of 460). Amit was unlucky to miss a bronze medal by just one point. Officially the IMO is an individual competition but there is always considerable interest in team performances. The winners were China with 223 points (out of 252), followed in order by Hungary, Iran, Russia and the USA.

It was a pleasure and a privilege for me to lead the UK team. They proved to be excellent ambassadors and displayed a splendid attitude throughout all the months of intensive training. We wish them all the best for the future.

Adam C. McBride
UK Team Leader, IMO 97

Within the UKMT, responsibility for IMO training rests with its Senior Olympiad Subtrust, formerly known as the British Mathematical Olympiad Committee. Help with this work is always welcome and any member who would like to get involved should contact the Chairman of the Subtrust, Professor J. Wiegold (School of Mathematics, University of Wales Cardiff). The DfEE makes a grant towards IMO training and travel, but the subtrust also depends heavily on sponsorship from interested bodies and individuals. Sponsors receive a much more detailed report of the IMO, which includes the problems, and the *British Mathematical Olympiads* booklet, which contains the BMO problems and solutions. Any member who would like to sponsor this worthwhile work is invited to send a donation (cheque payable to 'United Kingdom Mathematics Trust (BMOC)') to the Treasurer of the Subtrust, Dr A.R. Pears (Department of Mathematics, King's College London).

## SCIENCE AND SOCIAL RESPONSIBILITY

A public discussion meeting on Science and Social Responsibility will take place at 2.15 pm on Friday 12 December 1997 at The Royal Society, 6 Carlton House Terrace, London SW1. This will take the form of a panel discussion with audience participation. The panellists will include Sir Michael Atiyah, Jack Boag, Georges Kutukdjian, Ruth McNally, Bernadette Modell, and Sir Martin Rees, with Sebastian Pease as Chairman. Anyone planning to attend should advise Sue England, Pugwash, 63A Gt. Russell Street, London WC1B 3BJ (tel: 0171 405 6661, fax: 0171 831 5661, e-mail: pugwash@qmw.ac.uk).

## ROYAL MEDAL

Her Majesty The Queen has been pleased to approve a recommendation of the Council of the Royal Society of a Royal Medal for 1997 to Professor John Maynard Smith, FRS. The award is made in recognition of his theoretical contributions to evolutionary biology, combining mathematics and biology to develop a sound understanding in such fields as population dynamics, paleobiology, ethology, behavioural ecology, bacteriology and genetics.

# OUP and AMS
## A Winning Combination!

## Fractured Fractals and Broken Dreams:
### Self-similar Geometry through Metric and Measure

**Guy David,** *and* **Stephen Semmes**

Fractal patterns have emerged in many contexts, but what exactly is a "pattern" and what is not? How can one make precise the structures lying within objects and the relationships between them? The foundations laid herein provide a fresh approach to a familiar field.

OXFORD LECTURE SERIES IN MATHEMATICS AND ITS APPLICATIONS NO. 7

240 pp, October 1997

0-19-850166-8 £35.00 Hardback **£35.00**

## Codes and Algebraic Curves

**Oliver Pretzel**

This is an updated and extended version of the last part of the successful *Error Correcting Codes and Finite Fields*, also by Pretzel. It provides an introduction to the geometry of curves over finite fields and uses the theory for a detailed investigation of geometric Goppa codes, a new and important area of coding theory.

OXFORD LECTURE SERIES IN MATHEMATICS AND ITS APPLICATIONS NO. 8

208 pp, January 1998

0- 19-850039-4 Hardback **£35.00**

## Foundations of Mathematical Analysis

**J. K. Truss**

Mathematics forms a coherent whole from the foundations, where philosophical issues are paramount, through to the most complicated applications. This book presents one view of this development, emphasizing foundational matters, and shows how study of the standard number systems has helped to give mathematics its breath of characters.

OXFORD MATHEMATICAL MONOGRAPHS

368pp, May 1997

0-19-853375-6 Hardback **£40.00**

## Fundamentals of the Theory of Operator Algebras

### Volume I: Elementary Theory

**Richard V. Kadison** *and* **John R. Ringrose**

*"Drawing on their rich experience, the authors have succeeded in presenting a very attractive and well-written book that conveys the flavour and the beauty of classical operator algebra theory and that should be ideally suited as a text for a graduate course on the subject."*

**Zentralhlatt fur Mathematik**

GRADUATE STUDIES IN MATHEMATICS NO 15

398 pp American Mathematical Society, Oct 1997

0-8218-0819-2 Hardback **£35.00**

### Volume II: Advanced Theory

*"...what is presented here is an exciting and careful account of some very substantial mathematics! As with the first volume, this book has an outstanding collection of exercises (and groupings of exercises)...Although the material in this second volume is substantially more advanced than that in the first volume, the author's have maintained the same spirit of freshness of the presentation given here."*

**Mathematical Reviews**

GRADUATE STUDIES IN MATHEMATICS NO. 16

676 pp American Mathematical Society, Oct 1997

0-8218-0820-6 Hardback **£45.00**

### ALSO AVAILABLE

### Volume III: Special Topics, Elementary Theory - An Exercise Approach

273 pp American Mathematical Society Nov 1997

0-817-63497-5 Hardback **£25.00**

### Volume IV: Advanced Theory - An Exercise Approach

586 pp American Mathematical Society, Nov 1997

0-8176-3498-3 Hardback

To order direct by credit card, call either of the following two numbers, please have your details with you when you dial. Please quote the code LMS1297.

**Tel: +44 (0) 1536 454534 or Fax: +44 (0) 1536 454518**

Prices and extents are subject to change.

**OXFORD UNIVERSITY PRESS**

**Innovation, Excellence, Tradition**

# A Selection of Important New Titles from Gordon and Breach

## SERIES OF FABER POLYNOMIALS

**P.K. Suetin**, *Russia*

Presents some important classical and modern results of the series of Faber polynomials and their applications, a subject in which interest has increased rapidly over the last decade. Applications include theory of functions of complex variables, theory of analytic function approximation and some aspects of numerical analysis.

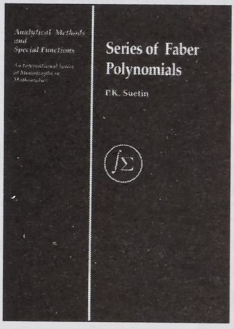
Early 1998 • 320pp • Cloth • ISBN 90-5699-058-6
US$125 / £81 / ECU104
*Analytical Methods and Special Functions*, Volume 1

## SOLVING ODEs BY LINEAR MULTISTEP INITIAL AND BOUNDARY VALUE METHODS

**L. Brugnano** and **D. Trigiante**, both of *Italy*

This book aims to generalize classical multistep methods for both initial and boundary value problems; to present a self-contained theory which embraces and generalizes the classical Dahlquist theory; to treat nonclassical problems, such as Hamiltonian problems and the mesh selection; and to select appropriate methods for a general purpose software capable of solving a wide range of problems efficiently, even on parallel computers.

Early 1998 • 448pp • Cloth • ISBN 90-5699-107-8
US$120 / £78 / ECU100
*Stability and Control: Theory Methods and Applications*, Volume 6




## TENSOR AND VECTOR ANALYSIS
### Geometry, Mechanics and Physics

**A.T. Fomenko**, **V.V. Trofimov** and **O.V. Manturov**, all of *Russia*

Foreword by **Professor Nigel Hitchin**, *Savilian Professor of Geometry, Oxford University, UK*

Reflecting the significant contributions of Russian mathematicians to the field, this book contains a selection of papers on tensor and vector analysis. It is divided into three parts, covering Hamiltonian systems, Riemannian geometry and calculus of variations, and topology.

Early 1998 • 312pp • Cloth • ISBN 90-5699-007-1
US$90 / £59 / ECU75

## THEORY OF PROBABILITY
### Sixth Edition

**Boris V. Gnedenko**, *Russia*

This sixth edition of a classic text first published in 1950, is a major revision over the fifth. It contains new material and for the first time includes a brief history of probability and its development. Exercise problems and examples have been revised and new ones added.

Late 1997 • 512pp • Cloth • ISBN 90-5699-585-5
US$64.95 / £42 / ECU54

**For further information on any of these titles, or to order, please contact:**

**North/South America**
University of Toronto Press, 250 Sonwil Drive, Buffalo, NY 14225, USA
Tel: +1 (800) 565 9523 • Fax: +1 (800) 221 9985
E-mail: utpbooks@gpu.utcc.utoronto.ca

**Europe/Middle East/Africa**
Marston Book Services Ltd., PO Box 269, Abingdon, Oxon OX14 4YN, UK
Tel: +44 (0) 1235 465 500 • Fax: +1 (0) 1235 465 555
E-mail: direct.order@marston.co.uk

**E-mail: info@gbhap.com**
**Visit Our Home Page: http://www.gbhap.com**

**Gordon and Breach Science Publishers**
**A member of The Gordon and Breach Publishing Group**

## NORTH WEST DYNAMICS SEMINARS

The second of a series of North West Dynamics Seminars, funded under a scheme three LMS grant will take place on 15th December 1997 at the Department of Mathematical Sciences, University of Liverpool. Talks will take place in Room 211 of the Mathematics and Oceanography Building. Morning coffee will be available from about 10.30 am in Room 304 of the same building. All are welcome. The talks are as follows.

Dr Patrick Verovic (University of Manchester) 11.00 - 12.00 am - "Katok-Gromov's entropy conjecture in the Finsler case". Abstract: On every compact locally symmetric space of non-compact type with rank at least two, we give an explicit construction of a Finsler metric whose total volume is the same as the Riemannian volume of the space but with a volume growth entropy strictly less than one of the locally symmetric entropy among all G-invariant Finsler metrics normalized by the volume of the manifold.

Dr Tom Ward (University of East Anglia) 2.15 - 3.15 pm - "Dynamical systems associated to rings of S-integers". Abstract: We will give a survey of recent work by Chothi, Everest and Ward on certain arithmetical dynamical systems; the construction applies in a uniform way to global fields, giving in characteristic zero a family of isometric extensions of (quasi)-hyperbolic toral and solenoidal automorphisms, and in positive characteristic a family of isometric extensions of algebraic cellular automata; basic questions about the dynamical zeta functions of these systems reveal connections with classical problems in number theory.

Dr Toby Hall (University of Liverpool) 3.45 - 4.45 pm - "Dynamics implied by a compact invariant set". Abstract: This is joint work with Philip Boyland; for surface homeomorphisms, the implications for the global dynamics of the existence of a given finite union of periodic orbits have been extensively studied, and can be relatively well understood by means of Thurston's classification theorem and the unremovability theorem of Asimov and Franks; I shall describe a generalization of the Asimov-Franks theorem, using which the dynamics implied by an arbitrary compact invariant set can be studied; applications include an alternative approach to Handel's result that certain homoclinic orbits in Smale's horseshoe imply the full dynamics of the horseshoe; and a proof that the invariant adding machine at the accumulation of a zero-entropy 'period-multiplying' cascade of periodic orbits implies all the periodic orbits in the cascade.

There will be lunch at 12.30 and an evening meal at 6.30 in a local restaurant. It would help with catering arrangements if you are able to attend please reply to either Dr R. Nair or Miss W. Orr (worr@liv.ac.uk). Further information may be obtained from: R. Nair, Room 504, Mathematics and Oceanography Building, Department of Mathematical Sciences, University of Liverpool, Liverpool L69 3BX; e-mail: nair@liv.ac.uk; tel: 0151 794 4057.

## HYPERBOLIC GEOMETRY

A Meeting of the London Mathematical Society will be held at the University of Southampton on Friday, 20 February and Saturday, 21 February 1998.

The speakers for this meeting are Werner Ballmann (University of Bonn), Yair Minsky (SUNY at Stony Brook), Caroline Series (University of Warwick), Brian Bowditch (University of Southampton), Alex Lubotsky (Hebrew University), and Michael Kapovich (University of Utah).

If you would like further details about the seminar, please contact one of the organizers, Graham Niblo (gan@maths.soton.ac.uk) and Jim Anderson (jwa@maths.soton.ac.uk). Their regular mail address is: Faculty of Mathematical Studies, University of Southampton, Southampton SO17 1BJ tel:(01703) 593612; fax;(01703) 595147.

# MATHEMATICIANS VISITING THE UK IN 1997/98

## ABERDEEN UNIVERSITY

Professor J Bicak (Charles University, Prague) Relativity theory, during 1998

Dr J Carot (University of the Balearic Isles, Palma) Relativity theory, during 1998

Professor A Coley (Dalhousie University, Halifax, Canada) Relativity theory, during 1998

Professor K Irie (Osaka Women's University, Japan) Algebraic topology, Sep '97- Jul '98

Professor N Iwase (Kyushu University, Japan) Algebraic topology, until Mar '98

Professor G Martin (University of Auckland) Discontinuous groups, July 1998

Professor B O J Tupper (University of New Brunswick, Fredericton, Canada) Relativity theory, during 1998

Professor E. Vaz (University of Minho, Portugal) Relativity theory, during 1998

## BATH UNIVERSITY

Dr P Z Kobak (Jagellonian University, Cracow) Differential geometry; Harmonic maps, Sep '97-Aug '98

## BIRBECK COLLEGE

Professor A C Dallas (University of Athens) Probability; Statistics, Oct '97-Sep '98

## BRADFORD UNIVERSITY

Dr G Nikolov (University of Sofia) Approximation theory, Mar '97-Feb '98

## BRUNEL UNIVERSITY

Dr M E Captivo (University of Lisbon) Optimization; Operational research, Oct '97-Aug '98

Dr C Climaco (University of Lisbon) Optimization; Operational research, Oct '97-Aug '98

## CAMBRIDGE UNIVERSITY

Dr J Caruso (USA) Dynamical systems; Algebraic topology, Sep '96-Sep '98

Dr R Cockett (Calgary) Categories; Computer science, 15 Aug '97-31 Mar '98

Dr C Consani (MIT) Number theory, 3 Jan '98-3 Jul '98

Dr P Gille (Universite Paris-Sud) Number theory, 1 Oct '97-30 Jun '98

P Golle (Paris XI, Orsay) Number theory; Algebraic geometry, Oct '97-Sep '98

Dr N Maier (Universite de Caen) Number theory, 1 Feb '98-30 Apr '98

Dr M Mella (Universita de Trento, Italy) Algebraic geometry, 1 Feb '98-31 Jan 2000

Professor M Teixidor (Tufts) Algebraic geometry, May '96-Aug '98

Dr R Wagner (Tel-Aviv) Functional analysis, 1 Nov '97-31 Oct '98

## DUNDEE UNIVERSITY

Dr M A Asiry (King Saud University, Saudi Arabia) Approximation theory, Jul '97-Jul '98

Dr E D Vinogradova (Institute of Radiophysics and Electronics, Kharkov, Ukraine) Scattering and diffraction; Applications to antenna theory, Aug '97-Jul '98

Dr S S Vinogradov (Kharkov State Academy of Civil Engineering, Ukraine) Scattering and diffraction, Aug '97-Jul '98

## EAST ANGLIA UNIVERSITY

Professor V Mnukhin (State University of Radio Engineering, Taganrog, Russia) Algebra; Combinatorics, Oct '97-Oct '98

Professor A S Kondratiev (Russian Academy of Sciences, Ekaterinburg) Finite group theory; Linear groups; Representation theory, 26 Jan-25 Feb '98

Professor C Tamburini (Universita Cattolica, Brescia, Italy) Group theory; Algebra, 16 Oct-15 Dec '97

## EXETER UNIVERSITY

Professor S Childress (New York University) Fluid dynamics, 1 Jan - 1 June '98

## GLASGOW CALEDONIAN UNIVERSITY

Dr D A Onishchenko (Russia Research and Design Institute, Moscow) Nonlinear problems of complex hierarchical

structures; Fractal trees and self-affine surfaces, 18 Aug-17 Nov '97

**HERIOT-WATT UNIVERSITY**

Dr V Z Enolskii (Ukranian Academy of Sciences, Kiev) Hyperelliptic abelian functions and Josephson functions, Jan - Jun '98

Dr V Metaftsis (University of the Aegean) Geometric group theory, mid Jan - end Feb '98

Dr S Srisatkunarajah (University of Jaffna) Differential equations and applied analysis, Oct '97 - Sep '98

**IMPERIAL COLLEGE**

Dr J V Anderson (University of Nice) Mathematical physics, Sep '96-Mar '98

Dr C Blanco del Prado (University of Navarro, Spain) Applied mathematics, Feb- Sep '98

Dr K Christensen (Federal University, Rio de Janeiro) Mathematical physics, Feb '97-Jan '99

Professor A Eremanko (Purdue University, Lafayette, USA) Pure mathematics, May-Jul '98

Dr J M Lopez (Institute de Fisicade Cantabria, Spain) Mathematical physics, Jan-Dec '98

Professor G Seitz (University of Oregan, USA) Pure mathematics, Jul '97-Jun '98

Professor F Z G Shanidze (Georgian Technical University, Georgia) Pure mathematics, Dec '96-Jan '98

Dr Y Shimizu (Tokokan University, Japan) Mathematical physics, May '98-Mar '99

Dr N Yamazaki (Kyushu University, Japan) Pure mathematics, Oct '97-Sep '98

Dr M Zamora (University of Fribourg, Switzerland) Mathematical physics, Oct '96-Sep '98

**KEELE UNIVERSITY**

Dr Z Cai (Tianjin University, China) Solid mechanics, Oct '97-Oct '98

Dr I C Collings (Deakin University, Australia) Geophysical fluid dynamics, 1 Oct-31 Dec '97

Professor X-C Fu (Wuhan Institute of Physics and Mathematics, China) Nonlinear systems theory, 30 Sep '97-31 Mar '98

Professor S Looney (University of Louisville, Kentucky) Medical statistics, Sep '97-Aug '98

Professor S V Sorokin (State Marine Technical University, St Petersburg) Applied mathematics and mechanics, 1 Dec '97-30 May '98

**LANCASTER UNIVERSITY**

Professor J R Peters (University of Iowa) Operator algebras, 16 Sep - 17 Nov '97

**LEEDS UNIVERSITY Pure Mathematics**

Professor L Angsheng (Academia Sinica, Beijing) Logic, Jan-Sep '98

Dr L Kristiansen (University of Oslo) Logic, Oct '97-Sep '98

Dr S Montaldo (University of Calibri, Italy) Differential geometry, Oct '97-Sep '98

Dr S S Pandy (R D University of Jabalpur, India) Analysis, 23 Sep '97-Jan '98

Dr P S Simonetta (University of Paris VII) Logic, Oct '97-Sep '98

**LIVERPOOL UNIVERSITY**

Professor V M Zakalyukin (Moscow Aviation Institute) Geometry, Mar '98

**LOUGHBOROUGH UNIVERSITY**

Dr O Chalykh (Moscow State University) Integrable systems, 1 Feb '98-1 Feb '99

Dr F Finkel (Universidad Complutense, Madrid) Mathematical physics, 1 Nov-15 Dec '97

**NEWCASTLE UNIVERSITY**

Professor D Sokoloff (Moscow State University) Differential geometry; Random media and turbulence; Magnetohydrodynamics; Dynamo theory, 1 Feb-31 Jul '98

**NOTTINGHAM UNIVERSITY Mathematics**

Professor M A Albar (KFUPM, Dhahran) Coxeter groups, from Oct '97

Professor L Crane (Kansas State Univer-

sity), spring Semester
Professor A V Kostochka (Institute of Mathematics, Novosibirsk) Graph theory, 1 Jan-1 Jul '98

**NOTTINGHAM UNIVERSITY Theoretical Mechanics**
Professor U G Abdullaev (Baku State University, Azerbaijan) Applied analysis, 1 Sep-Dec '97

**OPEN UNIVERSITY**
Professor B Johnston (University of Manitoba) Interobserver reliability response survey, Sep-Dec '97
Professor C E Lunneborg (University of Washington) Study design and resampling inference, 1 Sep '97-28 Feb '98

**OXFORD UNIVERSITY Mathematics**
Dr J Caro (University of Philippines) Complexity and combinatorics, Oct '97-Sep '98
Dr V De Smedt (Universite Libre de Bruxelles) Differential geometry; Oct '97- Sep '98
Dr W Hackborn (Augustana University College, Alberta, Canada) Mathematical biology,
Professor B Ko (Cheju National University, Republic of Korea) Partial differential equations, 1 Jul-31 Dec '97
K Stolot (Jagiellonian University, Cracow) Topology, Oct '97-Sep '98 1 Sep '97-15 Dec '97
Professor A Tertikas (Crete University) Partial differential equations, 1 Sep '97-31 Jan '98
Professor V Volenec (University of Zagreb) Geometry and algebra

**OXFORD UNIVERSITY Statistics**
Dr C Chen (Feng-Chia University, Taiwan) Time series analysis, 15 Aug '97-28 Mar '98
Professor E B Hook (School of Public Health, U C Berkeley) Statistical aspects of epidemiology and genetics, 1 Jan-15 Jul '98
Professor P Grambsch (University of Minnesota) Statistics and stochastic processes, 1 Jan-31 Dec '98
Dr P Kabaila (La Trobe University, Melbourne) Bootstrap and its variants, 4 Mar '97-12 Jan '98
Dr F Komaki (Institute of Statistical Mathematics, Tokyo) Differential geometrical methods in statistics, 16 Sep '97-13 Mar '98

**QUEENS UNIVERSITY BELFAST**
Professor H Raubenheimer (University of the Orange Free State, S Africa) Operators on ordered Banach spaces, 1 Oct '97-31 Dec '97

**SHEFFIELD UNIVERSITY Probability & Statistics**
Professor M Kimura (Nanzan University) Robust statistics; Regression analysis; Multivariate analysis, Aug '97-Jul '98
Dr M Mancharan (University of Calicut) Reliability; Queues, Sep '97-Aug '98

**SOUTHAMPTON UNIVERSITY**
Dr N Brady (University of Cornell, USA) Geometry; Group theory, 1 Jun- 31 Aug '98
Dr L C P Pereira (Telebras, Brazil) Antenna design, May-Aug '98
Dr E Ralha (Braga, Portugal) Mathematics education, Jan-Mar '98

**STRATHCLYDE UNIVERSITY**
Professor I Chudinovich (University of Kharkov, Ukraine) Boundary integral equation methods, 1 Sep-31 Dec '97
Dr A Latif (Gomal University, Pakistan) Fixed-point theorems for multivalued maps, Sep '97-Aug '98

**UMIST**
Dr M Karbassi (University of Yazd, Iran) Control engineering, Nov '97- Apr '98
Dr A N Krasil 'Nikov (Moscow Pedagogical State University) Group theory, Jan- Dec '98
Dr L G Kovacs (Australian National University, Canberra) Group theory, Jun-Jul '98
Dr A I Papistas (University of Thessaloniki, Greece) Groups and lie algebras, 15 Feb-31 May '98

**UNIVERSITY COLLEGE LONDON**

Dr G Elekes (Eotvos University, Budapest) Pure mathematics, Oct-Dec '97

Dr E Riss (Russian State Pedagogical State University, St Petersburg) Pure mathematics, Oct-Dec '97

**UNIVERSITY OF WALES, BANGOR**

Professor P I Booth (Memorial University of Newfoundland) Algebraic topology, Summer '98 (1 month)

Dr M Bullejos (University of Granada, Spain) Homological algebra; Category theory; Algebraic topology, Sep '97-Feb '98

**UNIVERSITY OF WARWICK**

Professor M Cahen (ULB, Bruxelles) Symplectic geometry, 10 Apr-30 Jun '98

Dr V Chloup-Arnould (Universite de Metz, France) Symplectic geometry, 1 Oct '97-31 Jul '98

Professor B V Fedosov (Universitat Potsdam, Germany) Symplectic geometry, 19 Nov '97-19 Dec '98

Professor S Gutt (ULB, Bruxelles) Symplectic geometry, 10 Apr-30 Jun '98

Dr A Karabegov (LCTA - JINR, Moscow Region) Symplectic geometry, 19 Nov '97-19 Dec '98

Professor S Mukai (Nagoya University, Japan) Symplectic geometry, 28 Oct '97-6 Apr '98

Professor K Matsuki (Purdue University, USA) Algebraic geometry, 1 Dec '97-31 Jan '98

Professor A I Stipsicz (ELTE TTK, Budapest) Symplectic geometry, 1 Mar-30 Apr '98

## BRITISH TOPOLOGY MEETING

The 13th British Topology Meeting will be held at the University of Aberdeen from Tuesday to Thursday, 14th to 16th April 1998. Talks will start on Wednesday morning and finish at lunchtime on Thursday. The programme will consist of two or three invited talks in addition to the usual eight to ten 30 - 40 minute talks. Provisionally, invited speakers include: Brian Bowditch (Southampton) and Matthias Kreck (Mainz and Oberwolfach).

The meeting is supported by the London Mathematical Society and some support will be available to help finance those participants who cannot obtain funding from their own institutions. Research students are particularly encouraged to attend. Up-to- date details of the meeting may be obtained from the meeting homepage (http://www.maths.abdn.ac.uk/~pt/btm /main.html). For further information contact Paul Turner (pt@maths.abdn.ac.uk) or Colin Maclachlan (cmac@maths. abdn.ac.uk).

## APPLIED MATHEMATICS FOR INDUSTRIAL FLOW PROBLEMS
### Travel Grants and Fellowships

AMIF is a five year programme funded by the European Science Foundation, which started in 1997. The overall goal is to increase understanding of the mathematics underlying models of realistic flows, and then both improve existing numerical methods and develop new ones in three different areas: fluid dynamics, non-linear analysis, and numerical analysis. Combining expertise from different countries will attain these goals.

The AMIF programme provides support for conferences of general interest, specialized workshops and travel grants or fellowships for European researchers on any of the subjects described above. The purpose of this announcement is to advertise the possibilities offered by AMIF to European researchers for visits in research centres of any country in Europe (not limited to UE countries). Interested researchers should apply as soon as possible at the following address: Simona Lilliu, AMIF Secretary, CRS4, Via Sauro, 10-09123 Cagliari, Italy (simona@crs4.it). Details on the AMIF Programme, guidelines for travel grants and fellowships as well as application forms can be found on the web page (http://www.crs4.it/~simona/ESF).

## SOCIETY OF FRIENDS OF OBERWOLFACH

The Mathematical Research Institute at Oberwolfach is formally managed and operated by the Society for Mathematical Research (die Gesellschaft für Mathematische Forschung). The Society of Friends of Oberwolfach (Verein zur Förderung des Mathematischen Forschungsinstituts Oberwolfach) was founded in February 1992; its main aims are to enhance the financial flexibility available for the management of the Oberwolfach Institute and to try to ensure the maintenance of the traditional friendly atmosphere at the meetings at Oberwolfach.

The London Mathematical Society is an institutional member of the Society of Friends of Oberwolfach; individuals may also join. The annual membership subscription for individuals is DM100, but an equivalent sum in any other currency, or any larger contribution, would be very welcome. Alternatively, payment can be made by Visa, Mastercard or Diners Club credit card, but in that case the amount of the payment must be given in German Marks. If you would like to join, please complete a copy of the form below and send it to the Treasurer of the Society of Friends of Oberwolfach at the address shown. Confirmation of your membership and a receipt for your subscription will be sent as soon as possible.

✂ .....

To: Professor Dr J. Lehn, Treasurer, Society of Friends of Oberwolfach, Technische Universitatstät Darmstadt, Fachbereich Mathematik, Schlossgartenstrasse 7, D-64289 Darmstadt, Germany.

Name (blockletters): .....

Address: .....

.....

.....

I wish to become a member of the Society of Friends of Oberwolfach and pay my first annual subscription

☐ with the enclosed cheque (made out to 'Verein zur Förderung des Mathematischen Forschungsinstituts Oberwolfach') for .....

☐ by credit card. Type of card: Visa/Mastercard/Diners Club. Expiry date: .....

Credit card number: ..... Payment: DM.....

Registered address for card: .....

.....

.....

.....

Signature: .....

I.M. VINOGRADOV
Honorary Member 1939

# 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 1997

**8-12** Moment Maps and Quantization Workshop, Warwick University

**12** Edinburgh Mathematical Society Meeting, Heriot-Watt University (252)

**13-17** European Women in Mathematics 8th General Meeting, ICTP, Trieste, Italy (244)

**15-19** Bayesian Methods in Neural Computing Conference, Isaac Newton Institute, Cambridge (252)

## JANUARY 1998

**16** Edinburgh Mathematical Society Meeting, Edinburgh University (252)

## FEBRUARY 1998

**9-13** Hyperbolic Problems Theory, Numerics, Application Conference, ETH Zurich, Switzerland (246)

**13** Edinburgh Mathematical Society Meeting, Edinburgh University (252)

**20-21** Two-day London Mathematical Society Meeting, University of Southampton - Hyperbolic Geometry (254)

## MARCH 1998

**13** Edinburgh Mathematical Society Meeting, Dundee University (252)

**31-3 Apr** Computational Fluid Dynamics Conference, Oxford University (252)

## APRIL 1998

**6-9** British Mathematical Colloquium, Manchester University

**6-9** British Applied Mathematics Colloquium, Brunel University (254)

**20-24** LMS Invited Lectures, Exeter University, Professor D. Zagier

**20-24** Probability: Theory and Applications Workshop, Nottingham Trent University (252)

## MAY 1998

**8** Edinburgh Mathematical Society Meeting, Aberdeen University (252)

**22-23** London Mathematical Society and Irish Mathematical Society Joint Meeting on Complex Analysis and Dynamical Systems, London

## JUNE 1998

**5** Edinburgh Mathematical Society Meeting, St Andrews University (252)

**22-27** European Consortium for Mathematics in Industry (ECMI 98), Göteborg, Sweden (252)

## JULY 1998

**5-9** Mathematics Colloquium, Victoria University of Wellington, New Zealand (254)

**20-24** Dimensions and Dynamics Conference, Miskolc, Hungary (254)

**20-24** Domain Decomposition Methods Conference, Greenwich University (254)

**27 Jul-7 Aug** Nonlinear Analysis, Differential Equations and Control Seminar, Montreal, Canada (254)

## AUGUST 1998

**18-28** International Congress of Mathematicians, Berlin, Germany (238) (242) (253)

**30-5 Sep** Algebraic Number Theory and Diophantine Analysis Conference, Graz, Austria (249)

## JULY 1999

**5-9** International Congress of Industrial and Applied Mathematics (ICIAM 99), Edinburgh (252)

**12-16** British Combinatorial Conference, Kent University (254)

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

The London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL
Tel: 0171-437 5377, fax: 0171-439 4629, e-mail: lms@lms.ac.uk.
World Wide Web: http://www.lms.ac.uk/

The London Mathematical Society is registered with the Charity Commissioners.

Printed by Armstrong Press Ltd, Southampton 01703 333132