

# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 266

December 1998

## FORTHCOMING SOCIETY MEETINGS

*Friday-Saturday 12-13 February 1999 - Leeds*

Proof and Computation

*Friday-Sunday 14-16 May 1999 - Brussels*

Joint meeting with the Belgian Mathematical Society

## COUNCIL DIARY

This month's Council meeting held on 16 October 1998 was notable for its length (nearly 5 hours). Partly this was because of the need to discuss the annual report and financial statements of the Society. (The finances of the Society are reported at the Annual General Meeting, which takes place during the November Society meeting.) Despite the recent turmoil in the world markets, our financial position remains healthy. This is a very important aspect of Council business; members of Council who are Trustees of the Society and are therefore responsible to the Charity Commissioners for its management.

We are constantly seeking ways to use LMS resources to further mathematics. Council agreed that Programme Committee, which administers Society grants, could increase the level of support for Conference grants, with a strong emphasis on participation of research students. Support limits for Scheme 4 (Collaborative Small Grants) were raised, and Scheme 5 (FSU Visitor Scheme) has been renamed 'International Short Visits', and the range of countries greatly extended to include (among others) Eastern Europe and China. Further information appears elsewhere in this *Newsletter*, and on the LMS web site. Other proposals to widen support of UK mathematics are

under active consideration.

Much discussion at the meeting revolved around Council's continual concern about our representation of applied mathematics, and our relations with the IMA. Various issues gave rise to an animated discussion. Members of LMS might be surprised (as we were) to learn that one UK University had advertised a lectureship for which IMA membership was a required qualification. There have been suggestions from time to time that the LMS and the IMA should join forces, and Council wishes to pursue a policy of increased cooperation with the Institute, although an imminent merger seems today perhaps as likely as the reunification of Germany did in the 70's. In any event, Council took further steps to affirm its commitment to supporting a wide spectrum of mathematics, including pure, applied, mathematical physics and mathematical aspects of computer science. The membership of the prizes committee has been expanded to ensure that more prizes are awarded in applied areas of mathematics. Over a quarter of our members are "applied" mathematicians, and they receive both individual and collective support from Programme Committee and Council - most recently we have made a substantial contribution to ICIAM99. To further increase our involvement we are applying to join CICIAM (the Committee for



International Conferences on Industrial and Applied Mathematics), which plans the ICIAM meetings and generally promotes industrial and applied mathematics internationally.

In the report of the Publications Secretary we learnt with sadness of the death of Eric Primrose, who has had a long association with 'Russian Mathematical Surveys', most recently as editor since 1986. Council approved costly and effective steps to eliminate by the end of 2000 the embarrassing backlog which currently afflicts the *Journal* of the LMS.

As readers may know, the year 2000 has been designated 'World Mathematical Year'. We discussed possible initiatives the Society might take. Members of the Society, especially those with connections in the media, are welcome to make suggestions to Peter Saunders (King's College, London), the LMS Publicity Officer.

Tony Scholl

## PROGRAMME AND CONFERENCE FUNDS

### Changes in the Regulations for Grants

Council has recently made changes in the regulations for grants from the Programme and Conference Funds. Details of these are given in the Members' Handbook and in the Society's web pages, at <http://www.lms.ac.uk/grants/>. The changes from the information in the Handbook are:

**Conference grants** The maximum grant for conferences is now £4,000, the size of the grant to take into account the length of the conference, the number of UK participants and the number of research students taking part. The total grant, less the support for research students, shall not normally exceed £3,000.

**Scheme 2: Visitors** The LMS contribution under this scheme is principally for the visitor's travelling expenses to and from the UK, and for a share of travel and subsistence costs within the UK, up to £1,000. Host institutions are expected to share travel and subsistence expenses within the UK, and to meet any residual costs.

**Scheme 3: Support of joint research groups**

No change.

**Scheme 4: Collaborative small grants** The maximum sum available is now £500.

**FSU Visitor Scheme** This scheme, originally to support mathematics in the countries of the former Soviet Union, is extended to other countries. It now includes the countries of the former Soviet Union and Eastern Europe including the former Yugoslavia, China, India, Pakistan, Bangladesh, and the countries of Africa. It excludes the countries of Western Europe and North America and Australia. The status of other countries will be determined by Programme Committee case by case. For visits to Britain, the maximum grant shall be £50 a day for accommodation and subsistence, up to a maximum of £1,400, and up to £500 for travel. For visits from Britain, the maximum grant is £1,200. Success of an application will depend mainly on the likelihood of potential benefit to mathematics in the country concerned.

## JOURNAL OF THE LMS

For a variety of reasons going back over several years, the *Journal* of the LMS has accumulated a large backlog of papers accepted for publication but not yet published. The extent of the problem has only gradually come to light. The LMS Council has now agreed on a plan to eliminate the backlog over a two-year period. This will be achieved partially by transferring some papers to the *Bulletin*, whose size will be increased by a total of 96 pages in 1999, but mainly by an increase of 50% in the size of the *Journal* for 1999 and 2000. The cost of the additional pages for 1999 will be borne by the Society and will not be passed on to institutional or personal subscribers.

The Society apologises to all authors whose papers have been delayed. Under the recovery plan, all papers already in the pipeline for publication in the *Journal* should appear in print by the end of 2000. The *Bulletin* and the *Proceedings* have negligible backlogs.

E.C. Lance  
Publications Secretary



# HOMOLOGICAL ALGEBRA

## EPSRC-LMS Short Course

This course will be held at Edinburgh University from Tuesday, 6th April 1999 (arrival on 5th April) to Saturday 10th April. Funding will be provided by EPSRC with a contribution from the LMS.

The aim of the course is to present the basic facts of homological algebra and to indicate some natural uses in algebraic number theory, topology and group theory. There will be three courses of 6 lectures each. The lectures will be accessible to beginning research students, but are likely to be of benefit to all research students. No special knowledge will be assumed. There will be daily tutorials at which Ian Leary (Southampton) and Peter Symonds (UMIST) will discuss the course material and help students with difficulties. The three courses will be as follows:

### **Basic homological algebra:** Karl Gruenberg (QMW)

Categories and functors; free and cofree modules, projective and injective modules, adjointness. Complexes, resolutions, cohomological functors. The Ext functor. Homology and the Tor functor. Module extensions. Basic facts on group cohomology.

### **Arithmetic cohomology:** Martin Taylor (UMIST)

Galois descent with examples  $GL_n$ ,  $SP_n$ ,  $O_n$  and application to quadratic forms. Laug's and Kneser's theorems on the vanishing of  $H^i(K, G)$ . Central simple algebras, the Brauer group and statement of local class field theory. Definition and basic facts on profinite groups with the fundamental example of infinite Galois groups. Cohomology of profinite groups. Dualising modules. Kummer theory. Cohomological dimension of a field.

### **Cell complexes and applications to group cohomology:** Peter Kropholler (QMW)

The fundamental group and van Kampen's theorem.  $G$ -CW-complexes, Euler class, Euler characteristic. Examples such as group actions on trees, arithmetic groups, symmetric spaces. Cohomological finiteness conditions and Serre's theorem on finite virtual cohomological dimension. Duality, manifolds and Poincaré duality.

Anyone wishing to learn this material will be welcome. EPSRC-funded postgraduate students will have their accommodation charges paid in full and they will be able to claim their travel expenses directly from EPSRC. Other UK postgraduate students are likely to be given partial support. The number of participants will be limited; preference will be given to early applicants. Further details and application forms will be available from **1st January 1999** from Dr D.J.H. Garling at London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HP (e-mail: [garling@lms.ac.uk](mailto:garling@lms.ac.uk)).

# LONDON MATHEMATICAL SOCIETY

TWO-DAY MEETING  
FRIDAY 12th AND SATURDAY 13th FEBRUARY 1999  
UNIVERSITY OF LEEDS

## PROOF AND COMPUTATION

The following speakers are expected:

P. Aczel (Manchester)  
M. Hyland (Cambridge)  
P. Martin-Lof (Stockholm)

G. Plotkin (Edinburgh)  
W. Pohlers (Münster)  
H. Schwichtenberg (Munich)

*All interested are very welcome*

Further information can be obtained from Professor S. Wainer (pmt6ssw@amsta.leeds.ac.uk). There are limited funds available to help research students attend the meeting. Requests for support may be addressed to Dr D.J.H. Garling, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HP (e-mail: garling@lsm.ac.uk).



## UNIVERSITY OF OXFORD

in association with St Catherine's College

### University Lectureship in Pure Mathematics

Applications are invited from candidates, preferably with research interests in Geometry, for a University Lectureship in Pure Mathematics tenable from 1 October 1999. University salary according to age on the scale £16,655 to £31,010 per annum. The successful candidate may be offered a tutorial fellowship by St Catherine's College, in which case the combined university and college salary would be according to age on a scale up to £37,113 per annum. Additional college allowances may be available.

Further particulars (containing details of the duties and full range of emoluments and allowances attaching to both the university and the college posts) may be obtained from the Administrator, Mathematical Institute, University of Oxford, 24-29 St Giles', Oxford OX1 3LB, to whom applications (10 typed copies, except in the case of overseas applicants, who need send only one typed copy) should be sent by 8 January 1999.

Candidates are asked to note that the Mathematical Institute will be closed between 23 December 1998 and 3 January 1999 inclusive.

The University is an Equal Opportunities Employer.



# Books for Christmas

## from Oxford University Press

### Geometry Civilized

**History, Culture, and Technique**

**John Heilbron**

This lavishly illustrated book offers a gentle introduction to classical plane geometry, including many examples of both pure and applied geometry from several different periods and cultures *'[this book] weaves in and out of a delight in [] mathematics and a sensitive attention to the variety of cultural occasions for it.'*

**NATURE**

318 pp, 1998

0-19-850078-5 Hardback **£35.00**

### Invitation to Discrete Mathematics

**Jiří Matoušek, and Jaroslav Nešetřil**

A masterly example of the teaching of contemporary discrete mathematics and of teaching science in general, *Invitation to Discrete Mathematics* is both an introduction and a thoroughly comprehensive textbook for courses in combinatorics and graph theory.

432 pp, 1998

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### My Brain Is Open

**The Mathematical Journeys of Paul Erdos**

**Bruce Schechter**

*My Brain is Open* is a captivating introduction to the world of one of this century's most brilliant and eccentric thinkers - Paul Erdos.

368 pp November 1998

0-19-850471-3 Hardback **£24.99**

### Ludwig Boltzmann

**The Man Who Trusted Atoms**

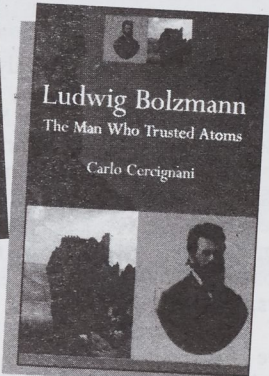
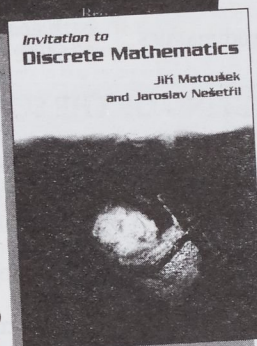
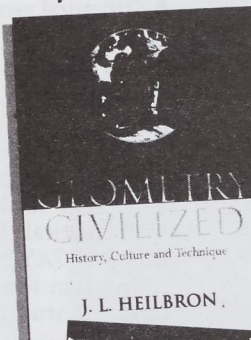
**Carlo Cercignani**

This book presents the life and personality, the scientific and philosophical work of Ludwig Boltzmann. His rich and tragic life ending, which ended in suicide, is described in detail.

330 pp, October 1998

0-19-850154-4

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## 1999 BRITISH APPLIED MATHEMATICS COLLOQUIUM (Incorporating the 41st BTMC)

BAMC 99 will be held at the Department of Mathematical Sciences, University of Bath from 12th - 15th April 1999. The colloquium welcomes anyone with an interest in the applications of mathematics. This meeting includes plenary speakers in applied probability, control theory, fluid mechanics, mathematical biology, numerical analysis and solid mechanics. Talks and posters are invited in both traditional and emerging areas of mathematics.

### Plenary speakers

Professor F. Kelly FRS (Cambridge)  
Professor H-O. Kreiss (UCLA)  
Professor T. Pedley FRS (Cambridge)  
Professor E. Sontag (Rutgers)  
Professor J. Willis FRS (Cambridge)  
Professor A. Woods (Bristol)

Professor D. Crighton FRS will be giving a special presentation in memory of Professor Sir James Lighthill FRS.

### Mini-symposia

- Cavitation
- Non-smooth dynamics
- Industrial mathematics
- Rigorous mathematical hydrodynamics
- Control theory

- Singularities in elasticity
- Symmetry methods
- Structural geology

### Registration

Those wishing to attend should return the registration forms on the web site <http://www.maths.bath.ac.uk/CONFERENCES/BAMC99> which gives full details including accommodation costs. Fees should be posted to BAMC99, Department of Mathematical Sciences, University of Bath, Bath BA2 7AY by **12th February 1999**. The registration fee is £75 (non-students) £35 (graduate students).

### Financial support

The organisers are very grateful to the following for their generous financial support: The London Mathematical Society, The Institute of Mathematics and its Applications, INTAS, BRIMS, SIAM and the Stewartson Memorial Fund.

For further information contact the Chairman (Professor C.J. Budd) the Secretary (Mrs N. Harvey) or the Treasurer (Dr D.A. Rees) e-mail: [bamc99@maths.bath.ac.uk](mailto:bamc99@maths.bath.ac.uk); tel: 01225 926198; fax: 01225 826492.

## MEETING OF THE SOCIETY

A meeting on Harmonic Analysis was held on Friday 16 and Saturday 17 October 1998, at the Department of Mathematics, University College, London. About 45 members and visitors were present for all or part of the meeting.

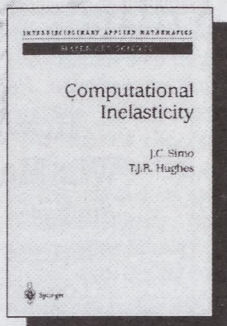
Eleven people were elected to Ordinary Membership: M.B. Ben-Ammar, A.D. Burbanks, M. Dzamonja, A.E. Hirst, S.A. Jones, R.J. Knops, R. Levi, H.K. Lotay, M.T. McAlinden, S. Reich, R. Schilling; three were elected to Associate Membership: S. Ahmed, R.J. Hadji, A. Lorent; and eight were elected to Reciprocity Membership: E. Behrends, T. Skill (both of Deutsche Mathematiker-Vereinigung), R.J. Albrecht, W.G. Dwyer, A. Iranmanesh, M. Sal Moslehian, M.

Shakil, B. Srinivasan (all of American Mathematical Society). One Member signed the book and was admitted to the Society.

The following lectures were given: A. Carbery 'Inverting the  $n$ -dimensional Fourier transform: convergence, divergence and localisation'; G. David 'Regularity properties for global minimizers of the Mumford-Shah functional'. C. Kenig 'On free boundary regularity for harmonic measure and Poisson kernels'; T.A. Gillespie 'Spectral decompositions and ergodic multiplier theory'; C. Thiele 'Bilinear singular integrals'; A. Volberg 'Nonhomogeneous harmonic analysis and capacities'.



# Springer for Scientific Computing



## J.C. Simo, T.J.R. Hughes **Computational Inelasticity**

1998. Approx. 430 pp. 85 figs.  
(Interdisciplinary Applied Mathematics, Vol. 7)  
Hardcover £ 47.50  
ISBN 3-540-97520-9

Describes the theoretical foundations of inelasticity, its numerical formulation and implementation. The subject matter described herein constitutes a representative sample of state-of-the-art methodology currently used in inelastic calculations. Among the numerous topics covered are small deformation plasticity and viscoplasticity, convex optimization theory, integration algorithms for the constitutive equation of plasticity and viscoplasticity, the variational setting of boundary value problems and discretization by finite element methods.



## H.-C. Hege, K. Polthier (Eds.) **Mathematical Visualization**

Algorithms, Applications, and Numerics  
1998. 430 pp. 175 figs., 32 figs. in color.  
Hardcover £ 64.50  
ISBN 3-540-63991-8

The quintessence of an international workshop in September 1997 in Berlin, focusing on recent developments in this emerging area. Experts present selected research work on new algorithms for visualization problems, describe the application and experiments in geometry, and develop new numerical or computer graphical techniques.

## G.B. Gustafson, C.H. Wilcox **Advanced Engineering Mathematics**

Analytical and Computational Methods  
1998. Approx. 755 pp. 192 figs.  
(Texts in Applied Mathematics, Vol. 28)  
Hardcover £ 47.50  
ISBN 0-387-98265-5

This text focuses on the topics which are an essential part of the engineering mathematics course: ordinary differential equations, vector calculus, linear algebra and partial differential equations.

## A. Tveito, R. Winther **Introduction to Partial Differential Equations. A Computational Approach**

1998. Approx. 415 pp. 69 figs.  
(Texts in Applied Mathematics, Vol. 29)  
Hardcover £ 34.00  
ISBN 0-387-98327-9

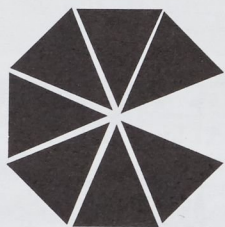
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## JUNIOR WHITEHEAD PRIZES

Council is concerned to widen the scope of the Society's activities: topics from a broad spectrum of mathematics are included at Society meetings and in lectures organised by the Society, and grants are made to all areas of mathematics. At its October meeting, Council decided to increase the normal maximum number of Junior Whitehead Prizes awarded each year to **four**, and to increase the size of the Prizes Committee to **seven**. The purpose of this change is to allow for the award of prizes across the whole of mathematics, including applied mathematics, mathematical physics and mathematical aspects of computer science. The Society will consult all Heads of Departments in a letter soliciting nominations, and this information will also be repeated in the *Newsletter*, when members are invited to submit nominations.

## LMS/HoDoMS SURVEY OF MATHEMATICS DEPARTMENTS 1998

- 69 questionnaires were returned; a continuing increase, but a few large Departments still find it impossible to complete them.
- 52 Departments replied in both 1997 and 1998 and 40 have replied for each of the last three years and the comparisons that can therefore be made allow a more significant analysis.
- The main trends seem to be a continuing decrease in staffing levels (933, 881, 849).
- FTE numbers remain steady after a previous significant drop (14484, 13703, 13942). There is, therefore, a continuing increase in SSR.
- Most of the large, traditional universities have SSR's close to the overall average (15.8%).
- There seems to be a definite increase in postgraduate numbers but this is com-

pensated by a drop in Honours students.

- A considerably lower proportion of Honours FTE came from joint degrees than in 1997.
- HND and Non-EU numbers are small but constant, although it is expected that HND's will reduce considerably.
- The proportion of service courses to Science students dropped whereas those for Computer Science and Engineering rose slightly.
- MSc numbers remain constant but PhD numbers increased, as did the numbers of those graduating with PhD's.
- Out of 290 who enrolled for PhD's in 1991/92, 229 obtained their degree, 17 obtained an MSc, 13 failed and the remainder have either withdrawn or not yet submitted.
- The proportion of staff in Pure Mathematics increased slightly.
- Over the period 1/10/96 to 30/9/97 a total of 74 new teaching and 87 research appointments were made; of these 64 were appointed from overseas, 9 of whom were UK citizens.
- The number of support staff increased slightly; the number of secretarial staff showed a very slight increase whilst the numbers of computer support staff increased significantly.
- The amount of income obtained from UK research councils dropped slightly whereas the amount from other sources remained constant. The amount from the two sources are now roughly equal.
- Library expenditure remained unchanged, as did the proportion spent on journals. *Maths Reviews* is taken online by a small, but increasing number, of universities; the AMS seems to be the only publisher making serious headway in this sphere.



**Volume 27**

NEIL HINDMAN · DONA STRAUSS

**Algebra in the Stone-Čech Compactification**

**Theory and Applications**

1998. 24 x 17 cm. XIII, 485 pages.  
Hardcover. DM 258,-/approx. £ 93.50  
• ISBN 3-11-015420-X

A study of the algebraic properties of compact right topological semigroups in general and the Stone-Čech compactification of a discrete semigroup in particular. Several powerful applications to combinatorics, primarily to the branch of combinatorics known as Ramsey Theory, are given. Connections with topological dynamics and ergodic theory are also presented.

**Volume 26**

**Positivity in Lie Theory:  
Open Problems**

EDITORS: JOACHIM HILGERT ·  
JIMMIE D. LAWSON · KARL-HER-  
MANN NEEB · ERNEST B. VINBERG

1998. 24 x 17 cm. XII, 290 pages.  
Hardcover. DM 258,-/approx. £ 93.50  
• ISBN 3-11-016112-5

Consists of 15 articles, each of which is an introduction to a set of open research problems in Lie theory. The unifying theme is "positivity", which means order-

ings on the level of manifolds, semigroups on the level of groups, and cones on the level of linear spaces and Lie algebras. The topics range from geometric and algebraic structure theory through harmonic analysis, representation theory as far as control theory and probability.

**Volume 25**

BERTRAM HUPPERT

**Character Theory of  
Finite Groups**

1998. 24 x 17 cm. VI, 618 pages.  
Hardcover. DM 328,-/approx. £ 119.00  
• ISBN 3-11-015421-8

Gives in its first section a self-contained introduction to the character theory of finite groups, which can be used for a first lecture on the subject. Later sections concentrate on Clifford theory, that is the relations between characters of a group and its normal subgroups.

This theory has many applications for solvable groups. Character degrees and lengths of conjugacy classes are studied in detail. Isaacs's theory of  $\pi$ -special characters is included with several applications. The text contains many recent results that are not published in previous books on the same subject.

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## UNIVERSITY OF CAMBRIDGE

DEPARTMENT OF PURE MATHEMATICS AND  
MATHEMATICAL STATISTICS

### NEWMAN RESEARCH FELLOWSHIP



Applications are invited for this Fellowship, tenable for 3 years from 1 October 1999, to carry out research in Pure Mathematics (including Probability and the mathematical aspects of Computer Science). The scale of stipends is from £16,655 at age 26 to £20,107 at age 30. In addition, the Fellow will hold a part-time consultancy at Government Communications Headquarters, Cheltenham, for 2 months each summer, with a supplementary stipend of £3,000 per year, and a generous allowance for academic travel. Appointment is restricted to British nationals, although in the case of an exceptionally well qualified candidate this restriction may be relaxed.

Further details (also accessible on the Department's web site at <http://www.dpmms.cam.ac.uk>) and application forms can be obtained from Professor W.B.R. Lickorish, Head of Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, 16 Mill Lane, Cambridge CB2 1SB (telephone 01223 337996, fax 01223 337920, e-mail [S.Lowe@dpmms.cam.ac.uk](mailto:S.Lowe@dpmms.cam.ac.uk)). The closing date for applications is **31 December 1998**.

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## BALLIOL COLLEGE, OXFORD

### JAMES STIRLING JUNIOR RESEARCH FELLOW IN MATHEMATICS

The College proposes to elect a Junior Research Fellow in Mathematics for a period of three years from 1 October 1999. The Fellow elected will be a Junior Research Fellow of the College as defined by the College Statutes. He or she will be required to undertake research in pure or applied mathematics. The stipend starts at £12,241 per annum in the first year with superannuation, free meals and rooms (or, in the case of a married Fellow, a housing allowance).

Other things being equal, preference will be given to (1) a graduate of the University of Glasgow, (2) a graduate of any other Scottish University. Applications should be sent to the College Secretary, Balliol College, Oxford OX1 3BJ, from whom further details and application forms may be obtained, not later than Thursday, **17 December 1998**.

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# ISAAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES

## Call for Proposals

The Isaac Newton Institute for Mathematical Sciences is a national research institute in Cambridge. It aims to bring mathematical scientists from UK universities and leading experts from overseas together for concentrated research on specialised topics in all branches of the mathematical sciences from pure mathematics, applied mathematics, and statistics, to engineering, computer science, theoretical physics and mathematical biology. At any time there are two visitor programmes in progress, each with about twenty scientists in residence. Included within these programmes are periods of more expanded activity including instructional courses and workshops.

The Institute now invites new proposals for programmes for 2001 onwards, particularly from areas which have been under-represented so far (eg Partial Differential Equations, Analysis, Computational Mathematics, Combinatorics). From 1999, a choice of six-month or four-month programmes will be available. In addition, from 2000, short programmes of three weeks duration will be available during July and August each year. These short programmes are intended for more narrowly focused topics or for subjects that may be at an embryonic stage of development, and for which a longer programme might not be as yet justified.

Proposals should be addressed to the Director, Professor H.K. Moffatt, Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge CB3 0EH, UK; proposers should state whether they would prefer a four-month, six-month or three-week programme. The Institute is pleased to receive proposals at any time. Proposals for consideration at the next meeting of the Scientific Steering Committee should be received by **31st January 1999**.

Submission guidelines, and information about forthcoming programmes already selected, are available at <http://www.newton.cam.ac.uk/call-prop.html>.

Further information is also available from the Director (tel 01223 335999; e-mail [info@newton.cam.ac.uk](mailto:info@newton.cam.ac.uk)), who will answer any enquiries.



## THE OPENING OF DE MORGAN HOUSE

About 120 members of the Society and guests were present on Friday 23 October 1998 for the opening of De Morgan House, the new headquarters of the Society, by Sir Michael Atiyah, OM, former President and De Morgan Medallist, Fields Medallist, and former President of the Royal Society. Sir Michael unveiled the plaque in the lobby of De Morgan House in the presence of other Fields Medallists, Alan Baker, who returned especially from Japan, Richard Borchers and Timothy Gowers, awarded Fields Medals this year, Simon Donaldson, Daniel Quillen, Klaus Roth, who came down from Inverness for the occasion, and John Thompson, at present in the United States, but present in spirit. Members and guests watched the ceremony on closed circuit television, in the Council Room and in the Members Room. After the formal opening, a reception was held, at which those present were able to explore the building and visit an exhibition about the history of the Society. During the reception, David Larman presented the Society with reproductions of pictures of Augustus De Morgan, the first President, on behalf of the Mathematics Department of University College, London. Later in the evening, the Council entertained the Fields Medallists, the speakers on the next day, and their partners to dinner at the Russell Hotel. After dinner Sir Robert May, the Government's Chief Scientific Adviser, spoke and revealed that mathematics had lost none of its magic for him, and that one of his tasks was to convey that magic to the Government and to Whitehall.

The celebrations resumed on Saturday 24 October 1998 at University College, London, thus returning to the place where the Society had its beginnings. There were about 90 members and guests present. John Ball, the President, described the way in which the Society had acquired De Morgan House and thanked those who had played a part; special thanks were very rightly given to the Society's Treasurer, Alun Morris, who had laboured tirelessly

over contracts and leases. After this, Robin Wilson gave a fascinating account, illustrated with some rare photographs, of the early history of the Society from De Morgan to Hardy. The session ended with talks on the work of Richard Borchers and Timothy Gowers, the two latest Members of the Society to win Fields Medals; these were given by Peter Goddard and Bela Bollabas, who had given the laudatory addresses at the International Congress of Mathematicians in Berlin. The proceedings ended with a buffet lunch at De Morgan House, which enabled more members and guests to inspect our new headquarters.

D.J.H. Garling  
Executive Secretary

## LONDON MATHEMATICAL SOCIETY 1998 COUNCIL ELECTIONS

At the Annual General Meeting on 20 November 1998, the following were elected to Council unopposed:

### President

M.J. Taylor (UMIST)

### Vice-Presidents

K.A. Brown (Glasgow)

J.W. Bruce (Liverpool)

### Treasurer

A.O. Morris (Aberystwyth)

### Council and General Secretary

J.S. Pym (Sheffield)

### Meetings and Membership Secretary

N.M.J. Woodhouse (Oxford)

### Publications Secretary

E.C. Lance (Leeds)

### Librarian

N.L. Biggs (LSE)

### Members-at-Large

R.J. Archbold (Aberdeen) (for 2 years)

A.G. Chetwynd (Lancaster) (for 2 years)

E.B. Davies (King's, London) (for 2 years)

U. Martin (St Andrews) (for 1 year)

S.E. Rees (Newcastle) (for 2 years)

E.G. Rees (Edinburgh) (for 2 years)

P.T. Saunders (King's, London) (for 1 year)

A.J. Scholl (Durham) (for 2 years)

J.F. Toland (Bath) (for 2 years)





John Ball, LMS President, with Sir Michael Atiyah



Field Medallists, from left to right: Atiyah, Baker, Borchers



Dr & Mrs Robin Wilson with Alun Morris, LMS Treasurer



Ann Davenport, widow of Harold Davenport 1957-59, James Davenport





Gowers, Roth, Donaldson,  
Atiyah, Quillen



Sir Michael Atiyah unveiling the plaque and opening the  
building



David Larman, LMS President  
John Ball and Alan Camina



John Ball receiving portraits of Augustus De Morgan from  
David Larman



25% off LMS books to LMS members

**Dissections**

Plane and Fancy

**Greg N. Frederickson**

This is a comprehensive, beautifully illustrated survey about puzzles in which one geometric figure is cut into pieces that rearrange to form another. The author assumes only a basic knowledge of secondary school geometry.

£19.95 HB 0 521 57197 9 322pp 1998

**Foundations of Convex Geometry****W. A. Coppel**

This book on the foundations of Euclidean geometry aims to present the subject from the point of view of present day mathematics. The treatment is self-contained and thorough.

£24.95 PB 0 521 63970 0 236pp 1998

*Australian Mathematical Society Lecture Series, 12*

**Tight and Taut Submanifolds****Thomas E. Cecil and Shiing-shen Chern**

This book contains six in-depth articles on various aspects of the field of tight and taut submanifolds and concludes with an extensive bibliography of the entire field.

£30.00 HB 0 521 62047 3 367pp 1998

*Mathematical Sciences Research Institute Publications, 32*

**Mixed Hodge Structures and Singularities****Valentine S. Kulikov**

This book is both an introduction to, and a survey of, some topics of singularity theory, in which the author uses algebraic geometry to strike a balance between the traditional approach to the subject and the homological approach.

£30.00 HB 0 521 62060 0 208pp 1998

*Cambridge Tracts in Mathematics, 132*

Cambridge books are available from good bookshops, alternatively phone UK + 44 (0)1223 325518  
UK +44 (0)1223 325152. For further information, please email Giulia Williams on [science@cup.cam.ac.uk](mailto:science@cup.cam.ac.uk)

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**Local Cohomology**

An Algebraic Introduction

**M. P. Brodmann and Ry.**

This book provides a careful treatment of local cohomology theory. It is a basic commutative algebra.

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*Cambridge Studies in Advanced Mathematics, 37*

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## Analysis and Lie Theory in Mathematics and

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of great interest, generally at the interface between physics and also where suitable expositions did not previously graduate students.

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students and researchers working in the fields of group theory. Includes over a hundred exercises.

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*Society Lecture Note Series, 246*

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## ISAAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES Workshop Announcements

Full details and application forms for the following workshops are available via WWW at the URLs given below.

### **Turbulence** (Jan - Jun 1999)

Organisers: G.F. Hewitt (Imperial College), P.A. Monkewitz (Lausanne), N. Sandham (QMW), J.C. Vassilicos (Cambridge)

January 11th-12th, 1999: Symposium on Turbulent Systems: Problems and Opportunities

<http://www.newton.cam.ac.uk/programs/trbw01.html>

March 15th-19th, 1999: Symposium on Turbulence Structure

<http://www.newton.cam.ac.uk/programs/trbw03.html>

April 6th-17th, 1999: Instructional Conference: Closure Strategies for Modelling Turbulent and Transitional Flows

<http://www.newton.cam.ac.uk/programs/trbw05.html>

May 12th-14th, 1999: Joint INI/ERCOTAC Workshop on Direct and Large-eddy Simulation

<http://www.newton.cam.ac.uk/programs/trbw07.html>

June 21st-24th, 1999: Symposium on Intermittency

<http://www.newton.cam.ac.uk/programs/trbw08.html>

June 29th-30th, 1999: Symposium on Future Strategies Towards Understanding and Prediction of Turbulent Systems

<http://www.newton.cam.ac.uk/programs/trbw09.html>

### **Mathematics and Applications of Fractals** (January - April 1999)

Organisers: R.C. Ball (Cambridge), K.J. Falconer (St Andrews)

March 21st-26th Differential Equations and Physics in Fractals

<http://www.newton.cam.ac.uk/programs/apfw04.html>

## LMS CONFERENCE GRANTS

Programme Committee has recently awarded grants to support the following conferences and meetings. These are open to members. If you wish to attend, or would like more information, please contact the organiser.

Date	Title	Location	Organiser
11 Dec 1998	Travelling Fronts in Mathematical Biology	Surrey	T J Bridges (t.bridges@mcs.surrey.ac.uk)
29 Mar - 1 Apr 1999	51st British Mathematical Colloquium	Southampton	I J Leary (ijl@maths.soton.ac.uk)
15-17 Apr 1999	Postgraduate Conference in Combinatorics and Group Theory	Royal Holloway	A G B Lauder (a.lauder@rhnbc.ac.uk)
11-12 Feb 1999	Workshop on Proof Theory	Leeds	S S Wainer (pmt6ssw@leeds.ac.uk) M Rathjen rathjen@amsta.leeds.ac.uk)
22-25 Mar 1999	Research Students' Conference in Probability & Statistics 1999	Bristol	M Harkness (m.a.harkness@bristol.ac.uk)
6-8 April 1999	14th British Topology Meeting	Swansea	F Clarke (f.clarke@swansea.ac.uk)



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Lee-Anne Taylor	Receptionist	0171 291 9971	<a href="mailto:taylor@lms.ac.uk">taylor@lms.ac.uk</a>

### TRAVELLING FRONTS IN MATHEMATICAL BIOLOGY

A half-day workshop on Travelling Fronts in Mathematical Biology will be held at the University of Surrey on Friday 4th December 1998, organised by Stephen Gourley and Tom Bridges. The workshop is supported by a grant from the London Mathematical Society. The workshop will include talks by Jean-Pierre Eckmann (Geneva), Bastion Fernandez (DAMTP, Cambridge), Peter Grindrod (QuantiSci Ltd) and Brian Sleeman (Leeds). All interested participants are welcome. Lunch will be provided and some funds are available to help with travel costs. Further information can be obtained by contacting Stephen Gourley ([s.gourley@mcs.surrey.ac.uk](mailto:s.gourley@mcs.surrey.ac.uk)) and updated information, including abstracts of talks and directions to the university, will be posted on the web at <http://www.eim.surrey.ac.uk/math/research/math/Centre.html>.

### BSHM

On Thursday 17 December the British Society for the History of Mathematics will hold a one day meeting at Harkness Hall, Birkbeck College, Malet Street, London WC1. The speakers are Dr Clive Ruggles (University of Leicester) on 'Archaeoastronomy: the use of computers

and clashes of approach in an emergent interdiscipline' and Professor Alan Mackay FRS (Birkbeck College) on 'Computing for Crystallography'. In the afternoon there is a Members' Session providing an opportunity to hear about current research with time set aside for a general discussion on chosen topics. For further information contact J.V. Field (fax: 0171-631 6107; e-mail: [jv.field@hart.bbk.ac.uk](mailto:jv.field@hart.bbk.ac.uk)).

### DEPARTMENTAL NEWS

#### Nottingham Trent University

David Applebaum has been appointed Professor of Mathematics and is currently serving as (acting) Head of Department.

The following new appointments have been made:

Lecturers in Mathematics: Dr Zaqueu Coelho (formerly of University of Porto); Dr Bartur Jumarhon (formerly of University of Salford); Dr Rene Schilling (formerly of Max Planck Institute, Leipzig).

Lecturers in Statistics: Dr Hristo Nikolov (formerly of St Andrews University); Dr James Webb (formerly of University of Bristol).

Robin Hudson has joined the Department as a Senior Research Fellow on a part-time basis. He retains his title of Emeritus Professor at Nottingham University



## MATHEMATICIANS VISITING THE UK IN 1998/1999

### ABERDEEN UNIVERSITY

Bowen, J. (Lewisburg, PA, USA) General relativity, Summer '99  
Shahabuddin, M. (Chittagong, Bangladesh) General relativity, mid Oct - mid Nov '98

### ABERTAY DUNDEE UNIVERSITY

Liakhovetski, G.V. (Vladivostok) Asymptotics, Oct '98 - Oct '99

### BATH UNIVERSITY

Chaves, M. (Autonoma University of Madrid) Nonlinear partial differential equations of parabolic type, 6 Oct - 19 Dec '98  
Grigoriev, D. (CNRS University of Rennes, France) Computational complexity theory, Computer algebra, 1 Mar - 30 Apr '99  
Pedersen, J.L. (University of Aarhus, Denmark) Financial mathematics, 1 Sep '98 - 31 Mar '99  
Plotnikov, P.I. (Lavrientiev Institute, Russia) Pure mathematics, 1 Nov '98 - 30 Jan '99

### BRUNEL UNIVERSITY

Aoki, T. (RIMS, Kyoto University) Algebraic analysis and singularity theory, Jun '99  
Delabaere, E. (University of Nice) Resurgence theory, asymptotic analysis, semi-classical analysis, Jun '99  
Hertzsch, J.-M. (Max-Planck Institute) Theories of granular gases and granular media, Sep '98 - Aug '00  
Kawai, T. (RIMS, Kyoto University) Algebraic analysis and singularity theory, Jun '99  
Khaliq, A.Q.M. (Western Illinois University) Reaction-diffusion equations Jul '99  
Sitta, A. (Universidade de Estado de Sao Paulo, Brazil) Singularity theory, 1 Mar '98 - 28 Feb '99  
Takei, Y. (RIMS, Kyoto University) Algebraic analysis and singularity theory, Jun '99

### CAMBRIDGE UNIVERSITY (DAMTP)

Bialy, M. (Israel) Hamiltonian Dynamics, 23 Aug '98 - 22 Aug '99  
Fradkin, L. (Japan) 1 Oct '98 - 30 Sep '99  
Latorre, J., Aug '98 - 31 Mar '00  
Malik, N., 1 Feb '97 - 31 Dec '98  
Shiromizu, T., 11 Mar '98 - 10 Mar '00

### CAMBRIDGE UNIVERSITY (DPMMS)

Andersson, S. (Lund, Sweden) Markov models, 26 Oct - 14 Dec '98  
Holmes, R. (Boise State) Set theory, 28 Jul '98 - 31 Jan '99  
Mella, M. (University di Trento, Italy) Algebraic geometry, 1 Feb '98 - 31 Jan '00  
Ng, T.W. (University of Hong Kong) Complex analysis, 1 Sep '98 - 31 Aug '00  
Plaza, F. (Salamanca, Spain) Algebraic geometry, 2 Oct '98 - 28 Feb '99  
Pollatsek, H. (Mount Holyoke College) Finite groups, 29 Jul '98 - 31 Jul '99  
Rosenstein, G.M. (Franklin & Marshall College) History of mathematics, 10 Aug '98 - 1 Aug '99  
Ryden, T. (Lund, Sweden) Markov models, 1 Sep - 31 Dec '98  
Scheithauer, N., (DAAD German Academic Exchange Service) Algebra, 1 Mar '98 - 28 Feb '99  
Siegmund, D. (Stanford) Change-Point problems, 2 Sep '98 - 30 Jun '99  
Song, Y. (Guizhou Normal, China) PDEs, 1 Oct '98 - 30 Sep '99  
Wallerstedt, M. (Chalmers, Sweden) Dynamical systems, 17 Aug - 31 Dec '98

### DUNDEE UNIVERSITY

Vinogradov, S.S. (Kharkov State University, Ukraine) Scattering and diffraction of acoustic and electromagnetic waves, Oct '98 - Aug '99

Vinogradova, E.D. (Kharkov State University, Ukraine) Scattering and diffraction of acoustic and electromagnetic waves, Oct '98 - Aug '99

#### **EDINBURGH UNIVERSITY**

Alabert, A. (Universitat Autònoma de Barcelona) Stochastic analysis, stochastic differential equations, 28 Sep - 8 Nov '98

Bavula, V. (Kiev, Ukraine) Non-Commutative algebra, 20 Mar '98 - 28 Feb '99

Buchstaber, V. (Steklov Mathematics Institute, Moscow) Topology, Integrable systems, 12 Sep - 24 Oct '98

D'Aquino, P. (2nd University of Naples) Logic, 2 Oct - 31 Dec '98

Farber, M. (Tel Aviv) Topology, 14 Sep - 23 Oct '98

Hedman, B. (University of Connecticut at Harvard) History of Mathematics, 2 Oct - 30 Dec '98

Manhas, J. (University of Jammu) Functional analysis, composition operators, 5 Oct '98 - 30 Sep '99

Popescu, D. (University of Bucharest) Commutative algebra, 6 May - 5 Jul '99

Pott, S. (University of Saarbrücken) Analysis, 1 Aug '98 - 31 Jul '99

Prasad, P. (Indian Institute of Science, Bangalore) Nonlinear wave asymptotics, Oct '98 - Feb '99

Radha, Ch. (Nagpur, India) Hyperbolic waves and similarity methods, Mar '99 - Mar '00

#### **GLASGOW UNIVERSITY**

McCasland, R. (University of Dallas) Commutative algebra, Sep '98 - Aug '99

Schechtman, V., Algebraic geometry and mathematical physics, Oct '98 - Oct '99

#### **GOLDSMITH'S COLLEGE**

Wong, N.C. (National Sun Yat-sen University, Taiwan) Functional analysis, 1 Feb - 30 Jun '99

#### **HULL UNIVERSITY**

Brooke, J. (Saskatchewan University) Mathematical physics, quantum theory, Sep '98 - Aug '99

Lackey, B.C. (Houston University) Differential geometry, Finsler spaces, Sep '98 - Sep '99

Lahti, P. (Turku University) Foundations of quantum mechanics, May '99

Ross, D.A. (Hawaii University) Non-standard analysis and measure theory, Jan - Jun '99

Samir, E. (Cyprus University) Differential geometry, Feb '99 - Jul '00

#### **IMPERIAL COLLEGE**

Bolsch, A. (Math Fachbereich Technical University, Berlin) Pure mathematics, Until Dec '98

Lopez, J.M. (Santander, Spain) Mathematical physics, Until Jun '99

Shimizu, Y. (Sendai University, Japan) Mathematical physics, Until Mar '99

Zamora, M. (Fribourg University, Switzerland) Mathematical physics, Until Sep '99

#### **KEELE UNIVERSITY**

Esfahian, E. (Iran University of Science & Technology, Tehran) Differential geometry, Differential equations, Sep '98 - May '99

Sorokin, S. (State Marine Technical University, St. Petersburg) Nonlinear mechanics, Mar - Apr '99

#### **KENT UNIVERSITY**

Catchpole, T. (Australian Defence Force Academy, Canberra) Bushfire modelling and statistical ecology, 16 Nov - 11 Dec '98

Holder, M. (University of Essen) Polynomial arithmetic and "Black-Box" linear algebra over finite fields, Early '99



Musette, M. (Vrije Universiteit, Belgium) Discrete non-linear equations related to linearisable mappings, 5 - 15 Jan '99

Roelse, P.L.A. (Eindhoven, Netherlands) Finite fields, applications of Groebner bases techniques in cryptography, Early '99

Vannucci, M. (Texas A & M) 26 Oct - 6 Nov '98 and later in '99

#### **KING'S COLLEGE LONDON**

Lambrou, M.S. (University of Crete) Operator theory, Basis theory, Oct '98 - May '99

#### **LANCASTER UNIVERSITY**

Meyer, C.M. (Fernuniversitat Hagen, Germany) Graphical modelling, entropy, May '98 - 30 Apr '99

Shi, D. (Tianjin University, China) Extreme value theory, 10 Jul '98 - 1 Feb '99

#### **LONDON SCHOOL OF ECONOMICS**

Beck, A. (University of Wisconsin) Search games and analysis, May - Aug '99

#### **LOUGHBOROUGH UNIVERSITY**

Alekseev, G.A. (Steklov Mathematical Institute, Moscow, Russia) General relativity, May '99

Kuznetsov, N. (Russian Academy of Sciences, St. Petersburg, Russia) Mathematical theory of water waves, 1 May - 30 Jun '99

Motygin, O. (Russian Academy of Sciences, St. Petersburg, Russia) Mathematical theory of water waves, 1 Jan - 31 Dec '99

Podolsky, J. (Charles University, Prague, Czech Republic) General relativity, Jun '99

Somersalo, E. (Technical University, Helsinki) Inverse problems, Jan/Feb '99

#### **MANCHESTER UNIVERSITY**

Buchstaber, V.M. (University of Moscow) Algebraic topology, 24 Oct - 6 Nov '98

Buckwar, E. (Free University, Berlin) Numerical analysis, Dec '98 - Dec '99

Kim, H.J. (Hoseo University, Korea) Geometry and Dynamical systems, Feb '99 - Jan '00

Hu, G.D. (Shanghai Teachers College, China) Numerical analysis and control, 12 months

Maller, R.A. (University of Western Australia) Statistics and Probability, 15 Aug '98 - 15 Jan '99

#### **NEWCASTLE UNIVERSITY**

Khalouf, Y. (Albath University, Syria) Algebra, Feb - Aug '99

#### **NOTTINGHAM UNIVERSITY**

Cherniha, R.M. (National Ukrainian Academy of Sciences) Symmetry analysis and exact solutions of non-linear partial differential equations of mathematical physics and biology, Oct - Dec '98

Crane, L. (Kansas State University) Quantum gravity, Apr - Jul '99

Nikolaev, V. (Joint Institute of Nuclear Research, Dubna, Russia) The construction of discrete time invariants in the Skyrme model, 19 Sep - 18 Nov '98

Shu, X. (Huaihai Institute of Technology, People's Republic of China) Mechanics of composite materials and structures, Sep '98 - Aug '99

#### **OXFORD UNIVERSITY Mathematical Institute**

Ahn, H. (University of California) Mathematical finance, 1 Apr - 31 Dec '98

Beckman, A. (Westfabeck Wilhelms University, Germany) Logic, 1 Oct '98 - 31 Mar '99

Bouabci, M.B. (University de Sao Paulo, Brazil) Mathematical finance, 12 Mar '98 - 12 Mar '99

Praeger, C.E. (University of Western Australia) Group theory and Combinatorics, 1 Aug - 1 Dec '98

Silva, S. (University of Brazil) Mathematical physics, 30 Sep '98 - 31 Aug '99  
 Whittle, G. (University of Western Australia) Combinatorics, 1 Oct - 31 Dec '98  
 Willis, G. (University of Newcastle, Australia) Algebra, 1 Oct - 31 Dec '98  
 Wilchinsky, A. (Kazan State University) Ice sheet dynamics, 1 Feb '98 - 1 Feb '99  
 Weintrub, S.H. (Louisiana State University, USA) Topology, 1 Oct - 31 Dec '98  
 White, A.T. (Western Michigan University, USA) Topology, 1 Oct '98 - 1 Oct '99  
 Yakhontov, V. (St. Petersburg University, Russia) Radiative double electron, 21 Jan '98 - 20 Jan '99

#### **OXFORD UNIVERSITY Statistics Department**

Eslava, G. (UNAM, Mexico) R-NN Classification, Jan - Mar '99  
 Grambsch, P. (University of Minnesota, USA) Statistics and Stochastic processes, Dec '98

#### **PLYMOUTH UNIVERSITY**

Glasson, A. (Victoria University of Technology, Australia) Dec '98 - Jun '99.

#### **QUEEN MARY & WESTFIELD COLLEGE**

Beisekeev, S. (Russian People's FU) Relativity, 15 Dec '97 - 15 Dec '98  
 Ellis, G. (University of Cape Town) Relativity and Cosmology, Various visits during year.  
 Jezierski, J. (University of Warsaw) General relativity, Mar - Jun '99  
 Lazkoz, R. (University of the Basque Country, Bilbao) General relativity, Oct '98 - Sep '00  
 Martin, J.E. (University of Alberta) Mathematics, 1 Oct '98 - 30 Sep '99  
 Pollatsek, H. (Mt. Holyoke College, Massachusetts) Finite groups and geometries, Difference sets, 24 Sep '98 - 30 Sep '99  
 Roberts, J. (University of Melbourne) Dynamics, 1 Oct - 23 Dec '98  
 Shah, H. (University of the Punjab) Astrophysics, Various visits during year  
 Vishveshwara, C.V. (Indian Institute of Astrophysics) General relativity, 13 Oct - 13 Nov '98 and Feb - Mar '99  
 Weiss, A. (University of Alberta) Pure mathematics, Various visits during year

#### **QUEEN'S UNIVERSITY, BELFAST**

McClusky, A.E. (National University of Ireland, Galway) Set-theoretic topology, Sep '98 - Mar '99

#### **READING UNIVERSITY**

Baddour, V. (Tishreen University, Syria) Analysis, 1 Oct '98 - Apr '99

#### **SALFORD UNIVERSITY**

Cai, Z. (University of Tianjin, China) Non-isotropic Cartesian tensors, Oct - Nov '98  
 Chattopadhyay, A. (Indian National School of Mines, Dhanbab, India) Elastic waves in layered media with specific application to earthquakes  
 Kaplunov, J. (Russian Academy of Natural Sciences) Asymptotic methods, Elasticity, Impact problems, Acoustics  
 Landjer, I.N. (Sofia, Bulgaria) Coding theory, Cryptography, Finite geometry, Design theory, Sep '98 - Aug '99  
 Ward, H.N. (University of Virginia) Coding theory, Design theory, Finite groups, Apr - May '99

#### **SOUTHAMPTON UNIVERSITY**

Cairns, G. (La Trobe University, Melbourne) Low dimensional topology, 15 May - 30 Jun '99

De Senna, V. (Federal University of Bahia, Brazil) O.R. - Mathematical modelling for health care, Feb '98 - Jan '99

Escuder-Valles, R. (University of Valencia, Spain) Statistics, Apr - Jun '99



Popa-Nita, V. (University of Bucharest) Liquid crystals, Oct - Dec '98

Seixas, W. (Universidade Federal De Sao Carlos, Brazil) General relativity, Oct '98 - Oct '99

#### **STRATHCLYDE UNIVERSITY Mathematics**

Meunargia, T. (Georgian Academy Sciences, Tbilisi) Mathematical analysis, Integral equations, 4 Oct - 3 Nov '98

#### **STRATHCLYDE UNIVERSITY Statistics**

Kolmanovskii, V. (Moscow Institute of Electronics & Mathematics) Stochastic differential equations and applications, 1-14 Mar '99

Matasor, A. (Moscow Lomonosov State University) Stochastic control theory, 1-14 Dec '98

Piunovskiy, A. (Moscow State Institute of Physics & Technology) Stochastic control theory, 1-14 Feb '99

Rodkina, A. (Voronezh State Academy of Construction and Architecture, Russia) Stochastic stability, 7-20 Jan '99

#### **UMIST**

Ustimenko, V.A. (Mohyla Academy, Kiev University) Group theory, Combinatorics, 25 Sep - 25 Dec '98

#### **UNIVERSITY COLLEGE LONDON**

Csornyei, M. (Eotvos University Budapest) Mathematical analysis, 28 Sept - 20 Dec '98

De Pauw, T. (Université Catholique de Louvain, Belgium) Geometric measure theory, 1 Sept '98 - 31 Aug '01

Elekes, M. (Eotvos University Budapest) Mathematical analysis, 28 Sept - 20 Dec '98

Huovinen, P. (University of Jyväskylä) Geometric measure theory, 1 Apr '98 - 31 Mar '00

Kirchheim, B. (Max Planck Institute, Leipzig) Mathematical analysis, PDE, 1 Sept '98 - 31 Mar '99

Zong, C. (Chinese Academy of Science, Beijing) Euclidean geometry, 1 Sept '98 - 31 Mar '99

#### **UNIVERSITY OF WALES, ABERYSTWYTH**

Hagen, T. (Virginia Polytechnic Institute, USA) Analysis of polymeric systems, Jan '99 - Dec '00

Wood, W. (University of Newcastle, Australia) Fluid mechanics, Jul - Dec '99

#### **UNIVERSITY OF WALES, BANGOR**

Velleman, D.J. (Amherst College, Mass) Logic, Philosophy of mathematics, Foundations of quantum mechanics, 20 Jan - early Jul '99.

#### **UNIVERSITY OF WALES, CARDIFF**

Kauffman, R.M. (University of Alabama at Birmingham) Spectral theory, Differential equations, 15 Mar - 1 Jun '99

Khoukhro, I. (Nova Sibirsk, Russia) Group theory, 1 Feb - 1 Jun '99

Saito, Y. (University of Alabama at Birmingham) Spectral theory, Differential equations, 1 Apr - 1 Jun '98

#### **UNIVERSITY OF WALES, SWANSEA**

Freidlin, M. (University of Maryland) Markov processes, differential equations and asymptotics, Jun/Jul '99

Smolianov, O. (Moscow State University) Ramer formulae for Feynman integrals, stochastic Schrödinger equations and open quantum systems, Nov 98 - Jan '99

# LONDON MATHEMATICAL SOCIETY

## INVITED LECTURE SERIES

Professor Alexander Mielke (Hanover)

Tuesday 6th - Friday 9th April 1999  
University of Bath

## REDUCTION METHODS FOR DIFFERENTIAL EQUATIONS

### Abstract

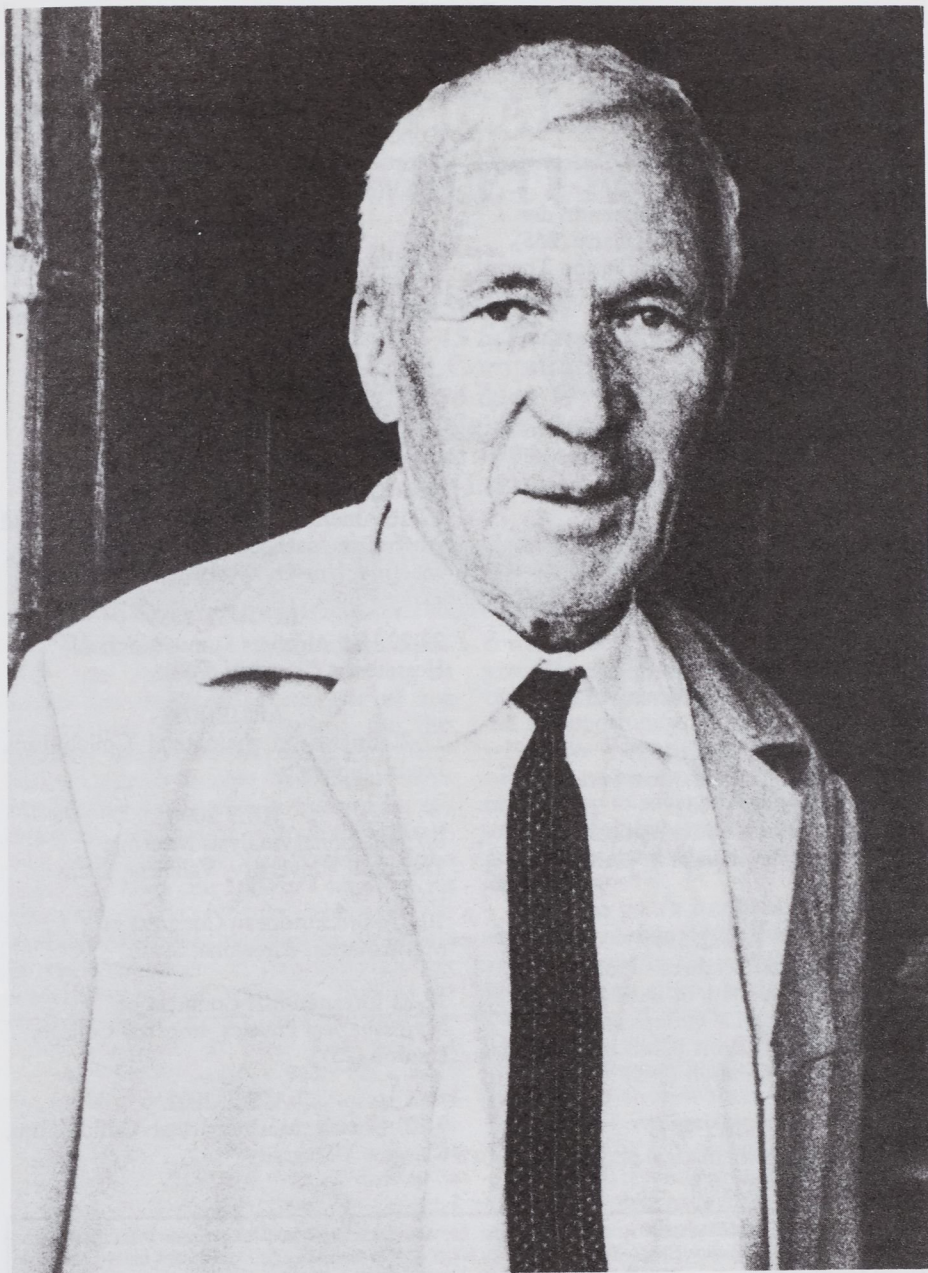
Ordinary and partial differential equations near steady states can often be reduced to equivalent but more accessible problems using implicit-function-theorem-type arguments. Often reduction is to finite-dimensional problems but sometimes, as in the case of Ginzburg-Landau theory, it leads to another partial differential equation.

Professor Mielke will present a unified treatment of these approaches, which include Lyapunov-Schmidt procedures, invariant manifold theory, centre manifolds and amplitude equations (as in Ginzburg-Landau theory).

These Invited Lectures, which are open to all, will be valuable for Research Students, and the LMS has provided funds to help support postgraduates who attend. It intends in each case that up to half the costs can be met, and it expects that the other half should be met by the student's department from RTSG or other funds. The fund will, however, be administered flexibly as needs dictate.

For further details contact: Professor John Toland, Department of Mathematical Sciences, University of Bath, Bath BA2 7AY ([jft@maths.bath.ac.uk](mailto:jft@maths.bath.ac.uk))





**A.N. KOLMOGOROV**  
**Honorary Member 1959**

## DIARY

The diary lists Society meetings and other events publicized in the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter number.

### DECEMBER 1998

- 5 SECANTS, Oxford (264)  
11 Edinburgh Mathematical Society Meeting, Napier (263)  
14-18 Geometrische Strukturen in der Mathematik, Münster, Germany (265)  
16-22 Symmetry and Perturbation Theory Workshop, Rome, Italy (258)

### JANUARY 1999

- 15 Edinburgh Mathematical Society Meeting, Edinburgh (263)  
25-27 Phase-Transition Phenomena in Combinatorial Problems EPSRC/LMS MathFit Workshop, Liverpool (261)

### FEBRUARY 1999

- 10-14 European Congress of Mathematics, Barcelona, Spain  
12 Edinburgh Mathematical Society Meeting, Edinburgh (263)  
12-13 Two-day LMS Meeting, Proof and Computation, University of Leeds

### MARCH 1999

- 12 Edinburgh Mathematical Society Meeting, Abertay (263)  
29 - 1 Apr British Mathematical Colloquium, Southampton University (265)

### APRIL 1999

- 6-9 LMS Invited Lectures - Professor A. Mielke, University of Bath (262)  
6-15 Analysis on Lie Groups and Partial Differential Equations ICMS Instructional Conference, Edinburgh (265)

### MAY 1999

- 7 Edinburgh Mathematical Society Meeting, Stirling (263)

- 14-16 Belgian Mathematical Society and London Mathematical Society Joint Meeting, Université de Bruxelles (260)(261)

### JUNE 1999

- 4 Edinburgh Mathematical Society Meeting, Aberdeen (263)  
18 LMS Meeting, Hardy Lecture, London

### JULY 1999

- 5-9 International Congress of Industrial and Applied Mathematics (ICIAM 99), Edinburgh University (252)  
12-16 British Combinatorial Conference, Kent University (254)  
12-16 American Mathematical Society and Australian Mathematical Society Joint Meeting, University of Melbourne (260)

### AUGUST 1999

- 22-29 Hall Algebras Summer School, Hesselberg, Germany (263)

### APRIL 2000

- 17-20 British Mathematical Colloquium, Leeds University

### JULY 2000

- 3-7 Functional Analysis Meeting, Technical University, Valencia, Spain (265)  
10 - 14 3rd European Congress of Mathematics, Barcelona, Spain

- 17-22 International Congress of Mathematical Physics, Imperial College, London (257)

### APRIL 2001

- 9-12 British Mathematical Colloquium, Glasgow University

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.

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