

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 231

October 1995

FORTHCOMING SOCIETY MEETINGS

Friday-Saturday 20-21 October 1995,

Scientific Societies' Lecture Theatre

Stochastic Analysis

D. Bakry, E. Bolthausen, L. Gross,

J.F. LeGall, D. Nualart, E. Pardoux

Friday 17 November 1995, Burlington House

I. Ekeland, J.M. Ball

Friday-Saturday 16-17 February 1996, Bath University

Differential Equations

H. Brézis, E.B. Davies, E.H. Lieb,

P.H. Rabinowitz, C.A. Stuart, T. Weidl

Friday-Saturday 10-11 May 1996, University of Glasgow

Joint Meeting with the Edinburgh Mathematical Society

Algebra

ANNUAL GENERAL MEETING

The Annual General Meeting of the London Mathematical Society will be held on Friday 17 November 1995 at 3.15 pm in the Linnean Society Lecture Room, Burlington House, Piccadilly, London W1.

At the Annual General Meeting the report of the Treasurer will be read, the Council and Officers of the Society for the coming year will be elected, and Auditors appointed. The election of Council and Officers is governed by Article 9 of the Charter of the Society, by Articles 18, 24 and 31 of the Statutes of the Society and by By-Law I of the By-Laws of the Society.

A ballot paper and voting envelope are enclosed. The ballot paper contains a list of those names recommended by the present Council, in accordance with By-Laws I,3 and I,6, for election as Officers and Members-at-Large of the Council. It should be noted that the following six Members-at-Large of Council elected for two-year terms at the last AGM have one remaining year to serve: R.A. Bailey, A.R.

Camina, A.D. Gardiner, J.D.S. Jones, J.F. Toland, C.T.C. Wall.

The election is uncontested because no nomination from a Member of the Society was received by the Council and General Secretary by the deadline of 1 September 1995.

A Member of the Society is entitled to vote in the election by striking out on the ballot paper those names for which he/she does not vote. The Member should then place the completed ballot paper inside the voting envelope, seal the envelope, and then validate the envelope with her/his signature and legibly written name on the back.

Voting envelopes, duly sealed and validated, should either be brought to the AGM or sent to "The Scrutineers, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL", to arrive at least 36 hours before the time of the AGM.

R.Y. Sharp
Council and General Secretary

1997 HARDY LECTURER

In Spring 1996 the Society's Council proposes to appoint the 1997 Hardy Lecturer. The Lectureship is awarded to a distinguished overseas mathematician, who then comes to the United Kingdom and Ireland for from four to six weeks, visits a number of universities, and addresses the June meeting of the Society, giving in all about twelve lectures during this stay. The visit usually takes place during the months of May and June.

The Council invites members of the Society to submit their views on possible candidates for the award of this Lectureship, together with reasons for their choice, confidentially in writing or by e-mail to the undersigned (at Pure Mathematics Section, University of Sheffield, Hicks Building, Sheffield S3 7RH or r.y.sharp@sheffield.ac.uk) or to any member of the General Purposes Committee of the Society (currently comprising N.J. Hitchin, A.O. Morris, R.Y. Sharp, D.J. Collins, D.A. Brannan) by 30 November 1995.

R.Y. Sharp
Council and General Secretary

LMS INVITED LECTURES 1997

The Society's Invited Lectures Series consists of meetings at which a single distinguished speaker gives a course of about 10 expository lectures, examining some subject in depth, over a five day period during a University vacation (usually the Easter vacation). The meetings are residential and open to all interested. It is intended that the texts of the lectures given in the series shall be published. In addition to full expenses the lecturer is offered a fee of £1000 for giving the course and a further fee of £1500 on delivery of the text in a form suitable for publication. Previous lecturers have included Professor L. de Branges, Dr J. Madore and Professor P.F. Baum

For the 1997 series, proposals are now invited from any member who, in

addition to suggesting a topic and lecturer, would be willing to organise the meeting at the member's own institution or a suitable conference centre. Enquiries about this series should be directed to the Meetings and Membership Secretary-Designate, Dr D.J.H. Garling, DPMMS, 16 Mill Lane, Cambridge CB2 1SB (tel: 01223-337978; e-mail: d.j.h.garling@pmms.cam.ac.uk) to whom proposals should be sent no later than 30 November 1995.

VISIT OF PROFESSOR IRENE SUPRUNENKO

Professor Irene Suprunenko (Byelorussian Academy of Sciences) will be visiting the UK under the London Mathematical Society fSU Visitor Scheme. The visit will include stays at Manchester University (from 11 to 17 October; contact A. Premet), Warwick University (from 18 October to 1 November; contact D.M. Testerman), and Lancaster University (from 2 to 5 November; contact R. Lawther).

48th BRITISH MATHEMATICAL COLLOQUIUM First Announcement

The forty-eighth British Mathematical Colloquium will be held at the University of Manchester Institute of Science and Technology. The meeting will run from the evening of Tuesday 9 April to the afternoon of Friday 12 April, 1996. Confirmed principal speakers are A. Wiles (Princeton) and E. Zelmanov (Yale). There will be special sessions in Combinatorics and Differential Geometry/Mathematical Physics. Further details will appear in a subsequent issue of the Newsletter, but if you wish to be added to our mailing list please write to BMC, Department of Mathematics, UMIST, Manchester M60 1QD or e-mail bmc@umist.ac.uk.

Mark Coleman

LONDON MATHEMATICAL SOCIETY

FRIDAY-SATURDAY 20-21 OCTOBER 1995

Meeting on Stochastic Analysis

Friday 20 October

- 2.15 J.F. LeGall (Paris) *Random trees and Lévy processes*
3.30 D. Bakry (Toulouse) *Lévy-Gromov's isoperimetric inequalities in infinite dimension*
4.30 Tea
5.00 A General and Ordinary Meeting
L. Gross (Cornell) *Hall's transform via stochastic analysis*

Saturday 21 October

- 9.15 E. Pardoux (Marseilles) *Averaging for backward SDEs and semilinear PDEs*
10.15 Coffee
10.45 D. Nualart (Barcelona) *The Markov property and stochastic boundary value problems*
12.00 E. Bolthausen (Zürich) *Localization and delocalization phenomena for random walks*

The meetings will be held at the Scientific Societies' Lecture Theatre, New Burlington Place, London W1.

A dinner will be held at 170 Queen's Gate, Imperial College, London SW7 on the Friday evening at 7.00 pm for 7.30 pm. The cost will be £19.00 per person, inclusive of wine. Those wishing to attend should inform Miss Susan M. Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, enclosing a cheque payable to 'The London Mathematical Society' to arrive no later than Friday 13 October. A list of moderately priced hotels can be obtained from Miss E. Rowley, Department of Mathematics, Imperial College (e-mail: e.rowley@ic.ac.uk).

1996 ASSESSMENT PANELS

The Funding Councils have announced the membership of the Assessment Panels for the 1996 Research Assessment Exercise.

Pure Mathematics: Professor B.E. Johnson (Chairman) (Newcastle), Professor Ken Brown (Glasgow), Professor P.J. Cameron (QMW), Professor N.J. Hitchin (Cambridge), Professor J. Toland (Bath).

Applied Mathematics: Professor D.G. Crighton (Chairman) (Cambridge), Professor Christopher T.H. Baker (Manchester), Professor C.J. Isham (Imperial), Dr J.R. Ockendon (Oxford), Professor David Parker (Edinburgh), Professor E.R. Priest (St Andrews), Professor B.D. Sleeman (Dundee), Professor J.R. Whiteman (Brunel).

Statistics and Operational Research: Professor D.M. Titterton (Chairman) (Glasgow), Professor A.H. Christer (Salford), Professor J.B. Copas (Warwick), Professor F.P. Kelly (Cambridge), Professor Byron J.T. Morgan (Kent).

SET96

The next National Week of Science, Engineering and Technology will commence on Friday 15 March 1996. The pattern will be much the same as for the first two, which means that almost everything will be left to individuals to organize locally. The British Association will produce regional and national programmes. These will go to print in early November, so if you want to be included you will have to plan well in advance. Limited funding may be available from COPUS (c/o the Royal Society: apply before 31 October). The LMS Education Committee will also consider applications for small grants (contact Dr T. Porter, Department of Mathematics, Bangor).

P.T. Saunders
King's College, London

GRESHAM COLLEGE GEOMETRY

During the 1995 Autumn semester three Public Lectures in Geometry will be given by Professor Ian Stewart (Gresham Professor of Geometry) 'Faggot's Fretful Fiasco: The Unsung Geometry of Musical Scales', Wednesday 4 October at 5.30 pm, Kingsway College, Sidmouth Street, London WC1, 'Factorials, Fortunes and Fallacies', Wednesday 25 October at 1.00 pm at Gresham College and 'Fermat's Final Fling: Last Days of the Last Theorem', on Monday 4 December at 1.00 pm at Gresham College. Admission is free and without tickets. Further details of the lectures are available from Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH, telephone 0171-831 0575.

DEPARTMENTAL NEWS

Birkbeck College Professor N.H. Bingham has been appointed Professor of Statistics.

Manchester University Professor C.T.H. Baker has succeeded Professor J.B. Paris as Head of Department.

Queen Mary & Westfield College Dr D.J. Collins has succeeded Professor I.W. Roxburgh as Head of Department.

MATHEMATICAL SCIENCES ANNUAL 1996

This is the sixth issue of an annual publication containing the addresses, telephone and fax numbers of Departments of Mathematics, Statistics, Computer Science and kindred subjects at Universities and similar institutions in the United Kingdom. Copies are being distributed to all the Departments concerned for further distribution to their members. Subject to availability additional copies can be obtained directly from Professor I.M. James, Mathematical Institute, 24-29 St. Giles, Oxford OX1 3LB (please enclose a stamped addressed envelope of the right size).

LONDON MATHEMATICAL SOCIETY

Spitalfields Day

Saturday 11 November 1995

Isaac Newton Institute for Mathematical Sciences
Seminar Room 1, 20 Clarkson Road, Cambridge

A DYNAMICAL SYSTEMS APPROACH TO PARTIAL DIFFERENTIAL EQUATIONS

Programme

10:30 Coffee

11:00 Jack K. Hale (Georgia Tech)
From finite to infinite dimensional dynamical systems

12:15 Lunch

13:30 John D. Gibbon (Imperial College)
Attractors for the Navier-Stokes equations

14:45 Edriss S. Titi (University of California at Irvine)
Inertial manifolds and degrees of freedom for dissipative systems

15:45 Tea

16:15 Peter Constantin (Chicago)
The Euler and Navier-Stokes equations

Anyone who is interested is welcome to attend. Lunch will be provided at a nominal charge; please let Tracey Hibbitt at the Institute know by Monday 6 November if you intend to come, in order to help us plan for lunch: tel: (01223) 335999; fax: (01223) 330508; e-mail: t.hibbitt@newton.cam.ac.uk.

Scientific enquiries can be addressed to Colin Sparrow at the Institute, e-mail: c.sparrow@newton.cam.ac.uk. All the speakers are currently based at the Newton Institute as part of the programme 'From Finite to Infinite Dimensional Dynamical Systems'.

ROBERT RANKIN 80th BIRTHDAY

The Department of Mathematics at the University of Glasgow proposes to mark the 80th birthday of Emeritus Professor Robert A. Rankin, FRSE, with a two-day conference on Friday 27 October and Saturday 28 October 1995. The theme of the conference will be recent developments which stem from the fundamental contributions made by Robert Rankin to modular forms, discrete groups and analytic number theory.

There will be six one-hour lectures, the speakers being: B.C. Berndt (Urbana), M.N. Huxley (Cardiff), H. Iwaniec (Rutgers), C. McLachlan (Aberdeen), R. Murthy (McGill), S.J. Patterson (Göttingen). Ample intervals will be allowed for refreshments, informal reunions and discussions. A conference dinner will be arranged on the Friday evening.

In order that accommodation can be booked we shall need to know how many people are provisionally interested in attending. Please indicate this as soon as possible, when registration forms and other data will be sent in reply. If you wish to communicate via e-mail, please send your message to the e-mail address below (not forgetting to give us your own e-mail address!). If not please use the postal address, and use airmail postage to avoid delays, to the organisers Dr A. Mason and Professor R.W.K. Odoni, Department of Mathematics, University of Glasgow, University Gardens, Glasgow G12 8QW, e-mail: awm@maths.gla.ac.uk. The conference is being sponsored by the London Mathematical Society, Edinburgh Mathematical Society, Royal Society of Edinburgh and the University of Glasgow.

SUBRAHMANYAN CHANDRASEKHAR

Professor Subrahmanyan Chandrasekhar, who was elected a member of the London Mathematical Society on 18 January 1934, died on 21 August 1995 aged 84. He was awarded the Nobel Prize for Physics in 1983.

T. BROOKE BENJAMIN

Professor T. Brooke Benjamin, FRS, who was elected a member of the London Mathematical Society on 20 May 1988, died on 16 August 1995 aged 66.

UNESCO 50th ANNIVERSARY

In November 1995 UNESCO will celebrate its 50th anniversary and in Britain this event will be officially marked by a public lecture to be given by Professor Sir Roger Penrose, FRS. It will take place in The Royal College of Physicians, Edinburgh at 7.00 pm on 8 November 1995.

Sir Roger Penrose, who is the Rouse Ball Professor of Mathematics in the University of Oxford, is the author of two controversial books ("The Emperor's New Mind" and "Shadows of the Mind") on machine intelligence versus human consciousness. He did fundamental work, some jointly with Stephen Hawking, in Relativity, and has pioneered a new approach to fundamental physics via "Twistor Theory". The title of Sir Roger's lecture on 8 November will be "Shadows of the Mind".

For further information contact: International Centre for Mathematical Sciences, 14 India Street, Edinburgh EH3 6EZ, tel: 0131 220 1777, e-mail: icms@maths.ed.ac.uk.

MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY

Members of the London Mathematical Society may wish to know that, in order to reduce the journal's backlog, eight issues of the *Mathematical Proceedings* will be published in 1996 rather than the usual six. This explains the one-off exceptional increase in price for 1996.

Graduate Texts in Mathematics

Vol. 158

S. Roman

Field Theory

1995. XII, 272 pp. 8 figs. £ 21.00
ISBN 0-387-94408-7

The book presents the basic theory of fields. The first part begins with a discussion of polynomials over a ring, the division algorithm, irreducibility, field extensions, and embeddings. The second part is devoted to Galois theory. The third part treats the theory of binomials. The book concludes with a chapter on families of binomials - the Kummer theory.

Vol. 151

J.H. Silverman

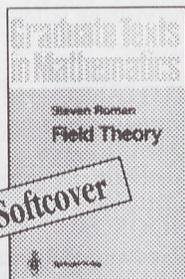
Advanced Topics in the Arithmetic of Elliptic Curves

1994. XIII, 525 pp. 17 figs. £ 30.00
ISBN 3-540-94328-5

The author presents six important topics: I. Elliptic and modular functions for the full modular group. II. Elliptic curves with complex multiplication. III. Elliptic surfaces and specialization theorems. IV. Néron models, Kodaira-Néron classification of special fibres, Tate's algorithm, and Ogg's conductor-discriminant formula. V. Tate's theory of q -curves over p -adic fields. VI. Néron's theory of canonical local height functions.

Also available by J.H. Silverman:
The Arithmetic of Elliptic Curves
1986. £ 38.50
ISBN 3-540-96203-4

Prices are subject to change without notice.



Vol. 152

G.M. Ziegler

Lectures on Polytopes

1995. IX, 370 pp. £ 21.00
ISBN 3-540-94365-X

These lectures introduce the basic facts about polytopes, with an emphasis on the methods that yield the results. They discuss important examples and elegant constructions and show the excitement of current work in the field. The material requires only linear algebra as a prerequisite, but takes the reader quickly from the basics to topics of recent research, including a number of unanswered questions.

For more information see the author's home page:
<http://winnie.math.tu-berlin.de/bsiegler/>

Vol. 153

W. Fulton

Algebraic Topology

1994. Approx. 435 pp. £ 21.00
ISBN 3-540-94327-7

This book introduces the important ideas of algebraic topology by emphasizing the relation of these ideas with other areas of mathematics. The author concentrates on concrete problems in spaces with a few dimensions, introducing only as much algebraic machinery as necessary. This makes it possible to see a wider variety of important features in the subject than is common in introductory texts.

Visit Springer on the Internet at <http://www.springer.de>



Springer

MATHEMATICS PROGRAMME OF EPSRC

Since 1 January 1995, 227 applications with a demand totalling £20.2m have been assessed by the Mathematics Programme of EPSRC. Of these 121 have been funded (overall value £5.6m). Forty four grants of less than £8K have so far been awarded under the Mathematics Programme's small grants scheme with a total value of £160K. The list of research grants awarded this session (excluding visiting fellowship awards made under the small grants scheme) is given below.

EPSRC AWARDS

- AMINI, S., CHEN, K.B., Salford. *Analysis of Boundary Integrable Equations for a class of Inhomogeneous and Nonlinear PDEs*
- ANTHONY, M.H.G., LSE. *The Canonical Metric in Machine Learning: Theory and Applications*
- BAKER, C.T.H., Manchester. *Effect of Derivative Discontinuities in the Numerical Solutions of the Delay Differential Equations*
- BALDING, D J., NICHOLS, R A., QMWC. *Extending Stochastic Genetic Models to allow Inference from Highly Variable Molecular Data*
- BALL, J.M., Heriot-Watt. *Workshop on New Mathematical Developments in Fluid Mechanics*
- BOLLOBAS, B., Cambridge. *Extremal Hypergraph Problems*
- BOLTON, J., Durham. *London Mathematical Society 1995 Durham Symposia*
- BROWN, B.M., UWCC. *Workshop on Computation and Analytic Problems in Spectral Theory*
- BROWN, K A., Glasgow. *Canonical Bases of Quantized Enveloping Algebras: Their Determination and Application*
- BROWN, P.J., Kent. *Feature Selection with many Variables*
- COATES, J.H., Cambridge. *Elliptic Curves and Modular Forms*
- COHEN, A.S., UWCC. *Numerical Methods for the Evaluation of Infinite Products*
- COLLINS, M.J., ERDMANN, K., Oxford. *Q-Schur Algebras and Quasi-Hereditary Algebras*
- COMMON, A.K., SOHBY, M I., Canterbury. *Exact and Appropriate Solutions to Nonlinear Pulsa Compression and Data Transmission Systems*
- CURTIS, R.T., Birmingham. *Support for Main Contribution to Conference on Atlas of Finite Groups July 1995*
- CUTLAND, N.J., Hull. *Equations of Stochastic Hydromechanics*
- DAVIES, P.A., DUCK, P.R., Dundee. *Nonlinear Transient Response of a Rotating Stratified Fluid*
- DODSON, M.M., York. *Metric Diophantine Approximation on Manifolds*
- DRAPER, D., Bath. *International Workshop on Model Uncertainty and Model Robustness*
- DUNWOODY, M.J., Southampton. *The Boundary of Hyperbolic Groups*
- EPSTEIN, D.B.A., HOLT, D.F., Warwick. *Groups, Automata and Semigroups Project Warwick*
- ETHERIDGE, A.M., Edinburgh. *Stochastic Methods in Nonlinear PDEs*
- EVANS, D.E., UW Swansea. *Operator Algebras and Applications*
- EVANS, D.V., Bristol. *Trapped Modes in Water Waves and Acoustics*
- FIRTH, W J., OPPO, G.L., Strathclyde. *Generation of Ultra-Short Pulses using Nonlinear Dynamics*
- GOLDIE, C.M., QMWC. *Fluctuations of Perpetuities*
- GREEN, P.J., Bristol. *Reversible Jump MCMC Computation and Bayesian Model Determination*
- GRIGOR'YAN, A., ICSTM. *Elliptic and Parabolic Equations on Riemannian Manifolds*
- HOGAN, S.J., Bristol. *Symmetry-Breaking Ground States in Liquid Crystal Cells*
- HOLDEN, A.V., BARKLEY, D., Leeds. *Control of Meandering Spiral Waves in Excitable Media; a Basis for Cardiac Defibrillator Design*
- HOWIE, J.M., ROBERTSON, E.F., St Andrews. *Combinatorial Semigroup Theory*
- HULL, C.N., SPENCE, W.J., QMWC. *Algebraic and Geometric Structures in String Theory*
- KENDALL, W.S., Warwick. *Stochastic Calculus in Axiom using Molecules of*

Stochastic Differentials

KING, A.C., Keele. *Motion of a Contact Line along Solid Surface at High Reynolds Number*

KING, J.R., TUCK, B., Nottingham. *Thermal Effects in Semiconductor Laser Operation*

LANCE, E.C., Leeds. *Locally Compact Quantum Groups*

LARMAN, D.G., UCL. *Various Geometric problems arising from Statistics and Computer Science*

LYONS, T. J., Imperial. *Partial Approximations in Nonlinear Filtering*

MACPHERSON, H.D., TRUSS, J.K., Leeds. *Automorphisms of First Order Structures*

MCCLINTOCK, P.V.R., MCKANE, A.J., Lancaster. *Nonlinear Dynamics of Stochastic Ratchets*

MCINTYRE, M.E., Cambridge. *Nonlinear Wave-Vortex Decomposition and Interaction*

MANTON, N.S., SHELLARD, E.P.S., Cambridge. *Solitons in Nuclear and Condensed Matter Physics*

MARDIA, K.V., KENT, J.T., DRYDEN, I.L., Leeds. *Multi-Scale approaches to Shape Change and Image Warping*

MARLETTA, M., Leicester. *Numerical Solution of Higher Order Sturm-Liouville Problems*

MCKEE, S., LESLIE, F.M., Strathclyde. *Centre for Applied and Industrial Mathematics at Strathclyde (AIMS)*

MOFFATT, H.K., DAVIDSON, P.A., Cambridge. *Electromagnetic Control of Advection Migration and Aggregation of Particulate Impurities in Liquid Metals*

MORTON, H.R., Liverpool. *Vassiliev Invariants and 3-Manifolds*

MOVCHAN, A.B., SPENCE, A., Bath. *Mathematical and Numerical Modelling of Thermoelastic Fields in a Multi-Channel Reactor*

NASON, G.P., SILVERMAN, B., Bristol. *Wavelet Methods in Statistics*

NIJHOFF, F., Leeds. *Integrable Discrete Many-Body Systems, Quadratic Algebras and Separations of Variables*

O'HAGAN, A., Nottingham. *Bayesian Uncertainty Analysis and Calibration of Complex Computer Models*

PEDLEY, T.J., CRIGHTON, D.G., Cambridge. *Viscous Flow in Buckled Tubes: A Computational Analysis of Collapse,*

Re-Opening and Peristaltic Pumping

PHILLIPS, T.N., Aberystwyth. *Settling of Spherical Particles in Viscoelastic Fluids using a Moving Spectral Element Method*

REES, E.G., Edinburgh. *Topological Methods in Algebraic and Differential Geometry*

REES, E.G., Edinburgh. *Interplays between Geometry and Topology*

REES, S.M., Liverpool. *Parameter spaces of Rational Maps*

RENSHAW, E., GIBSON, G.J., Strathclyde. *Stochastic Space-Time Modelling in Epidemiology and Agriculture*

SCHOLL, A.J., Durham. *Galois Representations in Arithmetic Algebraic Geometry*

SCHOLL, A.J., Durham. *Partial Differential Equations and Spectral Theory*

SCHOLL, A.J., Durham. *London Mathematical Society 1996 Durham Symposia*

SCHOLL, A.J., Durham. *Model Theory of Fields*

SHACKELL, J.R., Kent. *Asymptotics and Zero Equivalence*

SHAWE-TAYLOR, J.S., RHBNC. *The Canonical Metric in Machine Learning: Theory and Applications*

SHERRATT, J.A., MAINI, P.K., Warwick. *Mathematical Modelling of Scar Tissue Formation*

SOBOLEV, A.B., Sussex. *Partial Differential Operators with Singularities (Advanced Fellowship Ref: B/94/AF/1793)*

SMITH, J.Q., Warwick. *Dynamic Probabilistic Expert Systems*

SMITH, F.T., UCL. *Blade-Wake Interactions in Rotary Flows*

SMITH, C.J., CREMONA, J.K., Edinburgh. *Workshop on Curves and Computation*

SULI, E., MORTON, K.W., Oxford. *Adaptive Finite Element Approximations of Multi-Dimensional Hyperbolic Systems*

TITTERINGTON, D.K., CHAPMAN, J.N., Glasgow. *Aspects of Statistical Image Analysis Applied to the Behaviour of Magnetic Materials*

TOD, K.P., OXFORD. *Geometric Issues in the Foundation of Science*

VASSILICOS, J.C., BRITTER, R.E., Cambridge. *Small-Scale Turbulence Structure: Fundamental and Simulations*

WAGNER, F.O., Oxford. *Boundary*

- Questions of Model Theory and of Universal Algebra*
- WELSH, D.J.A., LEESE, R.A., Oxford. *The Development of Combinatorial Approaches to the problems of Radio Channel Assignment*
- WILLIAMS, D., TRUMAN, A., Bath. *Probabilistic Modelling and Analysis: Reaction-Diffusion Systems in Biology and Physics*
- WILLIS, J.R., Cambridge. *Studies of Crack Growth and Instability*
- WYNN, H P., SHAW, J.E.H., Warwick. *Algebraic Geometry for the Design of Experiments*
- YOUNG, P C., WHITTAKER, J.C., Lancaster. *Identification, Estimation and Forecasting Methods for a class of Nonlinear Stochastic Time Series*
- ZACHARY, S., Heriot-Watt. *Workshop on Problems in the Theory and Application of Stochastic Networks*
- ZEGARLINSKI, B., Imperial. *Ergodicity of Markov Semigroups on Infinite Dimensional Spaces*
- SMALL GRANTS SCHEME**
- BATTY, C.J.K., Oxford. *Asymptotic Behaviour of One-Parameter Semigroups of Operators*
- BLAKE, J.R., Birmingham. *Feeding, Filtering and Locomotion of Flagellates*
- BOLLOBAS, B., Cambridge. *The Combinatorics of Lacunary Sets*
- BRINDLEY, J., Leeds. *Co-Existence and Nonlinear interaction of Separated Length - Scale Structures in the Atmosphere*
- BURENKOV, V.I., UWCC. *Hardy Type Weighted Integral Inequalities and Related Problems*
- CARBERRY, A., Edinburgh. *Rough Operators in Harmonic Analysis*
- COATES, J.H., Cambridge. *p-Adic L-Functions*
- COOPER, S.B., Leeds. *Computability, Decidability and Definability*
- COPAS, J.B., Warwick. *Asymptotic Properties of Semi-Parametric Likelihood Inference*
- DALES, H.G., Leeds. *Derivations and Algebraic Structure of Banach Algebras*
- EDMUNDS, D.E., Sussex. *Convolution Operators and Orlicz Spaces*
- ERDMANN, K., Oxford. *GLN-Module Structure of Free Lie Algebras; Tensor Factorizations of Group Algebras*
- ERDMANN, K., Oxford. *Homological Properties of Blocks of Wild Type*
- ETHERIDGE, A.M., Edinburgh. *Some Questions in Infinite Dimensional Stochastic Analysis*
- FOKAS, A., Loughborough. *Integrability of The Einstein's Equations*
- GALBRAITH, R.F., UCL. *Statistical Modelling of Thermal Annealing of Fission Tracks*
- GOODMAN, T.N.T., Dundee. *Construction of Smooth Piecewise Rational Curves*
- GORYUNOV, V.V., BRUCE, J.W., Liverpool. *Projections and Langrangian Extensions of Isotropic Submanifolds*
- GRAHAM, I.G., Bath. *Domain Decomposition Methods in Computational PDE*
- GRUNDY, R.E., St Andrews. *Comparison of Numerical and Asymptotic Solutions of a Nonlinear Diffusion Equation in Two Space Dimensions*
- HIGHAM, N.J., Manchester. *Accuracy of Eigenvalue and Least Squares Computations*
- JOHNSON, B.E. Newcastle. *Workshop on Cohomology of Operator Algebras*
- KOBACZY, K.A.H., PERCY, D.F., Salford. *Selection of Models for Preventative Maintenance Strategies*
- LENAGAN, T.H., Edinburgh. *Erasmus Intensive Programme in Algebra*
- MACCALLUM, M.A.H., QMWC. *Solutions of Einstein's Vacuum Equations with Cosmological Constant*
- MACPHERSON, H.D., Leeds. *Generalisations of O-Minimality for the Model Theory of Valued Fields*
- MOORE, D.W., Imperial. *Compressible Vortex Ring Dynamics at Low Mach Number*
- MORGAN, B.J.T., Kent. *Study Design for Estimating Annual Survival*
- MOVCHAN, A.B., Bath. *Mapping Method in Analysis of Equations of Plane Electricity and Complex Dielect Equations in Anisotropic Media*
- MURDOCH, A.I., Strathclyde. *The Relationship Between Statistical and Continuum Mechanics Via Projection Operator Methodology*
- NEUMANN, P.M., Oxford. *Linear Algebra, Group Theory, Algorithms and Combinatorics*
- NEWSTEAD, P.E., Liverpool. *Brill-Noether Theory for Bundles of Higher Rank*

- PIPER, F.C., RHBNC. *Threshold Cryptography and other aspects of Secret Sharing Schemes*
- PRESSLEY, A.N., KCL. *Representation of Quantum Affine Algebras*
- SLOAN, D.M., Strathclyde. *Adaptive Pseudospectral Methods and Probability Density Function Kinetic Equation*
- SMITH, A.F.M., Imperial. *Experimental Design when the Outcome is Categorical*
- SUDBURY, A., York. *The Algebra of Functions on an Affine Quantum Group*
- SULL, E., Oxford. *Adaptive Finite Element Methods for the Time-Dependent Navier-Stokes Equations*
- TAYLOR, M.J., UMIST. *Non-Abelian Wild Extensions*
- TEW, R.B., Nottingham. *Modern Developments in Real and Complex Ray Theory*
- WALKER, G., WOOD, R.M.W., Manchester. *Differential Operators and the Steenrod Algebra*
- WASSERMANN, A.S., Glasgow. *Structure and Properties of Exact C*-Algebras*
- WATHEN, A.J., SILVESTER, D.J., Bristol. *Numerical Analysis of Eigenvalue and Pseudo-Eigenvalue Computations in Fluid Flow*
- WIEGELHOFFER, W., Glasgow. *Non-Axial Propagation in Helicoidal Bianisotropic Mediums*

DYNAMICS AND SYMMETRY A Newton Institute Workshop 30 October - 3 November 1995

This small workshop will take place as part of the Newton Institute programme, 'From Finite to Infinite Dimensional Dynamical Systems'. The general aim of this programme is to bring together researchers with an analytic training (in partial differential equations, for example) and those with a more topological approach in an attempt to understand 'large' systems. The main emphasis of the workshop will be on new insights into mathematical structures relating symmetry and dynamics rather than on specific applications. Topics are expected to include:

- symmetry of limit sets and attractors
- spontaneous bifurcation and change of symmetry
- forced symmetry-breaking
- topological and geometric tools

The programme will evolve to reflect the interests of participants. Apart from the invited lectures there will be time for contributed papers, and free time will be kept for more informal discussion and collaboration. The workshop is partially supported by a grant from the LMS.

Workshop Organiser: D. Chillingworth (Southampton). Invited Speakers: P. Chossat (Nice), B. Fiedler (Berlin), M. Field (Houston), M. Golubitsky (Hous-

ton), I. Stewart (Warwick).

Other participants include: Armbuster, Ashwin, Aston, Bridges, Broer, Cicogna, Crawford, Dellnitz, Furter, Gatermann, Gomes, Knobloch, Lamb, Lauterbach, Maier-Paape, Melbourne, Nicol, Scheurle, Silber, Stone, Vanderbauwhede, van Gils, Watanabe in addition to some longer-term participants in the Newton Institute programme who will be present during the workshop.

The workshop will take place at the Isaac Newton Institute, Cambridge. The Institute can provide assistance with finding local accommodation - the cost of which is likely to be £25 - £40 per day including breakfast. There will be a £20 registration fee that will include the cost of lunch. There may be some financial help available to support UK participants.

To register, please obtain and return a registration form from/to: Mike Sekulla, Isaac Newton Institute, 20 Clarkson Road, Cambridge CB3 0EH; tel: (44) 1223-335984; fax: (44) 1223-330508; e-mail: m.sekulla@newton.cam.ac.uk. Further information about the workshop programme may be obtained from: David Chillingworth (drjc@maths.soton.ac.uk) or Colin Sparrow (c.sparrow@newton.cam.ac.uk).

**UNIVERSITY OF CAMBRIDGE
DEPARTMENT OF PURE MATHEMATICS
AND MATHEMATICAL STATISTICS**

**University Lecturer or Assistant Lecturer
in Pure Mathematics**

Applications are invited for this post in any field of Pure Mathematics to take up appointment from 1 October 1996, or earlier if possible.

Further information can be obtained from Professor J.H. Coates, Head of Department, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, 16 Mill Lane, Cambridge, CB2 1SB (telephone 01223-337996, fax 01223-337920, e-mail Lectureship@pmms.cam.ac.uk). Applications should be sent to the Head of Department and should include a curriculum vitae and list of publications, together with the names of 3 referees. Candidates must ask their referees to send their reports directly to the Head of Department, to reach him by the closing date.

The closing date for applications is **10 November 1995**

Max Newman Research Fellowship

Applications are invited, from men and women, for this Fellowship tenable for 3 years from 1 October 1996, to carry out research in Pure Mathematics (including Probability and the mathematical aspects of Computer Science). The scale of stipends is from £15154 at age 26 to £18294 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 £2500 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, and application forms, can be obtained from Professor J.H. Coates, Head of Department, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, 16 Mill Lane, Cambridge, CB2 1SB (telephone 01223-337996, fax 01223-337920, e-mail Newman@pmms.cam.ac.uk).

The closing date for applications is **3 November 1995**

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PUBLICATIONS PRICING POLICY

The London Mathematical Society has a pricing structure for its journals which allows individual members to purchase them at a substantial discount. These discounted prices are intended for personal use only and the journals should be kept among your personal belongings and not deposited, even temporarily, in a library, common room or other public area. Issues of the journals should be accessible to other mathematicians or students only with your permission, given individually in each instance.

ANNUAL DINNER

The 1995 Annual Dinner will be held after the Annual General Meeting on Friday 17 November at 6.30 pm for 7.00 pm at the Chuen Cheng Ku Chinese Restaurant, 17 Wardour Street, London W1. The cost is £19.25 per person and members may book places for guests. The booking form enclosed with this Newsletter, should be returned together with payment to the London Mathematical Society office by Wednesday 8 November.

LMS ANNUAL SUBSCRIPTION

The annual subscription, including publications, for the session November 1995-October 1996 is due on 1 November 1995. Together with this Newsletter is a renewal form to be completed and returned with your remittance in the enclosed envelope.

No action is required if you are already paying by Direct Debit, and do not wish to change your choice of publications. Fully complete and return the form if you are paying by Direct Debit but wish to change your choice of publications or add/delete a subscription to the European Mathematical Society. Bank accounts of members paying by Direct Debit will be debited with the appropriate amount on 15 January 1996. Other members should either enclose a cheque (£ sterling or US\$) with their form or, if they have a UK bank account and wish to take advantage of this convenient form of payment, request a Direct Debit mandate.

If the renewal form is missing from this Newsletter, write to Miss H.K. Lotay, Assistant Administrator, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL (e-mail: lms@kcl.ac.uk).

F.E. WHITEHART

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DEPARTMENT OF MATHEMATICS LECTURESHIP IN PURE MATHEMATICS

Applications are invited for a Lectureship in Pure Mathematics, tenable at UCL after 1 January 1996. Applicants should have an excellent record in research and expect to contribute to graduate supervision and undergraduate teaching.

Applications, including the names of three referees, should be sent to Professor David Larman, Head of the Department of Mathematics, University College London, Gower Street, London WC1E 6BT. Tel: +44-171-387-7050 ext 2855; Fax: +44-171-383-5519; E-mail: ucahoff@ucl.ac.uk.

The closing date for applications is **1 November 1995**

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DEPARTMENT OF MATHEMATICS Lecturer/Senior Lecturer

The Department of Mathematics wishes to make appointments at Lecturer and Senior Lecturer levels (Assistant Professor and Associate Professor equivalents respectively). The Department of Mathematics has active research interests in algebra, analysis, mathematics education and number theory, but applications are encouraged from persons in any branch of mathematics. It runs a major programme in pure mathematics and in mathematics for teaching and has students at Master's and Doctoral level. The Department is keen to play a role in science and technology development in South Africa by the development of the discipline and of mathematics researchers for the region, and by providing superior mathematics teacher education.

■ **QUALIFICATIONS:** ● candidates for Lecturer position are expected to have a Ph.D degree in mathematics or be completing a Ph.D. shortly ● candidates for the Senior Lecturer position should, in addition, have appropriate research and teaching experience.

■ **FURTHER INFORMATION:** obtainable from the Chairperson of the Selection Committee at 036man@cosmos.wits.ac.za

■ To apply, submit a detailed CV with the names and addresses of 3 referees and certified copies of degrees/diplomas to: The Personnel Office (Academic), University of the Witwatersrand, Private Bag 3, WITS 2050, Johannesburg, South Africa, or fax (2711) 339-1838.

THE FORMAL CLOSING DATE is: **30th November 1995** but applications will continue to be considered until all the positions are filled. QUOTE REF **NLMS 11954**.



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E. PICARD
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DIARY

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

OCTOBER 1995

- 20 Fermat's Last Theorem, Lecture by Andrew Wiles, The Fields Institute, Ontario, Canada (230)
20-21 Stochastic Analysis, London Mathematical Society Meeting, Scientific Societies' Lecture Theatre, London
23 Modular Forms and Elliptic Curves, Lecture by Andrew Wiles, The Fields Institute, Ontario, Canada (230)
23-27 Workshop on Arithmetic Algebraic Geometry, Fields Institute, Toronto, Canada (229)

NOVEMBER 1995

- 4 Staking a Claim for Girls and Women in Science and Technology Meeting, Westhill College, Birmingham (230)
17 London Mathematical Society Meeting, Burlington House, London
19-22 Pure and Applied Mathematics Conference, Bahrain University (222)

DECEMBER 1995

- 14-18 Functional Analysis and Related Topics Seminar, Chinese University of Hong Kong (225)

FEBRUARY 1996

- 16-17 Differential Equations, London Mathematical Society Two-Day Meeting, Bath University

APRIL 1996

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

MAY 1996

- 10-11 Algebra, Joint Two-Day London Mathematical Society Meeting with the Edinburgh Mathematical Society, Glasgow University

JUNE 1996

- 21 London Mathematical Society Meeting, Linnean Society, London
22 Ali Fröhlich's 80th Birthday Meeting, Robinson College, Cambridge (230)
26-28 Homotopy Theory Mini-Conference, Mathematical Institute, Oxford (230)

JULY 1996

- 14-19 Computational Techniques in Spectral Theory and Related Topics Workshop, Gregynog Hall, University of Wales (230)
22-26 2nd European Congress of Mathematics, Budapest, Hungary

AUGUST 1996

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

SEPTEMBER 1996

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

JULY 1997

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

AUGUST 1998

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

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, to arrive before the first day of the month prior to publication. Telephone 0171-437 5377, fax 0171-439 4629, e-mail lms@kcl.ac.uk. The London Mathematical Society is registered with the Charity Commissioners.