THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 222

December 1994

FORTHCOMING SOCIETY MEETINGS Friday-Saturday, 17-18 February 1995, Warwick University Computers in Mathematics J.W. Milnor, H. Cohen, D. Gabai, N.Thurston, C. Leedham-Green, D. Holt, J.E. Cremona Friday-Saturday, 12-13 May 1995, Oxford University A Hundred Years of Analysis P.R. Halmos, J-P Kahane, J. Luetzen, S.J. Patterson, R. Remmert, F. Smithies Friday 16 June 1995, Burlington House Friday-Saturday, 20-21 October 1995 Scientific Societies Lecture Theatre Stochastic Analysis Friday 17 November 1995, Burlington House

LMS COUNCIL DIARY

Council met on Friday 21 October. At this time of year, much of our business is about appointing people to committees. But there are always items of more general interest - for example the uneasy situation at EPSRC, where the old Mathematics Committee has been disbanded and the shape of things to come is slowly emerging. Letters from the LMS President and others, expressing concern about lack of consultation and the ad hoc nature of some of the new arrangements, seem to have had an effect. But we are not out of the woods yet, and Council was urged to keep watch.

At present the membership of the LMS in Britain is tilted towards the old universities. We expect this balance to shift, and we discussed plans for a recruitment drive in several of the new universities.

Council's discussions and consultations about possible new initiatives are beginning to bear fruit. We approved a new scheme which will give small grants to support mathematical activities that involve people at several locations - for example peripatetic seminars. Details provided by the Meetings and Membership Secretary appear in this Newsletter.

We set aside £350,000 to start a Building and Development Reserve Fund. This fund will be built up against the day - we hope long distant - when the LMS Office may have to find new premises.

For the second time this year, Council heard sad news of the untimely death of a former Council member. We learned that Brian Hartley had died while climbing in the Lake District. He was a member of Council in 1988-9 and was recently appointed to the Society's working party on the former Soviet Union. His death is a great loss.

Wilfrid Hodges

NEW LONDON MATHEMATICAL SOCIETY GRANT SCHEME

At its last retreat, the Society's Council decided that it should seek additional ways of offering support to mathematical activities. The following new grant scheme, to be referred to as Scheme 3 (for joint research group support), was approved at the November 1994 meeting of Council.

Scheme 3: The aim of the scheme is to provide support for groups of mathematicians, working in at least three different locations in the United Kingdom, who have a common research interest, who wish to engage in collaborative activities and whose geographical locations are such that reasonably frequent regular meetings - several per year - are a realistic possibility.

A grant may be used for a variety of purposes associated with the group's activities, such as expenses for speakers at common seminars, travel for group members between institutions either for research visits, seminars or study groups. No strict criteria will be laid down as to the use of the money but the Society reserves the right to judge whether the activities proposed in an application are appropriate for a grant. Applications should be made by a nominated 'grantholder', who will be responsible for the use of the grant, and countersigned by a 'supporter' from each of at least two further institutions. (If none of the applicants is a member of the Society, the application must be countersigned by a member of the Society.) The grant will cover a twelve month period and the Society will expect to receive a report, both academic and financial. Applications for the renewal of a grant will be considered along with fresh applications. The maximum grant that would be awarded is £1000.

Anyone interested is invited to submit an application by 31 January 1995 for consideration at the Programme Committee meeting in February 1995. The application should take the form of a letter giving details of the proposed activities, a list of participants in the group and a provisional budget indicating how any grant awarded is likely to be used. While a reasonable level of detail is desirable, it should not be excessive and altogether the documentation expected might run to at most three A4 pages. The start date for the use of a grant would be expected to be either 1 March 1995 or 1 October 1995. Thereafter, applications will be considered biannually in September and February.

The letter of application should be sent to the Meetings and Membership Secretary, Dr D.J. Collins, School of Mathematical Sciences, Queen Mary and Westfield College, Mile End Road, London E1 4NS, (tel: 0171-975-5480; email:d.j.collins@qmw.ac.uk) who will be happy to answer queries.

DEPARTMENTAL NEWS

Heriot-Watt University Mr Jonathan Pears (Edinburgh) has been appointed to a Temporary Lecturership. The following have joined the department as research fellows under the EC HCM programme: Dr Julian Lopez-Gomez (Universidad Complutense de Madrid), Dr Sandro Merino (Zurich) and Dr Matthias Winter (University of Stuttgart). **Reading University** Dr M.J. Baines has been promoted to Professor of Applied Mathematics with effect from 1 October 1994. Dr D.J. Needham, formerly of the University of East Anglia, has been appointed Professor of Applied Mathematics with effect from 1 October 1994. Dr J.A. Leach has been appointed Lecturer in Mathematics with effect from 1 November 1994.

LONDON MATHEMATICAL SOCIETY

Spitalfields Day Wednesday 7 December 1994

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

NEW METHODS IN 4-DIMENSIONAL GEOMETRY

Programme

10:30	Coffee
11.00	Sir Michael Atiyah (Cambridge)
	The impact of quantum field theory on geometry
12.15	Lunch
13.30	Peter Kronheimer (Oxford)
	Problems in 4-dimensional topology
14.45	Ron Stern (University of California at Irvine) 4-dimensional manifolds and their Donaldson-Witten invariants
15.45	Tea
16.15	James Eells (Warwick and Cambridge) Geometric problems obstructing the Wide Screen

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 Friday 2nd December if you intend to come, in order to help us plan for lunch: telephone: (0223) 335999, fax: (0223) 330508, e-mail: t.hibbitt@newton.cam.ac.uk. Scientific inquiries may be addressed to C.B. Thomas at the Institute, e-mail: c.b.thomas@pmms.cam.ac.uk

A CELEBRATION OF TWO LIVES William Kingdon Clifford (1845-1879) and Lucy Clifford (1846-1929)

William Clifford and his wife, Lucy, were well known figures in later Victorian intellectual circles and they embodied the spirit of the times when there were no distinct boundaries between science and the arts. In his short life William was recognised as a genius mathematician and was an outspoken atheist in the religious controversy following the Darwinian revolution. As a young widow Lucy became a best selling writer of novels, plays and short stories, and up to her death befriended and corresponded with many prominent literary, political and scientific figures; she was particularly close to Henry James.

On the occasion of the 150th anniversary of William Clifford's birth, the William and Lucy Clifford Research Group is hosting a one day meeting in honour of the Cliffords on Saturday 6 May 1995 at Rutherford College, University of Kent, Canterbury. A biographical commentary on William and Lucy will be interspersed with specialist contributions from eminent academics on topical mathematical, scientific, philosophical and literary subjects including non-Euclidean geometries, the subsequent developments of Clifford's mathematics and mathematics education. The presentations will draw on previously unpublished material to which the Group has recently gained access. The meeting is aimed at a non-specialist, interdisciplinary audience and everyone is welcome.

Further information is available from Professor J.S.R. Chisholm, Institute of Mathematics and Statistics, University of Kent, Canterbury, Kent CT2 7NF, tel: 0227 764000, fax: 0227 475453, e-mail: j.s.r.chisholm@ukc.ac.uk.

SYMPOSIUM ON STOCHASTIC ANALYSIS & RELATED TOPICS Programme 1994-5

4

The symposium will take place at the Mathematics Research Centre, University of Warwick, throughout the academic year 1994/5 and visitors are welcome at all times. The special events are:

Workshop on Stochastic Evolution Equations as Dynamical Systems

27 - 31 March 1995. Organiser: K.D. El-worthy.

European/Gregynog Stochastic Analysis Symposium at Gregynog in Central Wales

9 - 16 July 1995. Organisers: K.D. Elworthy jointly with University of Wales: I.M. Davies, T.C. Dorlas, A. Truman, D. Williams, M. Yor. Transport from Warwick to Gregynog and back will be arranged.

Workshop on Ergodic Theory on Riemannian Manifolds

10 - 21 July 1995. Organiser: M. Pollicott.

Workshop on Differential Geometry & Stochastic Analysis

24 July - 5 August 1995. Organisers: K.D. Elworthy, M. Micallef.

For further information contact: Elaine Shiels, Mathematics Research Centre, University of Warwick, Coventry CV4 7AL.

UNIVERSITY OF KENT AT CANTERBURY

INSTITUTE OF MATHEMATICS & STATISTICS Lectureship in Mathematics

£14,756 - £19,326

Applications are invited for the post of Lecturer in Mathematics at the University of Kent. The appointment is tenable from 1 September 1995, or other such date as may be agreed.

Applicants should either have an outstanding research record or have demonstrated substantial research potential. The successful candidate should have a doctorate or equivalent research experience, and will be expected to contribute significantly towards the Mathematics Group's research profile. The Group is particularly strong in non-linear Mathematics and symbolic computation. Preference will be given to candidates whose research interests are in these areas. Dr. Peter Clarkson, currently Reader in Differential Equations in the University of Exeter, has recently been appointed to a Chair in Mathematics at Kent.

Informal enquiries are welcomed and should be addressed to Professor Alan Common - Tel. (0227) 764000, ext. 3664; Email: A.K.Common@ukc.ac.uk), or Dr. Peter Clarkson - Tel. (0392) 263969 direct line; Email: clarkson@maths.exeter.ac.uk).

The appointee may be placed on any point within the Lecturer A scale $(\pounds14,756 - \pounds19,326)$.

Application forms and further particulars are available from the Personnel Office, The University of Kent at Canterbury, Canterbury, Kent, CT2 7NZ. Tel. 0227 764000, ext. 3674 or 0227 475482 (24 hr. answerphone). Please quote Reference A95/20.

Closing Date: 31 December 1994.

The University is committed to implementing its Equal Opportunities Policy



PRESIDENT

At the Ordinary Meeting of the Society held on Friday 21 October, Sir John Kingman presented the Presidential Badge which he has generously donated to the Society. The badge was designed and made in 14 carat gold by Elizabeth Tyler, who was present for the ceremony. The badge depicts the 3 initials of the Society. The L and S are made from one piece of red gold which has been formed using a technique in which





IAL BADGE

Elizabeth Tyler specializes. The M initial is carved and forged in 14 carat yellow gold in contrast to the red gold. The badge is attached to a four-way-plaited hand-woven braid with purple, maroon, blue and gold threads by Emma and Gerry Darlby, and secured with a large hook. The presentation box was made in complementary colours by bookbinder Cathy Roberts.





7

POSTGRADUATE CONFERENCE IN PROBABILITY AND STATISTICS

The 18th Postgraduate Conference in Probability and Statistics will be held at Keble College, Oxford on 26-29 March 1995. The conference provides an opportunity for the presentation of postgraduate students' current work together with a forum for lively discussion and the exchange of ideas across applications. The program will consist of short talks all given by research students. All participants are encouraged to give a talk, but this is not compulsory. The conference is supported by the London Mathematical Society, which will help keep the cost to participants down. The full cost of registration, 3 nights bed and breakfast and 6 meals will be about £100.

Anyone interested in attending please contact James Carpenter, Department of Statistics, 1 South Parks Road, Oxford OX1 3TG, tel: 0865 272860, or e-mail: rsc95@statistics.ox.ac.uk.

THE PARTNERSHIP AWARDS 1995

The awards, sponsored by major companies or other bodies, are for the delivery of successful innovation in teaching and learning in higher education. Amongst the aspects of higher education covered in the 1995 programme is teacher training in mathematics. The closing date for nominations is Wednesday 21 December 1994. Copies of the full prospectus with specifications and nomination forms have been sent to the principal officers of every institution of higher education. Requests for information or additional copies should be made to: Gerald Ryalls, The Partnership Trust, 8 John Adam Street, London WC2N 6EZ, tel: 0171-839 6101.

SÉMINAIRE DE MATHÉMATIQUES SUPÉRIEURES -NATO ADVANCED STUDY INSTITUTE

A Seminar on "Gauge Theory and Symplectic Geometry" will be held at the Université de Montréal from 3 - 14 July 1995. The Seminar is held with the support of NATO, the Natural Sciences and Engineering Research Council of Canada, and the Université de Montréal. The principal speakers are M. Audin (Strasbourg), P. Braam (Oxford), Y. Eliashberg (Stanford), M. Gromov (Buressur-Yvette), N.J. Hitchin (Cambridge), J. Hurtubise (McGill), J.D.S. Jones (Warwick), F. Lalonde (UQAM Montréal), D. McDuff (SUNY at Stony Brook), T. Mrowka (Caltech), C.H. Taubes (Harvard), C. Viterbo (Orsay).

Partial financial assistance will be available. Priority will be given to graduate students. Requests for participation or financial assistance must be received before 21st February 1995. Further information is available from G. David, Secretary, Department of Mathematics & Statistics, Université de Montréal, C.P. 6128-centre-ville, Montréal, Quebec, Canada H3C 3J7, fax: (514) 343-5700.

History of Mathematics Books

American Mathematical Society

London Mathematical Society

The titles in the exciting History of Mathematics series present historical perspectives on individuals who have profoundly influenced the development of mathematics as well as those who have made great contributions to the mathematical community. The series also traces development of special areas of research. Beginning with Volume 4, this series is published jointly with the London Mathematical Society.

The Emergence of the American Mathematical Research Community, 1876–1900: J. J. Sylvester, Felix Klein, and E. H. Moore, Karen Hunger Parshall and David E. Rowe

Vol. 8, ISBN 0-8218-9004-2, 500 pp., 1994, List \$100, Indiv. mem. \$60, Inst. mem. \$80

Lectures in the History of Mathematics, *Henk J. M. Bos* Vol. 7, ISBN 0-8218-9001-8, 197 pp., 1993, List \$86, **Indiv. mem. \$52**, Inst. mem. \$69

Golden Years of Moscow Mathematics, edited by Smilka Zdravkovska and Peter L. Duren

Vol. 6, ISBN 0-8218-9003-4, 271 pp., 1993, List \$94, Indiv. mem. \$56, Inst. mem. \$75

The Scope and History of Commutative and Noncommutative Harmonic Analysis, *edited by G. W. Mackey*

Vol. 5, ISBN 0-8218-9903-1, 370 pp., 1992, List \$52, Indiv. mem. \$31, Inst. mem. \$42

Operations Analysis in the U.S. Army Eighth Air Force in World War II, *Charles W. McArthur*

Vol. 4, ISBN 0-8218-0158-9, 349 pp., 1990, List \$36 (no discounts)

A Century of Mathematics in America, edited by Peter Duren

Part I, ISBN 0-8218-0124-4, 477 pp., 1988, List \$75, **Indiv. mem. \$45**, Inst. mem. \$60 Part II, ISBN 0-8218-0130-9, 585 pp., 1989, List \$87, **Indiv. mem. \$52**, Inst. mem. \$70 Part III, ISBN 0-8218-0136-8, 675 pp., 1989, List \$93, **Indiv. mem. \$56**, Inst. mem. \$74 Parts I, II, III and Parts I, II are available as sets. Call AMS Customer Services for prices.

The London Mathematical Society is incorporated under Royal Charter and is registered with the Charity Commissioners.

To receive the discounted prices, LMS members must order directly from the AMS and mention that they are LMS members. To order directly from the AMS call (USA) 401-455-4000. Customers in **Europe, Middle East and Africa** should order directly from Oxford University Press, Walton Street, Oxford OX2 6DP, England, Telephone: (UK) 0865-56767, Fax (UK) 0865-56646, Telex 837330 OXPRES G.

CHRISTMAS-TIDE SERVICE for Mathematicians, Physicists and Astronomers

A service specially for the community of mathematicians, physicists and astronomers will be held at 11.30 am on Thursday 15 December in St Michael's Church, Chester Square, London SW1, off Elizabeth Street between Eaton Square and Victoria Coach Station. It is privately arranged with the agreement of the clergy at St Michael's, and will be conducted by people in the research world who acknowledge their Christian faith. For further information, contact Michael Cole, 17 St Mary's Mount, Leyburn, North Yorkshire DL8 5JB, tel: 096 924 321. fax: 096 924 185.

GRESHAM COLLEGE GEOMETRY

Three Public Lectures in Geometry will be given by Professor Ian Stewart (Gresham Professor of Geometry) during the Spring Semester 1995: The Riddle of the Vanishing Camel: From Puzzles to Number Theory on Wednesday 15 February at 5.30 pm at Kingsway College, Sidmouth Street, London WC1; Fuzzy Logic on Thursday 16 March at 1.00 pm at Gresham College and Chaos in the Solar System on Thursday 18 May at 1.00 pm at Gresham College. Admission is free and without tickets. Further details of the lectures are available from Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH, tel: 071-831 0575.

CIMPA & CIMI

The International Centre for Pure and Applied Mathematics (CIMPA) and the International Centre for Mathematics and Informatics (CIMI), are organising the following activities: Singularities and Applications, Montevideo (Uruguay), 6-17 March 1995; Virtual Reality, Sophia-Antipolis (France), 3 -13 July 1995; Real and Complex Foliations, Sfax (Tunisia), September 1995 (2 weeks); Programming Models, Hanoi (Vietnam), September 1995 (2 weeks); Symbolic Computation, Marrakech (Maroc), April-May 1995 (2 weeks); Nonlinear Systems, Pondicherry (India), 8-26 January 1996.

For application procedure and financial conditions write to: CIMPA/CIMI, 1 av. Edith-Cavell, 06000 Nice, France; tel: (33) 93 53 18 43; fax: (33) 93 81 73 48; telex: F 409 428; e-mail: cimpa@unice.fr.

EUROPEAN CONSORTIUM FOR MATHEMATICS IN INDUSTRY

The 9th conference of the European Consortium for Mathematics in Industry will be held at the Technical University of Denmark, Lyngby (Copenhagen) from 25 - 29 June 1996. The Mathematical Institute and Institute for Mathematical Modelling, The Technical University of Denmark, will host the conference. The conference will be organized around minisymposia on topics of industrial interest, but all papers on the application of mathematics in industrial problems are solicited. A formal first announcement and call for papers will appear later.

For further information contact: ECMI96, Mathematical Institute, The Technical University of Denmark, DK-2800 Lyngby, Denmark; tel: +45 42 88 36 99; fax: +45 42 88 13 99; e-mail: ecmi96@mat.dth.dk.

OXFORD UNIVERSITY PRESS

Oxford University Press is a leading publisher in mathematics and is exclusively responsible for the marketing and distribution of American Mathematical Society books in the UK, Europe, Middle East, and Africa.

We are proud to present some of the latest titles from OUP and the AMS:

The Mathematical Legacy of Wilhelm Magnus: Groups, Geometry and Special Functions

Edited by WILLIAM ABIKOFF, JOAN S. BIRMAN, and KATHRYN KUIKEN This book is in honour of the fundamental contributions of Wilhelm Magnus - an extraordinarily creative mathematician - to diverse areas of mathematics. The papers range from expository articles to major new research.

Contemporary Mathematics No. 169 0-8218-5156-X, 499 pp., paperback (American Mathematical Society), November 1994

£64.00

Ockham Algebras

T. S. BLYTH and J. C. VARLET The first unified account of research in to a new area of lattice theory. Many of the results presented from universal algebra and topological duality find a natural expression through the notion of boolean algebra. 0-19-859938-2, 250 pp., line drawings, Clarendon Press, October 1994

Knots and Surfaces

N. D. GILBERT and T. PORTER An account of the mathematical theory of knots and its interaction with the theory of surfaces and of group presentations. 0-19-853397-7, 280 pp., 242 line illustrations, December 1994

£29.50

£60.00

NEW EDITION

Symmetric Functions and Hall Polynomials

Second Edition

I. G. MACDONALD

A new and expanded edition of a highly acclaimed monograph with many new sections and examples throughout.

Oxford Mathematical Monographs 0-19-853489-2, 400 pp., 9 line figures, Clarendon Press, February 1995

£55.00

The Reconstruction of Trees from Their Automorphism Groups

MATATYAHU RUBIN

A self-contained book which takes the reader to the forefront of research on this topic. The text focuses on automorphism groups of trees. *Contemporary Mathematics No. 151* 0-8218-5187-X, 274 pp., paperback

(American Mathematical Society), November 1994

£46.00

Iterating the Cobar Construction JUSTIN R. SMITH

This book develops a new topological invariant called the m-structure, which incorporates all information contained in the canonical coproduct and the Steenrod operations.

Memoirs of the AMS No. 524 0-8218-2588-7, 141 pp., paperback (American Mathematical Society), November 1994

£29.00





Use our fast ordering, credit card hotline service: Tel: +44 (0)536 454534 or Fax: +44 (0)536 746337 For further information about mathematics titles from OUP please fax Gill Heasman for a catalogue: +44 (0)536 267782

MATHEMATICS AND COMPUTING

THE WORLD WIDE WEB A new information tool for mathematicians?

Broadly speaking, WWW is a collection of hypertext files distributed throughout the Internet, plus a system designed to link them in a transparent way, and such that the resulting pages are readable on any machine on the network. By hypertext we mean a document in which certain words or pictures are highlighted. Clicking your mouse on these brings up new documents or other material linked to the original document. Items are not restricted to text, it is possible to include pictures, sound, interactive forms, and even short animated sequences, all accessible at the click of a mouse button. Any machine registered on the Internet can obtain a free copy of the browser (usually Mosaic on Unix systems) required to read these pages, and anyone can set up as a server to make their own material available to others. Files must be written in a hypertext language called HTML (Hyper-Text Markup Language), which involves straightforward ASCII text plus some markers to delimit special sections such as header lines or links to other documents. Compared to learning TeX, it's straightforward, and if you have existing ASCII or TeX files it's easy to convert them to HTML.

To reach the documents you require, there are two methods. The easy way is as described above, to click in some word which has a built-in link. The original page and the linked page may be anywhere in the world, the only difference you will notice is a variable time lag depending on the distance and the

amount of network traffic. Busy sites in the US can sometime take several minutes to respond, particularly when both sides of the Atlantic are awake.

But suppose your required page isn't linked to one you know about? In that case you need to know the address of the page on the internet, called a Universal Resource Locator, or URL for short. For example our Departmental home page has the URL "http://www.ma.hw.ac.uk/maths.html". Instruct your browser to load the file with this address and you have immediate access. As you find new useful sources of information, you can link them to your own or your departmental home pages and so make them available to others.

In the cases where you are looking for WWW pages on a particular subject, but you don't know of any links or URL's, there are various directories of information or intelligent browsers which will search the WWW and report back likely possibilities. Such aids are still in their infancy, but developing rapidly, and would require another article to describe fully. Look at "http://home.mcom.com/home/internetsearch.html" to get started.

What is available now on the WWW that is of interest to mathematicians? Well, apart from the growing stock of University departmental pages giving staff lists, phone numbers, research interests, recent papers, etc., there is a number of pages maintained by various groups and Societies such as the AMS, and for mathematical physicists the Sissa preprint library is heavily used. But over the next months and years as this new technology becomes widespread, many new sources will open up. Suppose you are based in London and want to know what mathematics seminars are organised in the current week. An automatic server fed by e-mail from various seminar secretaries will provide a current list updated within minutes in the case of rescheduled talks. More importantly, perhaps, a list of provisional talks for next term will help avoid clashes and draw vour attention to the visit of Dr Z to department A in time for you to invite him to visit B also. Conference pages can be continually updated, so there's no need to register until the list of confirmed speakers includes enough of your favourites. And if you miss the meeting you can always read an edited version of the proceedings on WWW.

As a basic step I'd like to maintain a complete list of Departmental home

This occasional column is for the discussion of topics on the boundary between mathematics and computer science, thus covering both applications of mathematics in computer science and uses of computers in mathematics. Relevant material such as opinions, notices about Maths & CS meetings and pages. If yours isn't included in our list on "http://www.ma.hw.ac.uk/uk_maths.html", please let me know by e-mail (chris@ma.hw.ac.uk). The same goes for any other pages you think may be of general use to the mathematics community, or for any good ideas on how to use the WWW effectively to facilitate information exchange between mathematicians.

If you haven't yet connected to Internet or installed a WWW browser or server, I hope this article has whetted your appetite. A general introduction to the history and use of the WWW can be found in the article by Kurt Kleiner in New Scientist, 30 July 1994. Bribe your computer officer or some other computer guru to get you connected to the Information Superhighway, and you will soon become an accomplished "net-surfer"!

> Chris Eilbeck Department of Mathematics Heriot-Watt University

reviews of research, teaching and support software is solicited. Contributions should be sent to the editors of the column: w.hodges@qmw.ac.uk (Wilfrid Hodges, Queen Mary & Westfield College) dfh@maths.warwick. ac.uk (Derek Holt, University of Warwick).

INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS

An International Conference on Pure and Applied Mathematics will be held at the University of Bahrain from 19 to 22 November 1995. For further information contact: Professor A.Q.M. Khaliq, Conference Secretary- ICPAM95, Department of Mathematics, University of Bahrain, PO Box 32038, Isa Town, Bahrain; tel: (+973) 688348; fax: (+973) 682582; e-mail: ICPAM98@ isa.cc.uob.bh.

CAMBRIDGE Mathen

Singularities

Lille 1991

Edited by JEAN-PAUL BRASSELET Includes papers given at the International Singularity Conference held in 1991 at Lille. Research workers in singularity theory or related subjects will find that this book contains a wealth of valuable information.

£25.00 net PB 0 521 46631 8 436 pp. 1994 Special Price for LMS members £18.75 London Mathematical Society Lecture Note Series 201

Independent Random Variables and Rearrangement Invariant Spaces

M. SH. BRAVERMAN

The subject matter of this book lies on the boundary between probability theory and the theory of function spaces. Professor Braverman investigates independent random variables in rearrangement invariant (r.i.) spaces.

£19.95 net PB 0 521 45515 4 250 pp. 1994 Special price for LMS members £14.95 London Mathematical Society Lecture Note Series 194

A Guide to Quantum Groups

V. CHARI and A. N. PRESSLEY

This book gives a comprehensive view of quantum groups and their applications. All who have an interest in the subject will welcome this unique treatment of quantum groups.

£60.00 net HB 0 521 43305 3 672 pp. 1994

Normal Forms and Bifurcation of Planar Vector Fields

SHUI-NEE CHOW, CHENGZHI LI and DUO WANG This book is concerned with the bifurcation theory, the study of the changes in the structures of the solution of ordinary differential equations as parameters of the model vary.

£45.00 net HB 0 521 37226 7 384 pp. 1994

An Introduction to Twistor Theory

Second Edition

S. A. HUGGETT and K. P. TOD

This text is an introduction to twistor theory and modern geometrical approaches to space-time structure at the graduate or advanced undergraduate level.

£35.00 net HB 0 521 45157 4 192 pp. 1994 £13.95 net PB 0 521 45689 4 Special price for LMS members £26.25 HB £10.45 PB London Mathematical Society Student Texts 4

Introduction to Finite Fields and their Applications

Revised Edition

R. LIDL and H. NIEDERREITER

This book presents an introduction to the theory of finite fields, and contains a discussion of the most important applications of finite fields. £29.95 net HB 0 521 46094 8 400 pp. 1994

Now in paperback

Lectures on Arakelov Geometry

C. SOULÉ, D. ABRAMOVICH, J. F. BURNOL and J. K. KRAMER

An account for graduate students of this new technique in diophantine geometry; 'includes account of higher dimensional theory. This text is based on a graduate course given at Harvard University.

£15.95 net PB 0 521 47709 3 192 pp. 1994 Cambridge Studies in Advanced Mathematics 33

The Grothendieck Theory of Dessins d'Enfants

LEILA SCHNEPS

The various articles here unite all of the basics of the study of dessins d'enfants as well as the most recent advances. Researchers in number theory, algebraic geometry or related areas of group theory will find much of interest in this book

£24.95 net PB 0 521 47821 9 384 pp. 1994 Special price for LMS members £18.70 London Mathematical Society Lecture Note Series 200 f9 Le. C G Pr W Ed J. Au Ind

N

W

TH

fir

Br

an

sir

co

£3

Ca

S.

TH

H

vie

Pi

It

Loi No

Sp

२. Т! *М*а т

201 Ma Ma £19

matics

Multivalent Functions

W. K. HAYMAN

The second edition of this celebrated book is the first to contain a full and self-contained proof of De Branges' theorem. Every chapter has been updated and many of the original proofs have been simplified. It will be essential for all interested in complex function theory.

£35.00 net HB 0 521 46026 3 275 pp. 1994 Cambridge Tracts in Mathematics 110

Solitons and Geometry

S. P. NOVIKOV

This is an introduction to the geometry of Hamiltonian systems from the modern point of view. It is based on lectures given by the author in Pisa intended for a non-specialist audience. It provides an entry for more advanced work. £9.95 net PB 0 521 47196 6 62 pp. 1994 Lezione Fermiane

Combinatorial and Geometric Group Theory, Edinburgh, 1993

Proceedings of ICMS Workshop held at Heriot-Watt University, 23 March to 8 April 1993

Edited by A. J. DUNCAN, N. D. GILBERT and J. HOWIE

Authoritative collection of surveys and papers. Indispensible to all research workers in the area.

£22.95 net PB 0 521 46595 8 336 pp. 1994 Special price for LMS members £17.20 London Mathematical Society Lecture Note Series 204

Now in paperback

Topics in Matrix Analysis

R. A. HORN and C. R. JOHNSON

There is no doubt that this two volume work, Matrix Analysis and Topics in Matrix Analysis, is an mportant and unique contribution to the contemporary book literature on matrix theory.' Marvin Marcus, Bulletin of the American Mathematical Society

£19.95 net PB 0 521 46713 6 615 pp. 1994

ORDER FORM

To order please send this form to Tom Peacock at the address below, 'phone 0223 325970 or fax 0223 315052.

Qty	Author	ISBN	Price
		. database.	
	and Basis		
		IS I SAT JAS.	
	2 10 000		
		MORECOM	
-			
		and a strength of the	01.00
		a microsoficial	
		Tot	al

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

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

Card no. . **Expiry Date**

Signature _

Address .

Name of cardholder.



CAMBRIDGE UNIVERSITY PRESS

FREEPOST, The Edinburgh Building, Shaftesbury Rd., Cambridge CB2 IBR E-mail: SCIENCE@CUP.CAM.AC.UK

AN EDUCATIONAL REVOLUTION

I would like to put forward a proposal which I believe could revolutionise Undergraduate and Postgraduate Studies in the United Kingdom.

My suggestion is for Universities to provide all lecture and tutorial material on a computer database, which can be accessible to all students and staff on and off the University Campus, to the public at large in the U.K., who may wish to follow these courses, and to graduates and professionals in industry, who need to update their skills and knowledge. Such a database could be used by academics in other institutions for their own courses. I also suggest that the material should be available in text form and on CD ROM (a compact disk with read only memory). A single CD ROM can hold the equivalent of 300,000 pages of text, while a mini CD-ROM, available on a portable computer, can hold 100,000 pages.

The outstanding material provided by Universities would thus be accessible to a much wider audience, and would demonstrate the standards of excellence achievable in a subject area using state-of-the-art educational technology, and computer hardware and software, wherever appropriate. The top three universities in particular disciplines, according to recent performance league tables, should make their material available to everyone in the U.K. while other universities could restrict themselves to their boroughs or counties.

There are numerous advantages in this approach, some of which are the following:

• It gives a coherent, unified and comprehensive view of a subject area, covering four or five years of undergraduate and postgraduate studies. This complete knowledge base of a subject area could be useful to staff and students alike, not only in particular disciplines, but in cross-disciplinary studies. The knowledge base could be equally valuable to business, industry and the general public at large.

• Students could prepare for lectures in advance and can dispense with much of note-taking. They can consequently exercise more fully their appreciative, critical, creative and imaginative faculties. Similarly, lecturers will have more freedom to explore a subject in greater depth and breadth.

• About two to three times the ordinary amount of lecture material could be covered in this way, thus raising educational standards substantially.

• Greater cohorts of students could be taught in full-time and part-time.

• The material on the database would greatly promote and publicise a subject area, thus attracting more students and greater funding.

• The database could establish useful and important links with Industry.

• More time could be spent on detailed examples and illustrations of lecture material.

• In many specialised areas there are no authoritative textbooks. Lecture material is often the best, authoritative material, and it can thus be made universally available.

• More advanced material can be provided to challenge advanced students, and thus give them the opportunity to maximise their educational potential.

• The database would provide immediate, easy, permanent, continuous and up-to-date access to all relevant material in a subject area and its applications, 24 hours a day, 365 days of the year.

I would suggest that initially all undergraduate and postgraduate lectures and tutorials in four subject areas, namely, Mathematics, Statistics, Operational Research and Computer Science, should be installed on the computer database, as these subjects are of fundamental importance in science, technology and industry; similarly, for all related service courses in these subject areas. Subsequently, a similar approach could be adopted for other disciplines in both the Sciences and the Arts. A variable scale of access fees to the material could be charged, thus differentiating between different types of users. Students could be used, cheaply and effectively, to build up databases together with their lecturers.

I feel that there would clearly be substantial educational, financial and economic benefits accruing from my proposal. This is a unique opportunity to transform higher education in Britain and thereby enhance the intellectual, cultural and economic standards of the British nation. It is the quality of higher education which will propel nations ahead of others in the 21st century, and this quality will inevitably permeate into secondary education in due course.

This article was first published in The Times Higher Education Supplement.

V.M. Abraham Independent Consultant

47th BRITISH MATHEMATICAL COLLOQUIUM Heriot-Watt University, 3-6 April 1995 Second Announcement

The 47th BMC, supported by a grant from the LMS and by sponsorship from Shell Research, takes place at Heriot-Watt on the above dates. A list of speakers was included in the previous notice, in the November Newsletter.

Applications

An application form is being distributed with this Newsletter to UK-based members, and also direct to UK Mathematics Departments. The LaTeX source file of this form is also available by anonymous ftp from ftp.ma.hw.ac.uk (log on as ftp, give your full user-id as password, and see the file READ.ME in the directory pub/bmc for further instructions), or by e-mail on request from bmc@ma.hw.ac.uk.

Postgraduate Students

A significant part of the LMS grant is available to subsidise the expenses of postgraduate members of the Colloquium. Postgraduates are strongly encouraged to take advantage of this. Applications should be made on the separate postgraduate application form, which will be distributed to Mathematics Departments, and is also available by ftp or e-mail as above.

Erasmus Instructional Conference

An Erasmus Instructional Conference on Algebra and Related Topics (including Knot Theory and Operator Spaces) will be held at Edinburgh University immediately before the BMC. Further details are available from Dr T.H. Lenagan (erasmus@maths.ed.ac.uk; 0131-650 5078).

Further Information Further updates on the BMC will appear in future Newsletters. In addition there is a World-Wide-Web page on http://www.ma.hw.ac.uk (under Department of Mathematics: Conferences and Seminars), which will be kept up-to-date. Enquiries should be made to Professor J. Howie, Department of Mathematics, Heriot-Watt University, Edinburgh EH14 4AS (0131-451 3240; bmc@ma.hw.ac.uk).

BRIAN HARTLEY

Brian Hartley, Professor of Mathematics at Manchester University, who was elected a member of the London Mathematical Society on 18 April 1968, died on 8 October 1994. He had served the Society in many ways, including as a member of Council during 1988-89.

Refreshing and interesting



G.A. Jennings Modern

Geometry with Applications

1994. VIII, 187 pp. 150 figs. (Universitext) Softcover DM 48,- ISBN 3-540-94222-X

This is a thorough analysis of the fundamentals of plane geometry - Euclidean, spherical and projective. The reader is provided with an abundance of geometrical facts such as classical results of plane Euclidean and non-Euclidean geometry, investigation of conic sections, projective spaces, Galilean transformations. Lorentz transformations, and Minkowskii geometry to name a few. The author considers a range of interesting problems which one meets in real life - the number of images one sees in a pair of mirrors, how to detect the position of an enemy ship from two different listening posts and the distance between two cities knowing their latitude and longitude. This book provides fresh examples, interesting exercises, many illustrations, and is pleasant to read.

T.E. Cecil Lie Sphere Geometry

With Applications to Submanifolds

1992. XII, 207 pp. 14 figs. (Universitext) Softcover DM 50,- ISBN 3-540-97747-3

Lie Sphere Geometry provides a modern treatment of Lie's geometry of spheres, its recent applications and the study of Euclidean space. This book begins with Lie's construction of the space of spheres, including the fundamental notions of oriented contact, parabolic pencils of spheres and Lie sphere transformation. The link with Euclidean submanifold theory is established via the Legendre map. This provides a powerful framework for the study of submanifolds, especially those characterized by restrictions on their curvature spheres.

M. Berger

Geometry II

Translated from the French by **M. Cole**, **S. Levy**

1987. X, 406 pp. 364 figs. (Universitext) Softcover DM 88,- ISBN 3-540-17015-4



Prices are subject to change without notice. In EC countries the local VAT is effective. Customers in EC countries, please state your VAT Identification Number if applicable For information on prices in Austrian schillings and Nosie. France please consult the German book directory "VIB – Verzeichins liderbarer Bicher" or our greened catalogue.

 Springer-Verlag
 Heidelberger Platz 3, D-14197 Berlin, F.R. Germanc
 175 Fifth Ave., New York, NY 10010, USA
 Sweetapple House, Catteshall Road, Godalming, Surrey GU 7 30J, England

 Surrey GU 7 30J, England
 D 6, rue des Carmes, P-75005 Paris, France
 3-13, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan
 Room 701, Mirror Tower, 61 Mody Road, Tismshatsui, Kowloon, Hong Kom (D and Diagonal, 468.4°C, E-08006 Barcelona, Spain
 Wesselein u. H. 1-075 Budapes, Hungary

MATHEMATICIANS VISITING THE UK IN 1994/95

ABERDEEN UNIVERSITY

Dr P. Bueken (Louvain University) Differential geometry, relativity, Oct '94 -Sep '96

Dr J. da Costa (Madeira University) Relativity theory, Dec '94

Professor E. Kaniuth (Paderborn University) Locally compact groups, C*-algebras, Dec '94

Professor G. Neugebauer (Jena University) Relativity theory, Nov '94

Professor G. Schlichting (Technische Universitet München) Locally compact groups, C*-algebras, Dec '94

Professor E. Vaz (Minho University) Relativity theory, Oct - Nov '94

ABERTAY DUNDEE UNIVERSITY

Dr D. Kaminski (Lethbridge University) Asymptotic analysis, Oct '95 - Jun '96 Dr T.M. Dunster (SDSU) Asymptotic

analysis, Aug - Sep '95

BATH UNIVERSITY

Professor V.A. Kozlov (Linkoping University) Pure mathematics, Oct - Nov '94

Professor J.M. McLeod (Pittsburgh University) Ordinary and partial differential equations, analysis, Jan - Mar '95

BRADFORD UNIVERSITY

Dr R. Butt (Bahauddin Zakariya University) Optimisation and control, Jul - Dec '94

Professor O.P. Sharma (Indian Institute of Technology, Delhi) Queueing theory, Aug - Nov '94

CAMBRIDGE UNIVERSITY - DAMTP Dr M. Yu. Andramonov (Kazan State University) Economic cybernetics, 1 Aug '94 - 31 Jan '95

Dr B. Basu-Mallick (ICSC World Lab., Lausanne) Particle physics, 1 Mar '95 - 29 Feb '96

Professor D.H. Berman (Iowa University) Scattering, propagation, 5 Aug '94 - 31 Jul '95

Professor F.M. Borodich (Moscow) Solid mechanics, 1 Jan - 30 Apr '94

Dr P. Brax (CEA-Saclay, France) High energy physics, 1 Oct '94 - 30 Sep '96

Professor P. Castaneda (Pennsylvania University) Solid mechanics, 1 Sep - 31 Dec '94

Dr J. Davila (ETS de Ingeieros Industriales, Seville) Industrial engineering, fluid mechanics, 1 Apr '95 - 31 Mar '96

Dr W. Drugan, Solid mechanics, 1 Sep '94 -31 May '95

Professor Q.-Z. Feng (Peking University) Fluid mechanics, 1 Sep 94 - 31 Aug '95

Professor H. Hanazaki (National Institute for Environmental Studies, Ibaraki, Japan) Fluid mechanics, 12 Sep '94 - 11 Sep '95

Professor J.F. Harper (Victoria University of Wellington) Earth sciences, theoretical geophysics, 1 Jul - 31 Dec '95

Dr M. JJoffredo (Dip. di Mat., Siena, Italy) Fluid mechanics, 15 May - 15 Nov '95

Dr X. Lu (Wollongong University) Solid mechanics, 1 Aug '94 - 1 Jan '95

Dr G. Mangano (Sezione di Napoli) General relativity, 1 Sep '94 - 31 Aug '95

Professor R. Mann (Waterloo University), General relativity, 5 Sep '94 - 30 Jun '95

Professor J. Monaghan (Monash University) Fluid mechanics, 1 Sep '94 - 31 Jan '95

Dr J. Neto (Brazil) High energy physics, 1 Apr - 1 Oct '95

Dr S. Ren (Beijing) Atmospheric fluid mechanics, Aug '94 - 31 Jul '95

Dr Y. Sakai (Nagoya University) Turbulence surface and fractals, 1 Jul '94 -31 Jan '95

Dr P.R. Volkas (Melbourne University) High energy physics, 1 Jul - 31 Dec '94

Dr S. Zhu (Wollongong University) Fluid mechanics, 1 Jul '94 - 21 Jan '95

CAMBRIDGE UNIVERSITY - DPMMS Dr P. Bonnet (Ecole Normale Superieure) Algebraic geometry, 1 Oct '94 - 30 Sep '95 Dr S.C. Borst (CWI, Amsterdam) Queueing networks, 9 Sep - 31 Dec '94 Dr J.R.J. Groves (Melbourne) Geometric invariants, 1 Jan - 31 Mar '95

Dr A.S. Kleshchev (Minsk) Algebra, 1 Oct '94 - 39 Sep '95

Professor W.D. Neumann (Melbourne) Topology, 1 Jun - 31 Jul '95

Professor M.-H Saito (Kyoto) Algebraic geometry, 1 Sep '94 - 31 Jan '95

Dr R. Segal (National Security Agency, USA) Number theory, 1 Jan - 30 Jun '95

Professor H. Tropp (Humbolt State, Arcata) History of mathematics, 1 Oct - 2 Dec '94

Dr L.M. Wein (MIT, Cambridge, MA) Queueing networks, 1 Sep '94 - 31 Aug '95 Dr K. Ylinen (Turku, Finland) Geometry, 1 Sep '94 - 31 Aug '95

CITY UNIVERSITY

Professor E. Eslami (Shahid Bahonar University) Set theory, logic, 1 Sep '94 - 31 Aug '95

DURHAM UNIVERSITY

Dr H.B. Gao (Zhejiang University, China) Particle theory, Oct '94 - Oct '95

Dr J. Kim (KAIST, Korea) Particle theory, Oct '94 - Sep '95

Dr L.A. Linares (Universidad Murica) Pure mathematics, Oct '94 - Sep '95

Dr R. Tateo (Univ. Degli Studi di Torino) Particle theory, Oct '94 - Sep '95

ESSEX UNIVERSITY

Professor I. Evstigneev (Russian Academy of Sciences) Probability theory, mathematical economics, 14 Sep - 31 Dec '94.

EXETER UNIVERSITY

Professor M.J. Ablowitz (Colorado at Boulder University) Soliton theory, May '95

Professor J.B. McLeod (Pittsburgh University) Differential equations, Aug -Nov '94

GLASGOW UNIVERSITY Mathematics

Professor M.E. Antunes Simoes (Lisbon) Ring theory, Nov - Dec '94

Dr V.S. Guba (Pedagogical Institute, Russia) Combinatorial group theory, combinatorial semigroup theory, 6 Nov -4 Dec '94 Professor E-S Kim (Kyungpook Univ, Korea) Ring theory, Oct - Nov '94

Professor R.L. McCasland (Dallas University) Ring theory, Mar - May '95

GLASGOW UNIVERSITY Statistics

Dr I. Koch (Newcastle University, Australia) Image analysis, function estimation, 10 Aug - 22 Dec '94

Dr A. Pope (Newcastle University, Australia) Nonparametric function estimation, computer intensive methods, 10 Aug - 22 Dec '94

HERIOT-WATT UNIVERSITY

Professor C. Carstensen (Hannover University) Mathematics, 1 Oct '94 - 30 Aug '96

Dr J.L. Gomez (Universidad Complutense de Madrid) Mathematics, Oct '94 - 30 Aug '96

Professor J.B. McLeod (Pittsburgh University) Differential equations, Apr -Jun '95

Dr M. Winter (Stuttgart University) Mathematics, 1 Oct '94 - 30 Aug '96

HERTFORDSHIRE UNIVERSITY

Dr M. Ozawa (Keio University) Optimization, operational research, Sep '94 - Aug '95

HULL UNIVERSITY

Professor H. Osswald (University of Munich) Nonstandard analysis, vector measures, 16 Nov - 16 Dec '94

Dr S. Peszat (University of Mining & Metallurgy, Krakow) PDEs, evolution equations, 1 Apr '95 - 31 Mar '96

Dr B. Zimmer (University of Illinois) Nonstandard analysis, vector measures, 1 Oct '94 - 31 Jul '95

KENT UNIVERSITY

Dr M. Musette (Vrije Universiteit) Non-linear differential equations, 2 - 13 Jan, 1 - 10 Mar, 15 - 26 May '95

KING'S COLLEGE LONDON

Professor O. Meunargia (Steklov Mathematics Institute) Mathematical physics, 28 Nov - 9 Dec '94

Dr K. Murakami (Ehime University) Neural networks, 6 Apr '94 - 3 Feb '95

LEEDS UNIVERSITY

Applied Mathematical Studies

Professor B. Gray (MacQuarie University) Ignition theory, Jan '95

Professor T. Kapitaniak (Lodz Technical University) Chaos and noise, Dec '94 & Mar '95

Professor G. Wake (Massey University) Ignition theory, Jan '95

LEEDS UNIVERSITY Pure

Professor L.S. Levy (University of Wisconsin at Madison) Algebra, Feb - Apr '95

LIVERPOOL UNIVERSITY Pure Mathematics

Dr G. Ishikawa (Hokkaido University) Singularity theory, May '94 - Feb '95

Dr M. Saia (Universidade de Sao Paulo) Singularity theory, Jan '92 - Feb '95

LONDON SCHOOL OF ECONOMICS

Professor A. Beck (University of Wisconsin) Probability, search theory, analysis, Feb - Jun '95

LOUGHBOROUGH UNIVERSITY

Professor M.J. Ablowitz (Colorado at Boulder University) Nonlinear phenomena, Apr '95

Dr G.A. Alekseev (Steklov Mathematics Institute) Relativity, Feb - Apr '95

Professor J. Bicak (Charles University) Relativity, May - Jun '95

Professor D.V. Gal'tsov (Moscow State University) String theory, Feb - Mar '95

Professor I.M. Gelfand (Rutgers University) Nonlinear phenomena, Aug '95

Dr Ch. Kolassis (Ioannina University) Relativity, Feb - Apr '95

Professor D. Tsoubelis (Patras University) Inverse scattering, Apr - Jun '95

MANCHESTER UNIVERSITY

Dr G.K. Valente (Colgate University, N.Y.) Commutative ring theory, 1 Sep - 31 Dec '94

NORTH LONDON UNIVERSITY

Professor M.L. Goldman (Moscow Institute of Radio Engineering) Functional analysis, theory of functions, 2 Oct - 20 Nov '94

Professor I. Kovalenko (Institute of Cybernetics of the Academy of Sciences of the Ukraine) Queueing theory, reliability theory, Nov - Dec '94

Professor V.S. Shulman (Vologda Polytechn. Institute) Functional analysis, operator algebras, Jan - Feb '95

Professor D.P. Zelabenko (Moscow University of People Friendship) Functional analysis, group representation theory, Apr - May '95

OPEN UNIVERSITY Pure Mathematics Professor J.P. Lehmann (Valparaiso University) History of mathematics, 1 Jul '94 - 30 Jun '95

OPEN UNIVERSITY Statistics

Professor C.E. Lunneborg (Washington University) Resampling methods, formulating statistical questions, Oct '94 - Mar '95

Professor K. Sugawa (Hokusei Gakuen University) Applications of differential geometry to multivariate analysis, Apr '95 - Apr'96

OXFORD UNIVERSITY Mathematics

Professor E. Abbena (Turin, Italy) Differential geometry, 1994-95

Professor S. Aguzzoli (Milan, Italy) Logic, computer science, Jun '94 - May '95

Professor M. Arkowitz (Dartmouth College, USA) Homotopy theory, Apr -Jun '95

Professor E. Brown (Brandeis University, USA) Homotopy theory, May - Jun '95

Professor F. Clarke (Montreal University) Optimization, 1995

Professor D.M. Davis (Lehigh University, USA) Homotopy theory, 4-17 Jun '95

Professor J. Fogarty (Amherst, USA) Algebraic geometry, Jan - Jun '95

Dr N. Fowkes (Western Australia) Industrial applied mathematics, Feb '94 -Feb '95

Professor S. Gitler (Rochester University, USA) Homotopy theory, Jan - Jun '95

Professor S. Halperin (Toronto University, Canada) Homotopy theory, May - Jun '95 Professor K. Hardie (Cape Town University, S. Africa) Homotopy theory, May - Jun '95

Dr M. Hood (Western Australia) Applied mathematics, May - Dec '94

Professor F. Hoppensteadt (Michigan State University, USA) Mathematical biology and analysis, Oct - Nov '94.

Dr K. Kaarli (Tartu University, Estonia) Universal algebra, Feb - Mar '95

Dr N.G. Martinez (Buenos Aires, Argentina) Algebraic logic, May '93 ' Apr '95

Dr A.R.D. Mathias (Ballaterra, Spain) Logic, set theory, Jan - Mar '95

Dr C.K. Ng (Hong Kong) Functional analsyis, Oct 94 - Sep '96

Dr J-P. Nicolas (Bordeaux University) Relativity, 1 Jan - 31 Dec '94

Dr Y. Oshime (Doshisha University, Japan) Mathematical biology and energy, Mar '95 - Mar '96

Professor D.C. Ravenel (Rochester University, USA) Homotopy theory, May - Jun '95

Professor D. Ruberman (Brandeis University) Geometric topology, Aug '94 -Aug '95

Dr F. Sanchez-Garduno (UNAM, Mexico) Mathematical biology, Sep '94 - Aug '95

Dr G. Sander (Griffith University, Australia) Nonlinear diffusion, Jul '94 -Jun '95

Professor K. Shimomura (Tottori University, Japan) Homotopy theory, 15 May - 17 Jun '95

Professor J. Spalinski (Notre Dame University) Homotopy theory, 15 May -17 Jun '95

Dr V. Tasic (Manitoba, Canada) Groups, Lie algebras, Jun '93 - Jun '95

Dr Carla Tesi (Toronto, Canada) Partial differential equations, Oct '94 - Mar '95

Dr B.M. Tchavdarov (Sofia, Bulgaria) Nonlinear analysis, Oct - Dec '94

Dr M. Vynnycky (Japan) Applied mathematics, Dec '94 - Nov '95

Dr S. Williams (Queensland, Australia) Algebra, Apr - Jun '95

Professor J.J. Xu (McGill, Canada) Free boundary problems, Sep - Dec '94

Professor W. Zhang (Chengdu, China) Chaos, six months 1994/95

OXFORD UNIVERSITY Statistics

Professor R.W. Butler (Colorado State University) Saddlejoint methods, Jan -Jun '95

Professor R. Cowan (Hong Kong University) Random geometry, stereology, analysis of DNA data bases, 6 Jun - 27 Nov 94'

Professor R.A. Lockhart (Simon Fraser University) Goodness-to-fit, uniform asymptotic approximation, 31 Aug '94 - 31 Jul '95

PORTSMOUTH UNIVERSITY

Dr S. Maharaj (University of Natal) General relativity, 13 Sep - 31 Dec '94

Dr R. Zalaletdinov (Uzbek Academy of Sciences Tashkent) General relativity, 29 Sep - 10 Oct '94

Dr R. Taylor (University of Witwatersrand) General relativity, 1 Jan -30 Jun '95

QUEEN MARY & WESTFIELD COLLEGE Professor S. Bachmuth (University of Çalifornia) Pure mathematics, 15 Sep - 1 Nov '94

Professor A. Chamorro (Bilbao) Relativity, 10 - 16 Dec '94

Dr J. Comick (CRM, Spain) Pure mathematics, 1 Aug - 31 Oct '94

Professor D. Ghinelli (University of Rome) Erasmus, 1 Sep '94 - 31 Aug '95

Dr P. Johnson, Pure mathematics, 1 Nov 94 - 31 May '95

Professor A. Juhasz (Technion Institute, Haifa) Pure mathematics, 10 Aug '94 - 31 Aug '95

Dr D. Kinkowski (US Naval Academy, Annapolis) Applied mathematics, 1 Jan -31 Aug '95

Dr M .V. Koutras (University of Athens) Statistics, 1 Sep '94 - 31 Jun '95

Professor I. Novikov (Copenhagen) Astronomy, 1 - 12 Dec '94

Dr F. Pijpers (Uppsala) Astronomy, 24 Oct - 7 Nov '94

Dr C.A. Romero-Filho (Cidade University, Brazil) Relativity, 5 Sep '94 -31 Aug '95

Dr O. Talelli (University of Athens) Applied mathematics, 1 Jan - 31 Aug '95 Professor C.V. Vishveshwar (India) Relativity, 10 - 16 Dec '94

Dr R. Zalaletdinov (Uzebkistan) Relativity, 1 Dec 94 - 1 Dec '95

ROYAL HOLLOWAY

Professor A. Inoue (Hokkaido University) Probability, analysis, statistical mechanics, Nov '94 - Aug '95

Dr R.N. Mohan (D.A.R. College, India) Combinatorial configurations, 10 Apr - 10 Jun '95

SALFORD UNIVERSITY

Mr H.E. Ascher (H.E. Ascher & Associates) Mathematical modelling and maintenance, 3 Apr - 5 May '95

SHEFFIELD HALLAM UNIVERSITY

Professor S.V. Ablameyko (Belarusian Academy of Sciences) Image processing, Oct - Nov '94

SOUTHAMPTON UNIVERSITY Mathematics

Dr V. Badescu (Bucharest) Solid state physics, 1 Jan - 1 Jul '95

Dr V. Popa-Nita (Bucharest) Liquid crystals, 1 Oct '94 - 1 Oct '95

Dr L. Reeves (Melbourne) Topology, 1 Mar - 31 Aug '95

Dr A. Pulvirente (Pavia) Kinetic theory, Nov '94 - Oct '95

SOUTHAMPTON UNIVERSITY Social Statistics

Dr R. Chambers (Australian National University) Survey statistics, Jan '95

Dr D. Pfefferman (Hebrew University) Survey statistics, Jul - Dec '94

Dr N. Torelli (University of Padua) Modelling survey data, Oct - Nov '94

ST ANDREWS UNIVERSITY

Dr P. Csorgo (Eötvös Lorand Budapest) Finite groups, May - Jun '95

Dr G. Havas (Queensland University) Computational group theory, mid-Jul mid-Sep '95

Dr P. Hermann (Eötvös Lorand Budapest) p-groups, May - Jun '95

Dr L. Kecskemety (Technical University of Budapest) Statistics, probability theory, computers, Jun '95 Dr P. Kortesi (University of Miskolc) Ring theory, May - Jun '95

Dr P. Lakatos (Kossuth Lajos University Debrecen) Group theory, group rings, wreath products, Mar '95

Professor J. Pelikan (Eötvös Lorand Budapest) Group theory, May-Jun '95

Dr S. Radeleczky, Automata, semigroups, universal algebras, Jun '95

Dr G. Zsigry (Technical University of Budapest) Statistics, probability theory, computers, May '95

STRATHCLYDE UNIVERSITY

Professor D. Bedeaux (University of Leiden) Statistical physics, 8 - 16 Dec '94 Professor J.A. Cuminato (ICMSC, Brazil) Numerical PDEs, Industrial mathematics, 1 Oct '94 - 28 Feb '95

UMIST

Dr B. Erez (Université de Bordeaux) Research collaboration, Jan - Feb '95

Professor J. Franke (Kaiserslautern University) Time series analysis, Aug -Sep 95

Dr J.R.J. Groves (Melbourne University) Group theory, Apr - Jun '95

Dr G. Lettl (University of Graz) Research collaboration, Oct - Nov '94

Professor X. Hu (Chinese Academy of Science) Research collaboration, Oct '94 -Apr '95

UNIVERSITY COLLEGE LONDON

Dr M. Drazin (Purdue University) Algebra, Sep '94 - Jul '95

Dr L. Zajicek (Charles University) Real analysis, Sep - Dec '94

UNIVERSITY OF WALES, SWANSEA

Professor N. Karantchuk (Kiev) Stochastic analysis and applications, 1 week during Lent or Summer term

Dr S. Hirokawa (Kyushu University, Japan) Logic and lambda-calculus, Oct '94 - Jul '95

Professor Y. Kawahigashi (Tokyo) Operator algebras, Oct '94

Professor V.N. Kolokoltsov (Bochum/Moscow) Stochastic analysis and applications, Jan '95 Professor V.P. Maslov (Moscow) Stochastic analysis and applications, a few weeks during Lent Term

Professor M. Röckner (Bielefeld) Stochastic analysis and applications, one week during Summer Term

Professor M. Takesaki (UCLA) Operator algebras, Sep '94

Professor S. Watanabe (Kyoto) Stochastic analysis and applications, 1 week during Summer Term

UNIVERSITY OF WALES COLLEGE OF CARDIFF

Dr G. Cutolo (Naples University) Group theory, 1 Nov '94 - 30 Jun '95

Professor M. Ismail (South Florida University) Special functions and approximation theory, 17 Oct - 17 Nov '94 Dr L. Pick (Prague Academy of Sciences) Function spaces, inequalities and real harmonic analysis, 1 Feb - 14 Apr '95

Dr S. Rinauro (Naples University) Group theory, 1 Nov '94 - 30 Jun '95

WARWICK UNIVERSITY

Dr S. Aida (Tohoku University) Stochastic analysis and related fields, 2 Oct - 30 Nov '94

Professor M. Arnaudon (Université Louis Pasteur et CNRS) Stochastic analysis and related fields, 17 Apr - 14 May '95

Professor D. Bakry (Universiti Paul Sabatier) Stochastic analysis and related fields, 7 Nov - 5 Dec '94

Professor C. Burdzy (Washington University) Stochastic analysis and related fields, 25 Mar - 25 Jun '95

Dr Z. Coelho (University of Sao Paulo) Ergodic theory, 1 Oct '94 - 30 Sep '95

Professor B.K. Driver (University of California, San Diego) Stochastic analysis and related fields, 22 Feb - 31 Mar '95

Professor E. Dynkin (Cornell University) Stochastic analysis and related fields, 1 Jun - 31 Jul '95 Professor Y.E. Gliklikh (Voronezh State University) Stochastic analysis and related fields, 25 Sep - 23 Oct '94

Professor E. Hsu (Northwestern University) Stochastic analysis and related fields, 28 Sep - 10 Oct '94

Professor Y. Kifer (Hebrew University of Jerusalem) Stochastic analysis and related fields, 1 Jul - 25 Aug '95

Dr A. Kowalewski (Krakow University) Control theory, 22 Sep - 20 Dec '94

Professor F. Kubo (Kyushu University) Lie algebras, 26 Feb - 25 Mar '95

Professor S.E. Kuznetsov (Cornell University) Stochastic analysis and related fields, 1 Jun - 31 Jul '95

Professor T. Kurogi (Fukui University) Geometry and topology, 8 Jun - 11 Oct '95 Professor R. Lendre (Université Louis Pasteur) Stochastic analysis and related fields, 1 Sep '94 - 1 Sep '95

Dr S. Luzzatto (ICTP, Trieste) Dynamical systems, 1 Oct - 31 Dec '94

Dr L. Magalhaes (University of Porto) Topology, 1 Oct '94 - 31 Jan '95

Dr M. Mella (University of Trento) Algebraic geometry, 8 Oct '94 - 30 Jun '95 Dr M. Morigi (Padua University) Group theory, 8 Oct '94 - 30 Jun '95

Professor O.G. Smolianov (Moscow State University) Stochastic analysis and related fields, 27 Sep - 12 Oct '94

Professor N. Ueki (Himeji Institute of Technology) Stochastic analysis and related fields, 16 Mar - 14 Aug '95

Professor W. Zheng (University of California, Irvine) Stochastic analysis and related fields, 1 Jul - 15 Aug '95

YORK UNIVERSITY

Professor B. Bernik (Minsk) Number theory, Oct - Dec '94

Professor Y. Jin (Xi an, Shaanxi) Number theory, Oct '94

Professor P. Tamrazou (Kiev) Analysis, Oct - Dec '94

Lecture Notes in Logic

Lecture Notes in Logic is a new series addressing readers working in symbolic logic. This field is closely related to both mathematics and computer science and its importance is increasing.

Volume 1

J.R. Shoenfield

Recursion Theory

1993. VII, 84 pp. Softcover DM 44,-ISBN 3-540-57093-4

This first volume is an introduction to recursive functions and is intended for graduate students. It introduces the main topics of recursion theory, such as hierarchy theory, RE sets, and undecidable theories.

Volume 2

J. Oikkonen, J. Väänänen

Logic Colloquium '90

ASL Summer Meeting in Helsinki

1993. VII, 305 pp. 6 tabs Softcover DM 78,-ISBN 3-540-57094-2

This volume contains the Proceedings of Logic Colloquium '90 held in Helsinki, Finland and includes 13 research papers written mainly by the invited speakers of the congress. They represent all fields of mathematical logic from the philosophy of mathematics through model theory, proof theory, recursion theory and set theory, to connections of logic to computer science. Lecture Notes in Lecture Michael John R. Saed William J. Michael John R. Saed Fine Structure and Iteration Trees

Volume 3

W.J. Mitchell, J.R. Steel

and the second second

ittilli

Fine Structure and Iteration Trees

1994. V, 130 pp. Softcover DM 48,-ISBN 3-540--57494-8

This monograph lays the foundations for the theory of canonical inner models of set theory which are large enough to satisfy the statement "There is a Woodin cardinal". It does so by combining Jensen's fine structure models, already useful in the study of smaller inner models, with the theory of iteration trees and Woodin cardinals developed recently by Martin and Steel. The resulting theory is a powerful tool in studying the structure of models of set theory. The main result in this monograph is the construction, given the existence of a Woodin cardinal, of an *L*-like inner model containing a Woodin cardinal and satisfying the generalized continuum hypothesis, but its real significance is as an indispensable tool for further work with large cardinals in set theory.



Prices are subject to change without notice. In EC countries the local VAT is effective. Castomers in EC countries, please state your VAT-Identification-Number if applicable. For information on prices in Austrian schullings and Swiss frances please consult the German book directory "VIB - Verzeichnis lieferbarer Büchter" or our general catalogue.

Springer-Verlag | Heidelberger Platz 3, D-14197 Berlin, F.R. Germany | 175 Fifth Ave., New York, NY 10010, USA | Sweetapple House, Catteshall Road, Godalming, Surrey GU7 30), England G, rue des Carmes, F-75005 Paris, France | 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan | Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong Minguda Diagonal, 468-4° C. E-08006 Barcelona, Spain | Wesselétwi u. 28, H-1075 Budapest, Hungary



Walter de Gruyter Berlin • New York

Motion by Mean Curvature and Related Topics

Proceedings of the International Conference held in Trento, Italy, July 20 - 24, 1992

Editors: G. Buttazzo • A. Visintin

1994. 17 x 24 cm. viii, 219 pages. With 66 figures. Cloth DM 198,-; approx. £ 82.00

ISBN 3-11-013881-6

Algebra and Number Theory

Proceedings of the International Conference held at the Institute for Experimental Mathematics, University of Essen, Germany, December 2 - 4, 1992

Editors: G. Frey • J. Ritter

1994. 17 x 24 cm. x, 296 pages. Cloth DM 228,-; approx. £ 94.00

ISBN 3-11-014250-3

Zero-Dimensional Schemes

Proceedings of the International Conference held in Ravello, Italy, June 8 - 13, 1992

Editors: F. Orecchia • L. Chiantini

1994. 17 x 24 cm. viii, 339 pages Cloth DM 198,-; approx. £ 82.00

ISBN 3-11-013934-0

Jordan Algebras

Proceedings of the International Conference held in Oberwolfach, Germany, August 9 - 15, 1992

Editors: W. Kaup • K. McCrimmon • H.P. Petersson

1994. 17 x 24 cm. xi, 339 pages. With 15 figures. Cloth DM 198,-; approx. £ 82.00

ISBN 3-11-014251-1

Real Analytic and Algebraic Geometry

Proceedings of the International Conference held in Trento, Italy, September 21 - 25, 1992

Editors: F. Broglia • M. Galbiati • A. Tognoli

1994. 17 x 24 cm. viii, 298 pages. With 30 figures. Cloth. In preparation.

ISBN 3-11-013778-X

Walter de Gruyter & Co., P.O.Box 30 34 21, D - 10728 Berlin Tel.: (030) 2 60 05 - 0, Fax: (030) 2 60 05 - 222 Walter de Gruyter Inc., 200 Saw Mill River Road, Hawthorne, N.Y. 10532 Phone: (914) 747-0110, Fax: (914) 747-1326



M.S. LIE Honorary Member 1878 The diary lists Society meetings and other events publicized in previous issues of the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter number.

DECEMBER 1994

9 Edinburgh Mathematical Society Meeting. Edinburgh University, Professor D. McDuff (219) 12-17 Pacific Rim Geometry Conference, National University of Singapore (214)

IANUARY 1995

13 Edinburgh Mathematical Society Meeting, Heriot-Watt University, Dr H. Ockendon (219)

FEBRUARY 1995

5-9 ANZIAM'95, University of Western Australia (219)

7-10 Fractals in the Natural and Applied Sciences International Working Conference, Marseilles, France (217)

10 Edinburgh Mathematical Society Meeting. Edinburgh University, Professor M.J. Dunwoody (219)

11 Arthur Cayley (1821-1895) Special Day, Mathematical Institute, Oxford (221)

17-18 Two-day London Mathematical Society Meeting, Mathematics and Computers, Warwick University

MARCH 1995

10 Edinburgh Mathematical Society Meeting, Abertay, Professor A.D. Wood (219)

17-24 Sciences, Engineering and Technology Week (219)(221)

19-22 Carolus Magnus on Arithmetic and Geometry Colloquium, Aachen, Germany (217)

27-29 Applications of Logic, University of York(221)

APRIL 1995

3-6 British Mathematical Colloquium, Heriot-Watt (221)

3-6 Conference on Numerical Methods for Fluid Mechanics, Oxford (221)

18-22 Professor P.F. Baum, LMS Invited Lectures, Manchester University (218)

23-26 Korteweg and de Vries International Symposium, Amsterdam, The Netherlands (210)

24-28 Operator Algebras Symposium, Fields Institute, Canada (212)

MAY 1995

5 Edinburgh Mathematical Society Meeting, Stirling University, Dr C.J.H. McDiarmid (219)

12-13 Two-day London Mathematical Society Meeting, 'A Hundred Years of Analysis', Oxford University.

29-1 June Mathematical Modelling Conference, University of Brunei Darussalam (214)

JUNE 1995

2 Edinburgh Mathematical Society Meeting. St Andrews University, Dr M.A. Berger (219)

16 London Mathematical Society Meeting, Burlington House, London

28-30 Conference on the Legacy of George Boole, University College, Cork (219)

JULY 1995

3-7 Fifteenth British Combinatorial Conference, University of Stirling (210)

3-7 International Congress on Industrial and Applied Mathematics, Hamburg (213)

3-7 Mathematics on Neural Networks and Applications, Lady Margaret Hall, Oxford (221)

10-12 Linear Algebra and Its Applications Conference, Manchester University (220)

11-14 Finite Fields & Applications International Conference, University of Glasgow (219)

13-16 British Congress of Mathematics Education, Manchester Metropolitan University (220)

17-21 Symposium on Sieve Methods, Exponential Sums and their Applications in Number Theory, University of Wales College of Cardiff (221)

17-28 Banach Algebras '95, Newcastle University (221)

AUGUST 1995

28-1 Sep The A.C. Aitken Centenary Conference, University of Dunedin, New Zealand (210)

SEPTEMBER 1995

4-9 European Women in Mathematics Conference, Universidad Complutense de Madrid, Spain (219)

OCTOBER 1995

20-21 London Mathematical Society Meeting, Stochastic Analysis, Scientific Societies Lecture Theatre, London

NOVEMBER 1995

17 London Mathematical Society Meeting, Burlington House, London

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London WIV ONL, to arrive before the first day of the month prior to publication. Telephone 071-437 5377, fax 071-439 4629, e-mail Ims@uk.ac.kcl.cc.bay. The London Mathematical Society is registered with the Charity Commissioners.