

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 194

May 1992

FORTHCOMING SOCIETY MEETINGS

Friday 15 May 1992, Burlington House
A.J. Scholl, M.J. Taylor

Friday 19 June 1992, Burlington House
W.B.R. Lickorish, V.G. Turaev

Monday 29 June - Wednesday 1 July 1992
Joint meeting of AMS and LMS, Cambridge

Friday 16 October 1992, Burlington House
Meeting on Functional Analysis

L.J. Bunce, E.M. Christensen, A. Connes, C.M. Edwards

Friday 20 November 1992, Burlington House
Annual General Meeting
J.F.C. Kingman, P. Whittle

1993 HARDY LECTURER

Council is pleased to report that Professor Walter Feit (Yale University) has accepted its invitation to visit the United Kingdom in May and June 1993 as the Society's 1993

Hardy Lecturer. Further details of Professor Feit's visit and a request for invitations from potential host institutions will appear in the November 1992 issue of the Newsletter.

VISIT OF PROFESSOR P.M. GRUBER

Professor P.M. Gruber of the Technical University of Vienna will be visiting the UK in May. He will talk on Tuesday 5th May in Bristol, Wednesday 6th May in Sheffield and Friday 8th May at University College London; the titles of his talks are not yet fixed. Professor Gruber's visit is partially sup-

ported by a Scheme 2 grant from the London Mathematical Society. For further information, contact Professor P. McMullen, Department of Mathematics, University College London, Gower Street, London WC1E 6BT, telephone 071-387 7050, ext. 2849.

FELLOWSHIP OF THE ROYAL SOCIETY

Amongst those recently elected to Fellowship of the Royal Society were: Professor James Grieg Arthur, Professor of Mathematics in the University of Toronto, Canada; Dr Ian Philip Grant, Reader in Mathematical Physics in the University of Oxford; Professor John Bryce MacLeod, Professor of Mathematics in the University of Pittsburgh, USA; Professor Leslie Sydney Dennis Morley, Professorial Research Fellow in the Institute

of Computational Mathematics at Brunel University; Professor Gordon David Plotkin, Professor of Computer Science in the University of Edinburgh; Professor Nigel Oscar Weiss, Professor of Mathematical Astrophysics in the University of Cambridge; Professor John Raymond Willis, Professor of Applied Mathematics in the University of Bath.

LONDON MATHEMATICAL SOCIETY

NOTICE OF GENERAL MEETING

There will be a General Meeting of the Society on Friday 19 June 1992 at 3.30 p.m. in the Meeting Room of the Geological Society, Burlington House, Piccadilly, London W1V 0NL, to consider a proposal by the Council of the Society to delete the existing By-Law II,1 and to substitute that printed below.

The new By-Law II,1, if accepted, would increase the annual subscription of individual members for 1992-93 by £1.20, and would increase the prices per volume of the **Bulletin**, the **Journal** and the **Proceedings** to individual members for 1992-93 by £1.50.

Text of the Proposed By-Law II,1

The annual subscription to the Society of Ordinary Members for the 1992-93 session shall be £13.20. The prices of the Society's periodicals to Ordinary Members for the 1992-93 session shall be: **Proceedings** £13.50 per volume, **Journal** £13.50 per volume, **Bulletin** £13.50 per volume.

R.Y. Sharp
Council and General Secretary

WORKSHOP ON MOONSHINE AND RELATED TOPICS

There will be a workshop on 'Moonshine and related topics' at Glasgow University in the week of Monday 22nd June to Friday 26th June. The aim is to have a number of talks on the Tuesday, Wednesday and Thursday. Some funding has been received from the London and Edinburgh Mathematical Societies, which is expected to be used to pay for accommodation and travel within

Britain of active participants; note however that this is limited.

To obtain further information contact Dr Andrew Baker, Department of Mathematics, Glasgow University, Glasgow G12 8QW, Email: gama43@uk.ac.glasgow.cms, as soon as possible. The organisers would welcome offers to speak, and anyone who wishes to should send a title and brief abstract.

ONE-DAY MEETING ON MODEL THEORY AND GROUPS

A one-day meeting on 'Model Theory and Groups' is being held at the Department of Pure Mathematics, University of Leeds on 2nd May 1992 from 10.30 am to 5.00 pm. Speakers and titles are as follows: Richard Warren (Leeds) k-CS-transitivity properties of cycle-free partial orders; Henryk Kotlarski (Warsaw) Automorphisms of models of PA: maximal sub-

groups; John Wilson (Cambridge) Finitely presented soluble groups; Richard Kaye (Oxford) Automorphisms of models of PA: normal subgroups. For further information contact J.K. Truss, Department of Pure Mathematics, University of Leeds, telephone 0532 335128. The meeting is receiving financial support from the London Mathematical Society.

LONDON MATHEMATICAL SOCIETY

FRIDAY 15 MAY 1992

A.J. SCHOLL (Durham)
will speak at 3.30 on

**Modular Forms:
Arithmetic and Geometry**

M.J. TAYLOR (U.M.I.S.T.)
will speak at 5.00 on

**Arithmetic Galois Modules:
a Survey**

Tea will be served at 4.30

The meeting is at the Linnean Society
Burlington House, Piccadilly, London W1

All interested are very welcome.

LMS LIBRARY

A list of periodicals held at University College is enclosed with this copy of the Newsletter. It is hoped that it will help members to obtain articles from journals not taken by their institution or to track down some obscure reference. Members are reminded that they are entitled to an excellent range of services from University College. These include a rapid photocopy service by mail which, however, requires a signed photocopy declaration form. These forms and also a leaflet describing the services available may be obtained from any of the following sources:

The LMS Librarian, Tel: 071-873 2225,
Email: j.erdos@uk.kcl.cc.oak

The LMS Office, Tel: 071-437 5377,
Email: lms@uk.ac.kcl.oak

The University College Library, 071-387 7050,
ext.2628, Email: lmsinf@uk.ac.ucl

When members use the Library in person, would they please identify themselves as members of the London Mathematical Society. This will alert the library staff on the desk that the user is entitled to a wider range of services than the normal outside user.

INVITED LECTURES SERIES

The Society's Invited Lectures series consists of meetings at which a single speaker gives a course of about ten expository lectures, examining some subject in depth, over a five day period (Monday to Friday) during a University 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 in the series have been Professor R. Melrose,

Professor J.E. Marsden and Professor P.J. Olver.

For the 1994 meeting, proposals are now invited from any member who, in addition to suggesting a topic and lecturer, would be prepared to organize 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, A.R. Pears, Department of Mathematics, King's College London, Strand, London WC2R 2LS (telephone: 071-873-2852) to whom proposals should be sent no later than 31st August 1992.

PROGRAMME AND CONFERENCE FUND

Members are reminded that the Society's Programme and Conference Fund is used to provide financial support for visitors to the UK and for conferences. The fund is administered by the Society's Programme Committee and information about the proposals it is willing to consider was given in the January 1992 issue (No. 190) of the Newsletter. The

Meetings and Membership Secretary, A.R. Pears, Department of Mathematics, King's College London, Strand, London WC2R 2LS, telephone 071-873-2852, will be pleased to discuss proposals informally with potential applicants and to give advice on submission of an application to the Society.

MEMORIAL SERVICE - GEORGE TEMPLE

There will be a memorial service for Professor George F.J. Temple, FRS, former President of the the London Mathematical Society at 2.30 pm on Saturday 9th May 1992

in the Chapel of The Queen's College, Oxford. George Temple died on 30th January 1992.

JAMES C.S. WONG

Professor James C.S. Wong who was elected a reciprocity member of the London

Mathematical Society on 16 November 1972, died on 16 September 1991, at the age of 50.

LONDON MATHEMATICAL SOCIETY

1992 POPULAR LECTURES

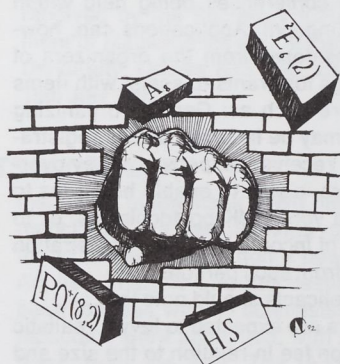
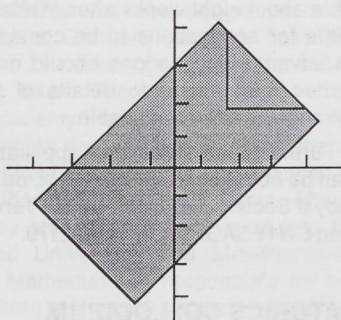
Imperial College - Friday 26 June 1992

Leeds University - Friday 3 July 1992

Dr Peter Neumann

A Breakthrough in Algebra

The Classification of the
Finite Simple Groups



Dr Leslie Mustoe

Heads I Win, Tails you Lose

How to use the Theory of Games

The Lectures are intended to be suitable for a general audience and no specific mathematical knowledge will be assumed. Although the talks are not primarily intended for professional mathematicians, everyone is welcome and some members may wish to apply for tickets for friends and relatives.

LONDON: 7.30 pm Peter Neumann, 8.30 pm refreshments, 9.00 pm Leslie Mustoe. The Great Hall, Sherfield Building, Imperial College, South Kensington, London SW7. Admission free, with ticket in advance. Apply by Friday 19 June to Miss S.M. Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL. A stamped addressed envelope would be appreciated.

LEEDS: 7.00 pm Peter Neumann, 8.00 pm refreshments, 8.30 pm Leslie Mustoe. Rupert Beckett Lecture Theatre, Arts Building, University of Leeds. Admission free, with ticket in advance. Apply by Monday 29 June to Mr L. Smith, Department of Mathematics, University of Leeds, Leeds LS2 9JT. A stamped addressed envelope would be appreciated.

LMS 1992 HONORARY MEMBER

At the Society Meeting on 20th March 1992, Professor Ya. G. Sinai was elected an Honorary Member of the London Mathematical Society in recognition of his foundational,

deep and highly influential work in the fields of ergodic theory, dynamical systems and statistical mechanics.

ROYAL SOCIETY GRANTS FOR INTERNATIONAL MEETINGS BEING HELD IN THE UNITED KINGDOM

The Royal Society does not offer individual travel grants to scientists wishing to attend international conferences being held within the United Kingdom. Applications can, however, be considered from the organizers of such meetings for grants to assist with items of expenditure such as: General organizing costs which may be incurred before registration fees are received, expenses of key overseas speakers, a sum to enable bursaries to be offered to young UK postdoctorals, or to offset a loss of income if a lower registration fee is levied from such persons.

Intending applicants should note that:

- (a) organizers are expected to levy a realistic registration fee in relation to the size and duration of the meeting
- (b) funds are limited and that £3000 is generally the maximum which might be offered for a major congress. Considerably smaller sums would usually be offered for smaller meetings.

(c) it is generally expected that there will be at least 75 participants of which approximately 30% will be from the UK

(d) in general grants are made only to assist meetings being arranged by an established scientific society, permanent committee or some similar body, but not those arranged by a university department or *ad hoc* group of scientists

The closing date for submission of applications are 1st March, 1st June, 1st October and 1st December with results becoming available about eight weeks after. Whilst it is possible for applications to be considered well in advance applications should not be submitted until adequate details of budgetary arrangements are available.

Further information and application forms can be obtained from: Miss B.M. de Vere, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG. Tel: 071-930 2170.

READING ONE-DAY COMBINATORICS COLLOQUIUM

There will be a Combinatorics Colloquium, at the Mathematics Department, University of Reading, from 10.15 - 5.15. on Wednesday 20th May 1992. The speakers and the titles of their talks are: Dr M V D Burmester (RHBNC) *Zero-knowledge based identification: from a theoretical concept to a practical token*; Ms S Easton (Keele University) *Highly irregular graphs and their automorphism groups*; Dr I B Leader (Cambridge) *Isoperimetric inequalities in the weighted cube*; Professor F C Piper (RHBNC) *Digital signatures*; Dr P Rowlinson (Stirling University) *Eutactic stars and eigenspaces*; Dr D H Smith (Polytech-

nic of Wales) *Optimally reliable graphs for both vertex and edge failures*; Professor A T White (University of Western Michigan) *Graphs of groups and graphs of geometries on surfaces*; Dr R J Wilson (Open University) *The ubiquitous Petersen graph* and *The lull before the storm*. All those interested are welcome.

The meeting is receiving financial support from the London Mathematical Society, the British Combinatorics Committee, and the Department of Mathematics, University of Reading.

ROLLO DAVIDSON TRUST

The Trustees of the Rollo Davidson Trust give notice that they have awarded a Rollo Davidson Prize for 1992 to Krzysztof Burdzy

(Seattle), for his work on the geometry of Brownian paths.

CMS ANNUAL SEMINAR 1992 AND ICRA VI

The Canadian Mathematical Society Annual Seminar on 'Representations of Algebras and Related Topics' will be held at Carleton University, Ottawa, Canada from 10th to 18th August 1992. The Scientific Organizing Committee consists of M. Auslander, R. Bautista, C.W. Curtis, V. Dlab (Chairman), I.M. Gelfand, D. Handelman, G.O. Michler, L.L. Scott and H. Tachikawa. One of the objectives of the Seminar is to promote relationships of the representation theory of finite dimensional associative algebras to other areas of mathematics. For further information, contact V. Dlab, Depart-

ment of Mathematics and Statistics, Carleton University, Ottawa, Ontario K1S 5B6, Canada. Tel. (613) 788 2166, Fax: (613) 788 3536, Email: icra@carleton.ca.

The Canadian Mathematical Society Annual Seminar will be followed by the '6th International Conference on Representations of Algebras' (ICRA VI) at Carleton University from 19th to 22nd August. A programme will be arranged on the basis of abstracts received by the Secretary ICRA VI, Department of Mathematics and Statistics, Carleton University, Ottawa K1S 5B6, Canada, before 15th July 1992.

DEVELOPMENTS IN GERMANY

Members may be interested in the following information from Professor F. Hirzebruch. The Max-Planck-Society has established Institutes and working groups in the New States of Germany (formerly East Germany). The 29 working groups consist of 5-10 scientists each. They usually come from former Academy Institutes, are associated to a University in the new States, administered by some Max-Planck-Institut and financed by the Max-Planck-Society for 5 years. After 5 years they should be incorporated into the associated University. The Max-Planck-Institut für Mathematik is responsible for two such working groups (Chairmen: H. Koch and B.-W. Schulze). The former Karl-Weierstrass-

Institut für Mathematik (KWI) had 157 mathematicians. The two working groups come from the KWI. In addition a new Institute for Applied Analysis and Stochastic (IAAS) has been founded with 55 scientists. The mathematicians were appointed, with some exceptions, from the KWI. The IAAS has direct funding, jointly from the Federal Republic and the State of Berlin. The mathematicians of the IAAS have no teaching duties, though they should give special courses at Berlin Universities on a voluntary basis. It is hoped that the IAAS in the long run will fill many of the positions with young people for a limited period of time (2-3 years for example).

KINETICS OF PHASE TRANSITIONS

As part of the International Centre for Mathematical Sciences research programme, Mathematical Problems in Materials Science, this international conference will bring together leading mathematicians, material scientists and physicists involved with the kinetics of phase transitions, a field which offers exciting possibilities for the prediction of material behaviour and the design of new materials. Topics to be considered will include spinodal decomposition and coarsening, elastic interactions, the derivation of kinetic equations and their mathematical properties, and the use of computers. Speakers will include K. Binder (Mainz), J.W. Cahn (NIST), C.M. Elliott (Sussex), P.C. Fife (Utah), J. Hyde

(Oxford), W.C. Johnson (Carnegie-Mellon), J.L. Lebowitz (Rutgers), T. Miyazaki (Nagoya), R.L. Pego (Maryland), G.R. Purdy (McMaster) and M. Schatzman (Lyon). Proposals for short talks are invited. Limited funds are available for UK participants with preference given to young mathematicians. Some support also may be available for participants from developing countries. Rooms in hotels or guesthouses can be reserved for participants. Enquiries and requests for application forms are invited from intending participants, and should be sent to: ICMS, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS. Telephone: (031) 451 3250, fax: (031) 451 3249, email: icms@cara.ma.hw.ac.uk.



UNIVERSITY OF CAPE TOWN

Dept of Mathematics:

Professor/Associate Professor/Senior Lecturer/Lecturer

Applications are invited for two vacant posts in the Department of Mathematics.

Candidates in all fields of Mathematics are invited to apply. For the Chair, the University seeks to secure the services of a mathematician of international repute, whose presence and activities will also be of benefit to mathematicians or other scientists outside of his/her immediate speciality.

The ranks of the successful applicants will be decided upon the basis of qualifications and experience.

The remuneration packages include attractive staff benefits such as non-contributory medical aid, a housing subsidy in certain circumstances, and a pension scheme. Further details are available on request.

Further information may be obtained from Dr M A Beezhod, CSIRIS, 2nd Floor, 16 Charles II Street, London SW1Y 4QU; tel: 071-839 4388; fax: 071-839 3480.

Applicants should submit a full curriculum vitae and the names, addresses and telephone numbers of three referees not later than 30 June 1992 to the Appointments Officer, University of Cape Town, Rondebosch 7700, Republic of South Africa; telephone (21) 650-2192; fax (21) 650-2138. (Late applications will be considered.) Candidates should indicate in their letters of application for which post/s they wish to be considered.

The policy and practice of the University of Cape Town are to oppose discrimination on grounds of gender, race or creed in any sphere of university life. UCT has consistently protested, and continues to protest, against apartheid laws and practices and is committed to working towards a just future for our country. Information on this is available on request.

C73006/1660-0

UNIVERSITY OF CAMBRIDGE

Department of Pure Mathematics and Mathematical Statistics

MAX NEWMAN RESEARCH FELLOWSHIP

Applications are invited for this Fellowship, tenable for 3 years from 1st October 1993, for research in Pure Mathematics. Preference will be given to candidates working in Combinatorics, Graph Theory, Algebra or Number Theory. The scale of stipends is from £12,860 at age 25 to £20,097 at age 35. The Fellow will be free to pursue his own research except for two months each summer when the appointee will hold a part-time consultancy at GCHQ, Cheltenham, with a supplementary stipend of £2,000 a year. Funding will also be available from GCHQ up to £2,000 per year for overseas travel expenses. The successful candidate must satisfy security positive vetting before appointment, and so appointment is restricted to British Nationals.

Further details and application forms, can be obtained from the Head of the Department of Pure Mathematics and Mathematical Statistics, 16 Mill Lane, Cambridge CB2 1SB, telephone Cambridge 337996. The closing date for applications is **25th May 1992**.

Lectures on Mechanics

J. E. MARSDEN

Employing geometry to classical mechanics can prove to be a fruitful exercise, and such methods have proved to have wide applications to physics and engineering. The main points that are covered are the stability of relative equilibria, geometric phases, mechanical integrators, stabilization and control, bifurcation of relative equilibria and chaos in mechanical systems.

£19.95 PB 0 521 42844 0 266 pp. 1992
Discount Price for LMS Members £14.96

London Mathematical Society Lecture Note Series 174

General Orthogonal Polynomials

H. STAHL and V. TOTIK

In this treatise, the authors present the general theory of orthogonal polynomials on the complex plane and several of its applications. The assumptions on the measure of orthogonality are general, the only restriction is that it has compact support on the complex plane. In the development of the theory the main emphasis is on asymptotic behaviour and the distribution of zeros.

£35.00 net HB 0 521 41534 9 288 pp. 1992

Encyclopedia of Mathematics and its Applications 43

Proceedings of the Adams Memorial Symposium on Algebraic Topology

Volumes I and II

Edited by N. RAY and G. WALKER

J. Frank Adams had a profound influence on algebraic topology, and his works continue to shape its development. The International Symposium on Algebraic Topology held in Manchester during July 1990 was dedicated to his memory, and virtually all of the world's leading experts took part.

Volume I £22.95 PB 0 521 42074 1
330 pp. 1992

Volume II £22.95 PB 0 521 42153 5
330 pp. 1992

Discount Price for LMS Members £17.20 each

London Mathematical Society Lecture Note Series 175-176

Representations of Algebras

Edited by H. TACHIKAWA and S. BRENNER

A collection of expository surveys given by some distinguished mathematicians during the 1990 International Mathematical Congress. Researchers into representation theory will find that this volume contains interesting and stimulating contributions to the development of the subject.

£24.95 PB 0 521 42411 9 304 pp. 1992
Discount Price for LMS Members £18.70

London Mathematical Society Lecture Note Series 168

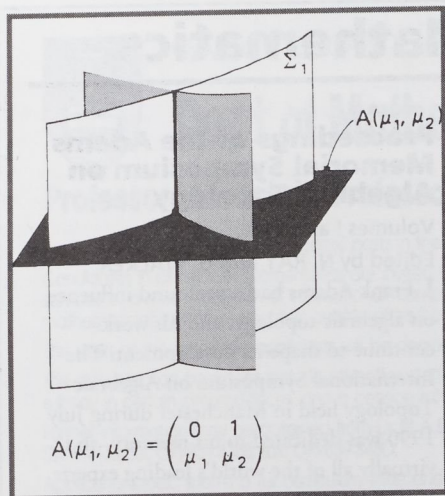
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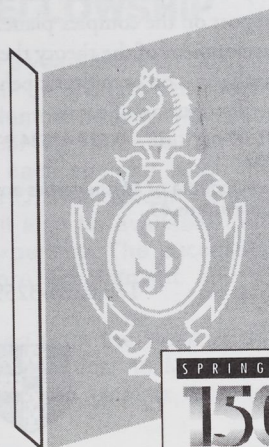
Dynamics and Bifurcations

1991. XIV, 568 pp. 315 figs.
(Texts in Applied Mathematics, Vol. 3)
Hardcover £ 35.00
ISBN 3-540-97141-6

This book of ideas and examples about the geometry of dynamics and bifurcations of ordinary differential equations. The subject of differential and difference equations is an old and much-honored chapter in science. In recent years, due primarily to the proliferation of computers, dynamical systems has once more turned to its roots in applications. It is the aim of this book to provide a modest foundation of knowledge for undergraduate and beginning graduate students in mathematics or science and engineering. Equations in dimension one and two constitute the majority of the text. It is demonstrated in particular that the basic notion of stability and bifurcations of vector fields are easily explained for scalar autonomous equations. Proceeding, the authors investigate the dynamics of planar autonomous equations where new dynamical behavior, such as periodic and homoclinic orbits, appear.

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☐ Wesselényi u. 28, H-1075 Budapest, Hungary



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FOR SCIENCE
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UNIVERSITÉS PARIS VI & PARIS VII

The following conferences will take place during June and July 1992:

23-26 June Colloque Analyse complexe et géométrie en l'honneur de P. Dolbeault, Mathématiques Pures et Appliquées, Université Paris VI - UFR 920.

29 Jun-4 Jul Invariants and representations of algebras, Mathématiques Pures et Appliquées, Université Paris VI - UFR 920.

30 Jun-3 Jul Colloque de géométrie analytique, Mathématiques, Université Paris VII - UFR 931.

1-3 July Géométrie des équations différentielles et aux dérivées partielles, Mathématiques Pures et Appliquées, Université Paris VI - UFR 902.

1-4 July Algèbres enveloppantes et

groupes quantiques, Science du Calcul et Ingénierie Mathématique, Université Paris VI - UFR 921.

2 July Journée arithmétique, Mathématiques Pures et Appliquées, Université Paris VI - UFR 920.

2-4 July Logique mathématique, Mathématiques, Université Paris VII - UFR 931

3-4 July Analyse et probabilités, Mathématiques Pures et Appliquées, Université Paris VI - UFR 920.

For further information write to: Université Paris VII, Mathématiques (UFR 931), Tour 45-55, 5ème étage, 2 Place Jussieu, 75251 Paris Cedex 05, France. Tel: 44 27 37 61, Fax: 44 27 69 35.

EUROPEAN CONGRESS OF MATHEMATICS

The first European Congress of Mathematics will be take place in Paris at the Sorbonne, from 6th to 10th July 1992. The Congress will be held under the auspices of the European Mathematical Society with support from the Société Mathématiques de France and the Société de Mathématiques Appliquées et Industrielles. The programme will feature fifty invited lectures (ten 50 minute lectures and forty 45 minute conferences organised in parallel sessions) and sixteen two hour round tables in parallel sessions. Invited lectures aim at presenting to a wide audience of mathematicians

various new aspects of pure and applied mathematics. Round tables are intended as a forum for discussion of present and future role of mathematics in society, in education and its interaction with other sciences as well as with industry. Policy makers, media, members of the European institutions and the general public will take part. Proceedings of the Congress will include both the invited talks and reports on the round table discussions. For further information, contact the Congress office: Congrès Européen de Mathématiques, Collège de France, 3 rue d'Ulm, 75005 Paris, France. Fax : 33 1 44 27 17 10.

COMPUTER ALGEBRA AND APPLICATIONS

An international workshop on 'Computer Algebra and Applications' (previously planned from 1st to 3rd April) will be held from 15th to 17th June 1992 at the French-German Research Institute of Saint-Louis. Topics to be covered are Differential

Equations, Series and Systems of Algebraic Equations. For further information contact Mrs Hengy, Institut Franco-Allemand de Recherches de Saint-Louis, Boite postale 34, F 68301 Saint-Louis Cedex, France. Telephone (0033) 89 69 50 00 ext. 5736.

1993 PRIX FERMAT DE RECHERCHE EN MATHÉMATIQUES

The Prix Fermat rewards mathematical research work in areas where Pierre de Fermat made contributions: variational principles, foundations of probability theory and analytic geometry, theory of numbers. Within these areas, the intention of the prize is to reward research results that are accessible to the greatest number of professional mathematicians. The prize, of value 100,000

FF, donated by Matra Marconi Space, will be awarded by the Université Paul Sabatier, Toulouse in Spring 1993. The regulations for the prize are available from: Prix Fermat de Recherche en Mathématiques, Service des Relations Publiques, Université Paul Sabatier, 118 route de Narbonne, 31062 Toulouse Cédex, France. The closing date for candidates is 19 December 1992.



The University of Sydney Australia

Faculty of Science

CHAIR OF PURE MATHEMATICS

Reference No: 13/01

Applications and expressions of interest are invited for appointment to a Chair of Pure Mathematics within the School of Mathematics and Statistics which fell vacant on 1 January 1991 on the retirement of Professor G.E.Wall, FAA.

The University is seeking applicants with a capacity for leadership who can make a major contribution to the School's excellence in research and teaching. Established areas of research in Pure Mathematics include category theory, algebraic groups and their representations, computational algebra and number theory, dynamical systems, singularity theory, group theory, geometric topology, number theory and combinatorics. While preference may be given to applicants with expertise in one of the above areas, suitably qualified persons from any branch of Pure Mathematics are invited to apply.

It is anticipated that interviews for the Chair will be held within three months of the closing date.

Salary will be at the rate of A\$73 800 - A\$77 900 per annum (top of salary range will not be available until 23 July 1992). Provision is also made for limited private consulting in accordance with the University's regulations. Assistance with relocation expenses to Sydney will be provided.

Enquiries about the School and the Chair should be directed to the Head of School in writing, by telephoning 61 2 692 4533 or by faxing to 61 2 692 4534.

The University reserves the right not to proceed with any appointment for financial or other reasons.

Membership of a superannuation scheme may be a condition of employment for new appointees.

Method of Application for Academic positions:

Four copies of the application, quoting reference no., including curriculum vitae, list of publications and the names, addresses and fax nos., of no more than five referees, to be lodged by the above closing dates

All applications to be sent to: the Assistant Registrar (Appointments), Staff Office (K07), The University of Sydney, N.S.W. 2006, AUSTRALIA. Facsimile 61 2 692 4316 by 11 June 1992.

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University policy



SCHOOL OF MATHEMATICS

PROFESSOR OF PURE MATHEMATICS

Applications are invited for the Chair of Pure Mathematics which becomes vacant following the appointment of the present incumbent, Professor G. Brown as Deputy Vice-Chancellor (Research) at the University of Adelaide. The other Chair of Pure Mathematics is held by Professor M.G. Cowling.

Applicants should have a distinguished record of research and scholarship in a branch of Pure Mathematics, and the ability to provide academic leadership to the Department and School.

The School of Mathematics is one of the largest in Australia, and has a record of excellence in research, as well as a commitment to excellence in teaching at all undergraduate and postgraduate levels. Within the School, the Department of Pure Mathematics, with an academic staff of around 25, has active research groups in functional analysis, operator algebras, harmonic analysis, ergodic theory, partial differential equations, mathematical physics, relativity, discrete mathematics, group theory, number theory and combinatorics. The Department encourages both basic and applied research, and collaborative interaction with other Departments and Schools within the University and with external bodies. In addition, the School of Mathematics is currently building strength in the areas of mathematical computer science, and computational science and engineering.

The appointee will be expected to serve as Head of Department or Head of School for a term or terms if so requested.

Further information may be obtained from Professor I.H. Sloan, Head of School, (telephone: international number +61 2 697 2957; facsimile: international number +61 2 662 6445).

Salary: AUS \$73,800 per annum, rising to AUS \$77,900 per annum after July 23, 1992.

Subject to consent by the University, Professors may undertake a limited amount of higher consultative work.

The University reserves the right to fill any chair by invitation.

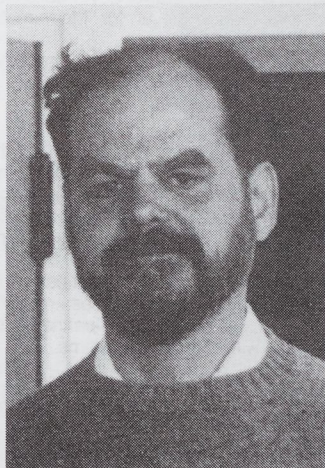
Applications close: Friday July 31, 1992. Ref 92/1511.

Details of the position, together with conditions of appointment, are available from Ms Margaret Aiken, Senior Appointments Unit, UNSW, PO Box 1, Kensington, NSW 2033, Australia, (telephone: international number +61 2 697 2728; facsimile: international number +61 2 313 6561). People from targeted EEO groups are encouraged to apply.

86117

THE WOLF PRIZE

The Mathematics Prize Committee of the Wolf Foundation has selected the following two mathematicians to share equally the Wolf Prize for 1992: Professor Lennart Carleson, University of Uppsala and UCLA, for his fundamental contributions to Fourier analysis, complex analysis, quasi-conformal mappings and dynamical systems; and Professor John G. Thompson, University of Cambridge, for his profound contributions to all aspects of finite group theory and its connections with other branches of mathematics.



Professors Carleson and Thompson will receive the Wolf Prize in Mathematics from the President of Israel on 17 May 1992, at the Chagall Hall of the Knesset in Jerusalem. The Wolf Foundation was established in 1975 by the late Dr Ricardo Wolf "to promote science and art for the benefit of mankind". Annual awards are made by the Israel-based Foundation for outstanding achievements in the fields of Medicine, Chemistry, Physics, Agriculture and the Arts, as well as Mathematics.

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NEW FROM VIEWEG

Friedrich Hirzebruch/
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Manifolds and Modular Forms

Translated by Peter Landweber. A Publication of the Max-Planck-Institut für Mathematik, Bonn.

1992. Approx. 300 pp. (Aspects of Mathematics; ed. by K. Diederich, Vol. E 20)

Hardcover approx. DM 62,—/£ 24.00
ISBN 3-528-06414-5

This book provides an introduction to the theory of elliptic genera due to Ochanine, Landweber and others. The theory displays a rich interplay between manifolds and modular forms. The genera are constructed using cobordism theory and the classical theory of elliptic functions. The text is in most parts self-contained. Many explicit examples are given and most of the results are illuminated by comparison with classical theorems.

Reinhard Racke

Lectures on Nonlinear Evolution Equations

Initial Value Problems

1992. viii, 259 pp. (Aspects of Mathematics; ed. by K. Diederich, Vol. E 19)

Hardcover approx. DM 68,—/£ 26.00
ISBN 3-528-06421-8

This book serves as an elementary, self contained introduction into some important aspects of the theory of global solutions to initial value problems for nonlinear equations. The presentation is made using the classical method of continuation of local solutions with the help of a priori estimates obtained for small data.

Gerd Faltings/Gisbert Wüstholz et al.

Rational Points

Seminar Bonn/Wuppertal 1983/84. A Publication of the Max-Planck-Institut für Mathematik, Bonn. Adviser: Friedrich Hirzebruch

3rd enlarged Ed. 1992. Approx. x, 312 pp. (Aspects of Mathematics; ed. by K. Diederich; Vol. E 6)

Hardcover approx. DM 70,—/£ 27.00
ISBN 3-528-28593-1

The third edition includes an appendix in which a detailed survey on the spectacular recent developments in arithmetic algebraic geometry is given.

Wilfried W. J. Hulsbergen

Conjectures in Arithmetic Algebraic Geometry

A Survey

1992. viii, 236 pp. (Aspects of Mathematics; ed. by K. Diederich; Vol. E 18)

Hardcover DM 64,—/£ 25.00
ISBN 3-528-06433-5

The main purpose of this book is to give an introduction to Beilinson's Conjectures. In two motivational chapters on classical number theory and elliptic curves, L-functions and regulators are introduced. Topics discussed are Fermat's Conjecture, Dirichlet and Artin L-functions, L-functions of elliptic curves the conjectures of Shimura-Taniyama-Weil and of Beilinson's Conjectures and those of Hodge and Tate in Jannsen's approach. In the final chapter a few examples are discussed of cases where some of the conjectures are verified.

Albrecht Eberle/Arthur Rizzi/
Ernst H. Hirschel

Numerical Solutions of the Euler Equations for Steady Flow Problems

1992. xvi, 448 pp. (Notes on Numerical Fluid Mechanics; ed. by E. H. Hirschel et al., Vol. 34)

Hardcover DM 148,—/£ 57.00
ISBN 3-528-07634-8

This monograph gives a survey of numerical solution methods for the Euler equations. It focusses on finite-volume methods, both with central and with upwind differencing.

From our Backlist:

Heinrich von Weizsäcker
and Gerhard Winkler

Stochastic Integrals

1990. x, 332 pp. (Advanced Lectures in Mathematics; ed. by G. Fischer and M. Knebusch)

Softcover DM 78,—/£ 30.00
ISBN 3-528-06310-6

For further information write to the address below.

Verlag Vieweg · Postfach 58 20 · D-6200 Wiesbaden





Hans Arnold Heilbronn (1908-1975) was born in Berlin and studied under Landau at Göttingen. He came to England in 1935 and took up a temporary position at Bristol, later moving to Cambridge, where he began a long collaboration with Davenport. He was interned at the start of the war, but later served in the Signals Corps and Military Intelligence. In 1964 he emigrated to Toronto, where he concluded a distinguished career in which he had worked on many branches of number theory. He was elected to Fellowship of the Royal Society in 1951. He was the London Mathematical Society's 48th President from 1959-1961.

DIARY

The diary lists Society meetings and other events publicised 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.

1992

MAY

- 1 Edinburgh Mathematical Society Meeting, Stirling (186)
- 7 Fifth Schrödinger Lecture, Imperial College, London (192) (193)
- 8-10 Order and Chaos, Dartington Hall, Devon (191)
- 11-14 Progress in Algebraic Geometry and Ring Theory Meeting, Antwerp, Belgium (193)
- 11-15 Harmonic Maps and Integrable Systems Workshop, Leeds (192)
- 15 LMS Meeting, London
- 15-16 Groups Theory Conference, Galway, Ireland (193)
- 18-22 Nascode VIII, Dublin, Ireland (188)
- 20 Algebraic Geometry and Coding Theory Conference, University of Sussex (193)
- 26-31 Engineering Mathematics and Applications Symposium, Shenzhen, China (188)
- 28 Statistical Mechanics Conference, King's College London (193)
- 29 Edinburgh Mathematical Society Meeting, Aberdeen (186)

JUNE

- 8-13 Continuum Models for the Microstructure of Crystals Conference, Heriot-Watt University, Edinburgh (193)
- 9-12 Analysis and Optimization of Systems Conference, Sophia-Antipolis, France (190)
- 15-20 Fourier Analysis and Partial Differential Equations Conference, Spain (192)
- 15-26 Numerical Analysis - Shell Models, France (193)
- 19 LMS Meeting, London
- 22-26 Dundee Conference on Ordinary and Partial Differential Equations, Dundee (188)
- 25-27 Discontinuous Groups Workshop, King's College London (193)
- 27-3 July The Penrose Transform and Analytic Cohomology in Representation Theory Conference, Massachusetts, U.S.A. (186)
- 29-30 The Development of Mathematics from 1900 to 1950 Colloquium, Luxembourg (189)
- 29-1 July Joint AMS/LMS Meeting, Cambridge (155)(193)

JULY

- 1-4 New Index Theorems and Applications Conference, Oxford (192)
- 4-14 Evolutionary Problems, LMS Durham Symposia, Durham (178) (189)
- 6-10 Mathematical Conferences in Perth, Australia (186)
- 6-10 European Congress of Mathematics, Paris, France (180) (188)
- 11-18 St Andrews Colloquium, St Andrews (185)
- 13-24 Séminaire de Mathématiques Supérieures, Bifurcations and Periodic Orbits of Vector Fields, Montréal, Canada (189)

AUGUST

- 10-14 Sussex Fourier Analysis Workshop, Sussex University (193)
- 16-29 Wavelets and Their Applications, Tuscany, Italy (192)
- 22-24 Theoretical and Applied Mechanics Congress, Haifa, Israel (191)

SEPTEMBER

- 3-4 Irish Mathematical Society meeting, Waterford, Ireland (193)
- 4-9 Homotopy Theory Conference, Gargnano, Italy (191)

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 071- 437 5377, Fax 071-439 4629, E-mail lms@uk.ac.kcl.cc.oak.
