

# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 198

October 1992

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## FORTHCOMING SOCIETY MEETINGS

**Friday 16 October 1992, Burlington House**

**Meeting on Functional Analysis**

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

**Friday 20 November 1992, Burlington House**

**Annual General Meeting**

**J.F.C. Kingman, P. Whittle**

**Friday 11 December 1992, University of Warwick**

**Memorial Meeting for Rolf Schwarzenberger**

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## ANNUAL GENERAL MEETING

The Annual General Meeting of the London Mathematical Society will be held on Friday 20th November 1992 at 3.00 p.m. at the Geological Society, Burlington House, Piccadilly, London W1V 0NL.

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

A Ballot Paper is enclosed which contains a list of those names recommended by the present Council, in accordance with By-Law I.6, for election as Officers and Members-at-Large of the Council. It should be noted that the following two Members-at-Large of Council elected for two-year terms at the last

AGM have one remaining year to serve: N. J. Hitchin, N. J. Young.

The election is (again) uncontested because no nomination from a Member of the Society was received by the Council and General Secretary by the deadline of 1st September 1992.

A Member of the Society is entitled to vote in the election by striking out on the Ballot Paper those names for which he/she does not vote. The Member must then validate the Ballot Paper both by writing his/her name legibly on it and by signing it.

The completed Ballot Paper should either be brought to the AGM or sent to "The Scrutineers, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL", to arrive at least 36 hours before the time of the AGM. An appropriate envelope is enclosed.

R. Y. Sharp  
Council and General Secretary

## ANNUAL DINNER

The 1992 Annual Dinner will be held after the Annual General Meeting on Friday 20th November at 6.30 pm for 7.00 pm at the United Oxford and Cambridge University Club, 71 Pall Mall, London SW1. The cost is £26 per

person and members may book places for guests. The booking form enclosed with this Newsletter should be returned together with payment to the London Mathematical Society office by Friday 13th November.



## ALAN PEARS

Alan Pears will finish a nine-year term as Meetings and Membership Secretary at the Annual General meeting next month. Throughout this period, he has borne a heavy administrative burden in the day-to-day running of the Society, and, in addition, has been a quiet but extremely thoughtful influence behind the development and implementation of many new activities. In his traditional role as Meetings and Membership Secretary, both members and officers have grown used to the impeccable organization which was always the hallmark of Meetings which he ran. Perhaps less well known is the fact that Alan, as secretary of Programme Committee, oversaw the very considerable expansion of the Society's Programme and Conference Fund from the late 1980's onwards. His work on this Committee, which gave modest but bureaucracy free support for a wide range of mathematical activities throughout the United

Kingdom, won the admiration of all who served with him and deserves the gratitude of the whole mathematical community. The tours of Hardy Lectures went like clockwork under Alan's guidance, and he played an important role in the introduction and implementation of the Society's new Invited Lectures series. On Council, Alan's was a progressive but practical voice, which always had a fine understanding of what the whole mathematical community in the United Kingdom felt or wanted on a major issue. His swan song has been his excellent organization of the first joint AMS-LMS Meeting, which was held in Cambridge at the end of June. But overall his contribution has been far greater than these few words summarize - he has simply been one of the major forces behind the Society over the last decade.

John Coates  
John Kingman

## LONDON MATHEMATICAL SOCIETY ANNUAL SUBSCRIPTION

The annual subscription, including publications, for the session November 1992 - October 1993 is due on 1st November 1992. Together with this Newsletter is a renewal form to be completed and returned with your remittance in the enclosed envelope. No action is required if you are already paying by Direct Debit, and do not wish to change your choice of publications. Fully complete and return the form if you are paying by Direct Debit but wish to change your choice of publications or add/delete a subscription to the European Mathematical Society. Bank accounts of members paying by Direct Debit

will be debited with the appropriate amount on 15th January 1993. Other members should either enclose a cheque (£ sterling or US\$) with their form or, if they have a UK bank account and wish to take advantage of this convenient form of payment, request a Direct Debit mandate.

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

## PUBLICATIONS PRICING POLICY

The London Mathematical Society has a pricing structure for its journals which allows individual members to purchase them at a substantial discount. These discounted prices are intended for personal use only and the journals should be kept among

your personal belongings and not deposited, even temporarily, in a library, common room or other public area. Issues of the journals should be accessible to other mathematicians or students only with your permission, given individually in each instance.

## COLLINGWOOD MEMORIAL PRIZE

This prize was established by the London Mathematical Society in memory of Sir Edward Collingwood, and is awarded annually to a student of the University of Durham obtaining First Class Honours in Mathematics

and entering a course of postgraduate study. The 1992 prize is awarded to Mr T.J. Gosling of Collingwood College who will be a research student at the University of Bath.

# **LONDON MATHEMATICAL SOCIETY**

**FRIDAY 16 OCTOBER 1992**

## **MEETING ON FUNCTIONAL ANALYSIS**

**2.00 E. Christensen (Copenhagen)**

On Hochschild Cohomology for Operator Algebras

**2.50 C.M. Edwards (Oxford)**

The Structure of  $JB^*$ -triples

**3.40 L.J. Bunce (Reading)**

The Mackey-Gleason Problem

**A General and Ordinary Meeting  
will commence at 5.00**

**A. Connes (Paris) will speak on  
Euler Products and Type III Factors**

The meetings will be held at the Geological Society  
Burlington House, Piccadilly, London W1.

All interested are very welcome.

Tea will be served at 4.30



## GRANTS IN SUPPORT OF PUBLIC UNDERSTANDING OF SCIENCE

Grants are available from The Royal Society, for new or continuing activities or initiatives directly concerned with the promotion of the public understanding of science (including mathematics). Innovative and imaginative proposals are welcome. Over one hundred grants have already been awarded for an exciting range of projects, such as science in theatre, dance and art; enhancing displays; travelling shows and open days; providing equipment and interactive exhibits; signage, labelling and leaflets; science workshops; and talks and lecture series.

Applicants are asked to show clearly how their proposal relates to the public understanding of science, to submit a statement of the financial basis of their proposal, to specify any related schemes in the area of the public understanding of science of which they are aware and to give an assurance that the

grant applied for is not for an activity in direct competition or conflict with existing schemes. Successful applicants will be required to submit a brief report after the event on how the grant was used.

All applicants must be resident in the UK. The maximum sum available for an individual grant is £3000 and allocations will often be less than this amount. The closing date for applications are 31st March and 31st October each year: late applications will be considered at the next round. Application forms are available from Dr Alison Evans, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, telephone 071-839 5561 ext. 219. The Council of The Royal Society is advised on suitable recipients for grants by COPUS (Committee on the Public Understanding of Science).

## GRESHAM COLLEGE: 1992/93 LECTURE PROGRAMME

The following Gresham College Geometry Lectures are being given during 1992/93. Each lecture, unless otherwise indicated, will last for approximately one hour, including a short period for questions. Admission to all the lectures is free without tickets. Professor Zeeman, FRS, is Gresham Professor of Geometry.

Mathematicians on the Philosophy of Mathematics. Jointly organized with the Centre for Philosophical Studies, King's College, London. Speakers include Professor Sir Michael Atiyah, PRS and Professor Sir Christopher Zeeman, FRS, Chairman Dr D.A. Gillies. Thursday 12th November 1992, 10.00 am to 5.00 pm. This event will take place in the Great Hall at King's College, Strand, London WC2.

Symmetry, Group Theory and Regular Solids, Tuesday 10th November, 5.00 pm. City

of London School, Queen Victoria Street, London EC4.

The 17 Symmetry Groups of Plane Patterns, with examples in Islamic art, Tuesday 17th November 1992, 5.00 pm. City of London School, Queen Victoria Street, London EC4.

Mathematics Applied to Dressmaking, Tuesday 9th March 1993, 5.00 pm. City of London School for Girls, Barbican, London EC2.

Eudoxus's Theory of Proportion: "The Crown of Greek Mathematics", Tuesday 4th May 1993. 6.00 pm. Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH.

Vibrating Strings and the History of the Discovery of Fourier Series, Thursday 27th May 1993, 5.00 pm. Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH.

## RAYMOND HALL

Dr Raymond Hall who was elected a member of the London Mathematical Society on

20th November 1952 died on 26th June 1992.

## LMS BACK ISSUES

Mrs Zaremba wishes to dispose of the LMS Bulletin Volumes 9 - 21 (1977-87). Telephone 0970 084329 if interested.

Professor M.S.P. Eastham has a complete

run of the LMS Journal starting at Volume 39 (1964) and ending at Volume 32 (Second Series) (1985), Nominal price. Telephone 0494 488580 if interested.



# **LONDON MATHEMATICAL SOCIETY SPITALFIELDS DAY**

**Friday 9th October  
Isaac Newton Institute  
Seminar Room 1**

- |                    |  |
|--------------------|--|
| <b>11.00</b>       | <b>Coffee</b>  |
| <b>11.30-12.30</b> | <b>S.K. Donaldson (Oxford):<br/>Yang-Mills instantons and holomorphic curves</b>   |
| <b>13.00</b>       | <b>Lunch</b>   |
| <b>14.30-15.30</b> | <b>T. Miwa (Kyoto):<br/>Quantum affine symmetry in solvable lattice<br/>models</b> |
| <b>16.00-17.00</b> | <b>D. Olive (Swansea):<br/>Conformal to integrable quantum field theory</b>        |

Anyone who is interested is welcome to attend the talks. The meeting takes place at the Institute, situated some distance from the centre of Cambridge. A light lunch will be provided at a cost of £3.50; please inform the Institute before 7th October if you wish to take this.

For further information please contact E Corrigan: The Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge CB3 0EH. Tel: 0223 335999; e-mail: [edward.corrigan@durham.ac.uk](mailto:edward.corrigan@durham.ac.uk).

# INTERNATIONAL CENTRE FOR MATHEMATICAL SCIENCES EDINBURGH

## DIRECTOR

The ICMS has been created in Edinburgh to be an international research centre of excellence covering all the mathematical sciences. It expects soon to have accommodation in 14 India Street, Edinburgh, a large, centrally situated house which was the birthplace of James Clerk Maxwell. As well as fostering mathematics and its applications the ICMS aims to support mathematicians in the developing countries on the lines laid down by ICTP, Trieste.

The scientific activities of ICMS started in April 1991 and it is now in a position to appoint its first director. The Director will be in a position to shape the future direction of ICMS as a leading international research centre.

The responsibilities are:

- Scientific leadership,
- Administrative and financial well-being of the Centre,
- Promotion of the Centre's activities.

The successful applicant will have

- A record of research at the highest level,
- Experience of developing research in an academic or industrial environment.

Well qualified applicants of any age, sex or nationality are welcomed. Consideration will be given to those who might wish to be seconded to the position.

Salary, terms and tenure will be at least comparable to those of a professor of the same age and experience.

Applications should be sent to:

Mr Frank Donald, Project Development Director, ICMS, Department of Mathematics, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS before **15 December, 1992**.

Further particulars can also be obtained by contacting him (Tel: 031 451 3256 or e-mail [icms@cara.ma.hw.ac.uk](mailto:icms@cara.ma.hw.ac.uk)).



# The Wellcome Trust

## Mathematical Biology

### Postdoctoral Research Training Fellowships Research Training Studentships

The Wellcome Trust recently introduced a scheme of support for individuals wishing to develop careers in research in the application of mathematics to biological and medical science. The Governors are anxious to stimulate research in this subject, and in particular to promote the flow of well-trained research workers into the area.

Two forms of support are available:-

**Postdoctoral Research Training Fellowships** are open both to mathematicians and to biology graduates of British or Irish universities. Mathematicians completing a PhD degree would be supported to pursue independent postdoctoral studies applying their mathematical skills to a biological or medical problem. Scientists with a doctorate in a biological subject could be supported to develop their mathematical skills in relation to their biological interests, and to pursue research at this interface. Applicants for these Fellowships should note that the Trust's remit is primarily to support research in medicine, veterinary medicine, and the related basic biomedical sciences, and that these areas of biological science will take precedence.

Prospective Fellows should apply within four years of completion of the PhD degree. **Applicants should note that these Fellowships are primarily intended for training and the development of postdoctoral skills and experience in mathematical biology, rather than to sustain the careers of those with an established research background in this discipline.** Fellowship support can be requested for any period between one and five years, and can include funding, where appropriate, to attend an MSc course on the subject, or to obtain experience at a suitable centre abroad, or both. Normally, candidates should have two sponsors, one from each of the biological and mathematical sciences, and applications should be made jointly with these supervisors whose laboratories or departments must be in the United Kingdom or Eire. The prospective Fellow will be expected to be primarily responsible for writing the application and capable of independently executing the research proposed.

The stipend and research expenses for these Fellowships will be at the Trust's usual Fellowship rate.

**Research Training Studentships** are available for graduates of British or Irish universities in any mathematical or biological subject, wishing to study for a PhD degree in the United Kingdom or Eire. Support will be available for a course lasting four years, to allow those with a mathematical training to study the biological background in the area of their PhD degree, and to allow biologists additional time to develop their mathematical skills. The subject of the doctoral research can be in any area of mathematical biology, although (as with the Fellowship scheme) medicine, veterinary medicine, and the related basic sciences will take precedence over other biological subjects.

Applications should be made jointly by the intended student and supervisor. The stipend and research expenses for these Studentships will be at the advantageous level offered to holders of Wellcome Prize Studentships.

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Applications for both these forms of support will be considered in competition, and application forms are available **until 17th October 1992 from: The Grants Section (Ref: MathBio), The Wellcome Trust, 1 Park Square West, London NW1 4LJ. Tel: 071-486 4902.**

**After 17th October 1992 from: The Grants Section (Ref: MathBio), The Wellcome Trust, 183 Euston Road, London NW1 2BE. Tel: 071-611 8438.**

**Completed applications must be returned no later than 22nd January 1993, and late applications will not be considered.** Decisions about applications in both schemes will be made by an expert panel convened for the purpose, and these decisions will be made no later than 18th June 1993. Short-listed candidates for Research Fellowships will be invited to the offices of the Trust for interview.

## The Higher Arithmetic

Sixth Edition

H. DAVENPORT

Now updated with an additional chapter on computers and number theory, this textbook introduces concepts and theorems in a way that does not require the reader to have an in depth knowledge of the theory of numbers but also touches upon matters of deep mathematical significance.

£30.00 net HB 0 521 41998 0 192 pp. 1992  
£12.95 net PB 0 521 42227 2

## Stochastic Control of Partially Observable Systems

A. BENSOUSSAN

The problem of stochastic control of partially observable systems plays an important role in many applications. Professor Bensoussan is the leading world authority on the subject and this volume will be a valuable reference to all those working in stochastic control and filtering theory.

£50.00 net HB 0 521 35403 X 360 pp. 1992

## Groups, Combinatorics and Geometry

Durham, 1990

Edited by M. W. LIEBECK and J. SAXL

This volume contains a collection of papers arising from the 1990 Durham conference, in which the progress of the decade was surveyed and new goals considered. The list of contributors is impressive and the subjects covered include many recent fascinating developments.

£27.95 PB 0 521 40685 4 512 pp. 1991

**Discount price for LMS members £20.96**

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## Mathematical Methods for CAD

J. J. RISLER

This book sets out the fundamental elements of CAD theory in a mathematically rigorous manner. Splines and Bézier curves are tackled leading to Bézier surfaces, triangulation and box splines. The final chapter is devoted to algebraic geometry and provides a firm theoretical basis for anyone wishing to develop and investigate CAD systems.

£35.00 net HB 0 521 43100 X 196 pp. 1992  
£18.95 net PB 0 521 43691 5

## Acta Numerica 1992

Edited by A. ISELES

*Acta Numerica* provides an annual compendium of the major advances in numerical mathematics, in a manner that is both timely and readable. Each volume consists of about eight articles of 30–40 pages which have been invited only from researchers of the highest calibre.

£19.95 net HB 0 521 41026 6 320 pp. 1992  
*Acta Numerica*

## Discrete Groups and Geometry

Edited by W. J. HARVEY and C. MACLACHLAN

This book constitutes the proceedings of a conference held at the University of Birmingham to mark the retirement of Professor A. M. Macbeath. The papers represent up-to-date work on a broad spectrum of topics in the theory of discrete group actions.

£22.95 PB 0 521 42932 3 256 pp. 1992

**Discount price for LMS members £17.25**

London Mathematical Society Lecture Note Series  
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# atics

## The Logarithmic Integral, II

PAUL KOOSIS

This long-awaited work shows how, from simple ideas, one can build up an investigation which explains and clarifies many different, seemingly unrelated problems. Many results here are unpublished, some are new, and some available only in inaccessible journals.

£75.00 net HB 0 521 30907 7 598 pp. 1992  
*Cambridge Studies in Advanced Mathematics 21*

Volume I is still available:

£75.00 net HB 0 521 30906 9 592 pp. 1988

## Nonlinear Systems

P. G. DRAZIN

A wide range of mathematical tools and ideas are drawn together in the study of nonlinear equations, and the results applied to diverse and countless problems in all the natural and social sciences.

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£17.95 net PB 0 521 40668 4

*Cambridge Texts in Applied Mathematics 10*

## Complex Projective Geometry

Selected Papers

Edited by G. ELLINGSRUD, C. PESKINE,  
G. SACCHIERO and S. A. STROMME

New methods for tackling a variety of questions in algebraic geometry were addressed at successive conferences held in Trieste and Bergen. This cohesive collection represents a development of the work conducted at the conferences.

£22.95 PB 0 521 43352 5 350 pp. 1992

**Discount price for LMS members £17.21**

*London Mathematical Society Lecture Note Series*  
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## DISCOUNT ORDER FORM

LMS members are entitled to a 25% discount on all Cambridge/LMS publications. To order please send this form to Tom Peacock at the address below or 'phone 0223 325970.

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## L-FUNCTIONS AND ARITHMETIC

A Programme on L-functions and Arithmetic will take place at the Newton Institute from early January until the end of June 1993, and will concentrate on all aspects, both classical and modern, of the mysterious connections between L-functions and the basic problems of arithmetic. The Organising Committee consists of B. Birch (Oxford), D. Blasius (UCLA), S. Bloch (Chicago), J. Coates (Cambridge), J-M. Fontaine (Orsay), R. Heath-Brown (Oxford), and K. Kato (Tokyo). Seminars will be held regularly throughout the Programme, and the following Workshops have been arranged:

5-10 April. Workshop on "Motives attached

to Automorphic Forms", organised by R. Taylor and D. Blasius.

12-17 April. Workshop on "L-functions and Classical Problems", organised by B. Birch and R. Heath-Brown.

21 - 26 June. Workshop on "p-adic Representations, Iwasawa Theory, and the Tamagawa Numbers of Motives", organised by S. Bloch, J. Coates, K. Kato, J-M. Fontaine.

All are welcome to attend both the Seminars and Workshops. Anyone wishing to be placed on the mailing list for the Seminars and Workshops should write to J. Coates, DPMMS, 16 Mill Lane, Cambridge CB2 1SB.

## LANGLANDS' PROGRAMME

An Instructional Course on Langlands' Programme will be held at the Newton Institute, Cambridge from 15th to 27th February 1993. The aim of Langlands' Programme is to generalise abelian class field theory to various non-abelian situations. The underlying ideas, which bring together techniques from algebraic number theory, automorphic forms, algebraic geometry, and the representation theory of Lie groups, have now reached a certain maturity after 30 years of development. The Instructional Course, which is part of the programme "L-functions and Arithmetic", will provide an introduction to these ideas for the non-expert. There will

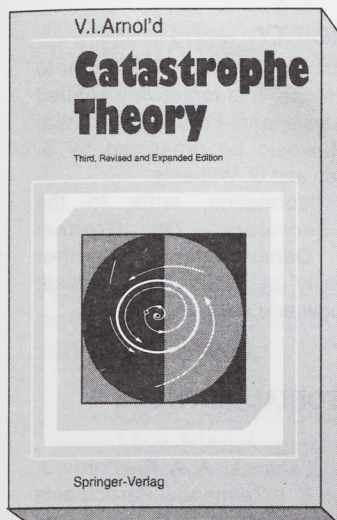
be 8 courses of 6 lectures given by J. Coates, P. Schneider, A. Scholl, M. Taylor and R. Taylor. The Institute will offer up to 10 bursaries of £300 each, towards subsistence and travel costs, for graduate students or young post-doctoral research workers in mathematics in United Kingdom universities, who wish to attend the Course. Applicants for these bursaries, which should include a CV and a letter of support from a senior mathematician, should be sent to the Deputy Director, Newton Institute, 20 Clarkson Road, Cambridge CB3 0EH by 30th October 1992. All interested are welcome to attend the Course.

## ORDINARY DIFFERENTIAL EQUATIONS AND THEIR APPLICATIONS

This is the first announcement of an International Meeting on Ordinary Differential Equations and their Applications on the occasion of the 70th birthday of Roberto Conti and Gaetano Villari. It will be held at Florence, Italy from 20th to 24th September 1993. The conference topics will centre around recent advances in: Boundary value problems; Control problems; Differential inclusions; Periodic solutions; Qualitative theory. The scientific programme will consist of eight 50-minute plenary lectures and short communications (possibly in parallel sessions). The plenary lectures will be published. The following invited speakers have agreed to lecture: Felix Albrecht (University of Illinois), Jack Hale (Georgia Institute of Technology), Lawrence Markus (University

of Minnesota), Jean Mawhin (University of Louvain - La Neuve), Czeslaw Olech (University of Warsaw) and George Sell (University of Minnesota). The registration fee before 30th April 1993 is \$160 and after is \$240. The second announcement will only be sent to people who make a request by 31st December 1992. Lodging information will be provided in the second announcement. Financial support partially to cover travel and living expenses will be available for a limited number of participants. Further information about the meeting is available by e-mail: edoa@ifiidg.bitnet, or by telephone from C. Franchetti 055-4796251, M. Cecchi 055-4796251, M. Marini 055-4796373 or G. Anichini 059-364496.





**V.I. Arnol'd**, Steklov Mathematical Institute,  
Moscow, Russia

## ***Catastrophe Theory***

To the Memory of M.A. Leontovich

Translated from the Russian by G.S. Wassermann based on a translation by R.K. Thomas

3rd rev. and exp. ed. 1992. XIII, 150 pp.

87 figs. Softcover £ 13.50

ISBN 3-540-54811-4

This well-known booklet, now in its third, expanded edition, provides an informal survey of applications of singularity theory. Readers familiar with the previous editions will find much that is new, e.g. topics like shock waves, implicit differential equations and folded singularities, and interior scattering. Three new sections give an overview of the history of singularity theory from Leonardo da

Vinci to modern times, a discussion of perestroika in terms of the theory of metamorphoses, and a list of 93 problems.

Arnol'd's goal with this edition remains the same: to explain the essence of the results and applications to readers having a minimal mathematical background. All that he asks, is that the reader have an inquiring mind.

**V.I. Arnol'd**, Steklov Mathematical Institute,  
Moscow, Russia, CIS

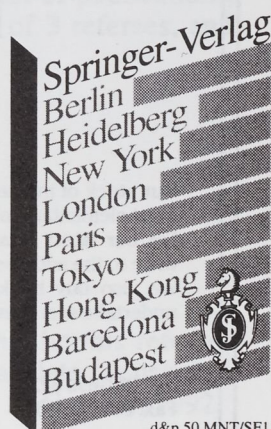
## ***Ordinary Differential Equations***

Translated from the Russian by R. Cooke

1992. IV, 334 pp. 272 figs. (Springer-Textbook)

Softcover £ 28.00 ISBN 3-540-54813-0

(Translated from the 3rd original Russian edition published by Publisher Nauka, Moscow, 1984)



Prices are subject to change without notice.

## AUSTRALIAN MATHEMATICAL SOCIETY

The 37th Annual Meeting of the Australian Mathematical Society will be held from 5th to 9th July 1993 at the University of Wollongong. The following speakers have so far (formally or informally) accepted invitations to speak: Robert F. Churchhouse (Cardiff), Jack K. Gray (AMP Sydney), Jack K. Hale (Georgia Tech), S.N. Chow (Georgia Tech), Jennifer Seberry (Wollongong), John N. Crossley (Monash) and Henrik Petersen (Odense).

A mini-conference on Analysis will prob-

ably be held from 1st to 3rd July 1993, prior to the AMS Conference. It is tentatively entitled 'Harmonic Analysis and Partial Differential Equations' and would be organised by S. Morris, R. Nilsen and G. Williams.

For further information, write to the Conference Secretary, Dr Graham H. Williams, Department of Mathematics, University of Wollongong, e-mail: [ams93@math.uow.edu.au](mailto:ams93@math.uow.edu.au).

## WORKSHOP ON GEOMETRIC AND COMBINATORIAL METHODS IN GROUP THEORY

A Workshop on Geometric and Combinatorial Methods in Group Theory will be held at the International Centre for the Mathematical Sciences, Edinburgh, from 29th March to 8th April, 1993, under the direction of a Scientific Committee of S. M. Gersten, E. Ghys, J. Howie, S. J. Pride, and A. A. Razborov. Invited speakers include G. Baumslag, M. J. Dunwoody, S. M. Gersten, E. Ghys, P. H. Kropholler, A. Lubotsky, A. J.

McIntyre, A. Yu Ol'shanski, A. A. Razborov, J. R. Stallings, and E. I. Zelmanov. Participants will have the opportunity to give contributed talks. Some support is available for UK participants. Further information from the organizers, A.J. Duncan, N.D. Gilbert and J. Howie, Department of Mathematics, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS; email [groups93@cara.ma.hw.ac.uk](mailto:groups93@cara.ma.hw.ac.uk); Fax 031 451 3249.

## KHOWARZMI AWARD

The fifth Khowarzmi Award, sponsored by the Iranian Research Organization for Science and Technology, has been awarded to Dr Qaiser Mushtaq. The award was conferred upon him by the President of

Iran for his outstanding contribution in Combinatorial Group Theory, LA-semigroup Theory and History of Mathematics. The competition was from amongst 361 scientists short listed from nineteen regional countries.

## F.E. WHITEHART

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# LEIBNIZ POST-DOCTORAL FELLOWSHIPS IN MATHEMATICS

(EC Human Capital and Mobility Programme)

Applications are invited for a number of 2 year fellowships for research in any area of mathematics, to be held at any one of the institutions in the following network:-

CRM, Institut d'Estudis Catalans, Barcelona  
Max-Planck-Institut für Mathematik, Bonn  
DPMMS or Newton Institute, Cambridge  
DMI, Ecole Normale Supérieure, Paris  
Département de Mathématiques, Orsay, Paris.

Conditions. Applicants must be citizens of a member state of the European Community or resident in the Community, be under 33 and expect to have completed a PhD or equivalent degree by 1/10/1993. Exceptionally consideration may be given to applicants who expect to finish by 1/10/1994. Applicants should propose at least 2 institutions at which they would accept appointment; each of which must be outside their country of citizenship or residence, and other than the institution at which their doctoral studies have been carried out. In all cases successful candidates will be able to take up their fellowships at the latest on 1/10/1993. Holders of the fellowships will be encouraged to spend 6 months at a second network institution. Information concerning salaries and the main mathematical interests of the various institutions can be obtained from the coordinator.

Applications. These must include a *Curriculum Vitae*, list of publications, concise description of research interests and the names of 3 referees, and should reach the coordinator

Dr. C.B. Thomas,  
Leibniz Fellows,  
DPMMS, 16 Mill Lane,  
Cambridge CB2 1SB,  
England  
Fax: 44 223 337920

by 7 OCTOBER, 1992. Each candidate must ensure that her/his referees send their reports so as to reach the coordinator by the same date. A network committee will make an initial selection of the fellows on 10 October, 1992.



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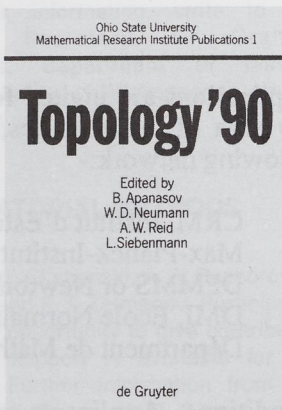
*New Series*

**Ohio State University  
Mathematical Research Institute  
Publications**

*Editors:*

**Gregory R. Baker, Walter D. Neumann, Karl Rubin**  
Columbus, Ohio, USA

This series is devoted to the publication of research monographs, lecture notes, proceedings, and other mathematical works arising from activities of the International Mathematical Research Institute at Ohio State University. The IMRI was founded in 1989 to support a program of visiting research scholars in mathematics at Ohio State and to run Workshops and Special Emphasis Programs on topics of particular importance and timeliness. The Research Semester on Low Dimensional Topology was the first major program of the Institute. In the meantime other programs have been organized and corresponding publications are in preparation.



***Volume 1: Topology '90***

**Proceedings of the Research Semester in Low Dimensional Topology at Ohio State University**

*Editors:* **Boris Apanasov, Walter D. Neumann, Alan W. Reid, Laurent Siebenmann**

1992. XII, 457 pages. 17 x 24 cm. USA, Canada, Mexico. Cloth US\$ 54.95

*All other countries:* Cloth DM 134,- ISBN 3-11-012598-6

This volume consists of contributions from participants in a Research Semester in Low Dimensional Topology which took place under the auspices of the International Mathematical Research Institute at Ohio State University from February through June 1990. The main topics of this volume include: the geometry and topology of 3-manifolds, with particular emphasis on hyperbolic 3-manifolds and their interactions with number theory; the "new" invariants of 3-manifolds related to quantum field theory; plane algebraic curves.

***Volume 2: The Arithmetic of Function Fields***

**Proceedings of the workshop at Ohio State University, June 17-26, 1991**

*Editors:* **David Goss, David Hayes, Michael Rosen**

1992. Approx. 500 pages. 17 x 24 cm. Cloth. ISBN 3-11-013171-4





John Arthur Todd (born 1908) was educated at Liverpool Collegiate School and Trinity College Cambridge. He taught first at Manchester then at Cambridge, as a Lecturer from 1937-1960 and as a Reader from 1960 - 1973. In 1937, he successfully generalised the arithmetic genus and the invariants of the canonical system on an algebraic variety to a system of invariants of every codimension. This work is the origin of the Todd genus and the Todd polynomial, named after him and much studied. He was elected to Fellowship of the Royal Society in 1948 and was the London Mathematical Society's 53rd President, from 1967 to 1969.



## 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

#### OCTOBER

- 9 Spitalfields Day, Isaac Newton Institute, Cambridge (197) (198)  
23 AGM, Edinburgh Mathematical Society, Edinburgh (197)  
24 History of Recreational Mathematics, South Bank Polytechnic, London (196)

#### NOVEMBER

- 20 Edinburgh Mathematical Society Meeting, Strathclyde (197)

#### DECEMBER

- 11 Edinburgh Mathematical Society Meeting, Edinburgh (197)

### 1993

#### JANUARY

- 15 Edinburgh Mathematical Society Meeting, Heriot-Watt (197)

#### FEBRUARY

- 7-11 Australian Applied Mathematics Conference, South Australia (197)  
12 Edinburgh Mathematical Society Meeting, Edinburgh (197)

#### MARCH

- 12 Edinburgh Mathematical Society Meeting, Stirling (197)  
29-1 Apr British Mathematical Colloquium, Reading

#### MAY

- 7 Edinburgh Mathematical Society Meeting, Aberdeen (197)  
29 Edinburgh Mathematical Society Meeting, St Andrews (197)

#### JUNE

- 29-2 July Number Theoretic and Algebraic Methods in Computer Science, Moscow, Russia (197)

#### JULY

- 5-9 14th British Combinatorial Conference, Keele (188)  
12-16 Combinatorial Mathematics and Combinatorial Computing Conference, Adelaide, Australia (189)  
12-16 Algebraic Graph Theory, ICMS, Edinburgh (197)  
26-30 Randomness and Computation Workshop, Edinburgh (197)

#### AUGUST

- 17-20 The Mathematical Heritage of Sir William Rowan Hamilton, Dublin, Ireland (193)  
18-22 Differential Equations, Plovdiv, Bulgaria (197)

#### SEPTEMBER

- 6-9 Bubble Dynamics and Interface Phenomena Conference, Birmingham (188)

### 1994

#### AUGUST

- 3-11 International Congress of Mathematicians 1994, Zurich, Switzerland (189) (197)

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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.

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