# THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

**No.153** **September 1988**

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.

## FORTHCOMING SOCIETY MEETINGS

Friday 21 October 1988, Burlington House
Meeting on Differential Geometry
N.J. Hitchin, S.M. Salamon, M. Gromov
Friday 18 November 1988, Royal Society
Annual General Meeting

## 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 1988 prize is awarded to Mr J.R. Ellis of the College of St Hild and St Bede who will be a research student at the University of Durham.

## VISITORS TO THE UNITED KINGDOM

The Council has agreed that overseas mathematicians spending a term or more at a United Kingdom institution in the next academic year shall receive complimentary issues of the Society's Newsletter throughout the year. Mathematics Departments will be asked later this month to supply lists of visitors expected in the coming academic year. These lists will be published in the November Newsletter and those named will be added to the mailing list for the Newsletter for the year.

A.R. Pears
Meetings & Membership Secretary

## LEV S. PONTRJAGIN

Professor Lev S. Pontrjagin who was elected an Honorary Member of the London Mathematical Society on 20 November 1952 died in April 1988.

## JOHN D. BAUM

Professor John D. Baum who was elected a reciprocity member of the London Mathematical Society on 19 November 1964 died on 17 November 1987 at the age of 67.

## SECONDS ENTRETIENS DU CENTRE JACQUES–CARTIER

The 'Seconds Entretiens du Centre Jacques-Cartier' will be held at the University of Montreal from 12 to 15 October 1988. The title of the colloquium is 'Les Mathématiques Discrètes et l'Informatique Fondamentale: l'Interface'. Further information can be obtained from A. Achache, I.S.M., Université Claude Bernard, Lyon 1, France.

# CENTENNIAL MEDAL FOR THE AMERICAN MATHEMATICAL SOCIETY



To commemorate the Centenary of the American Mathematical Society the Council of the LMS, on behalf of the Society, has presented a gold medal to the AMS.

The photographs show the actual size of the medal: on the front is the logo of the AMS, and on the back is an inscription to mark the occasion. The front is enamelled in translucent venetian red and chartreuse green, so that the name "American Mathematical Society" stands out in gold against the red, and so that the picture of Plato's academy with its legendary inscription "ΑΓΕΩΜΕΤΡΗΤΟΣ ΜΗ ΕΙΣΙΤΩ" (let no one unskilled in geometry enter here) stands out in gold against the green. The medal was designed and made by the jeweller and enameller Rosemary Zeeman whose initials can be seen on the back to the left of the gold mark; and engraver was John Salt, whose initials can be seen to the right of the gold mark. The medal has a small ribbon for wearing around the neck, so that it can be worn by the President of the AMS on formal occasions.

The medal was presented to the President of the AMS, Professor G.D. Mostow, by the President of the LMS, Professor E.C. Zeeman, at the opening ceremony of the AMS Centennial Celebration Conference at Providence, Rhode Island on 8th August 1988.

The AMS traces its origins to the influence of the LMS upon Thomas Scott Fiske who spent part of 1887-88 at Cambridge University and, upon his return to Columbia College in 1888, founded and was the first secretary of the New York Mathematical Society, which then became the American Mathematical Society six years later.

AMS President, Professor G.D. Mostow being presented with the medal by the LMS President, Professor E.C. Zeeman at the Opening Ceremony of the AMS Centennial Celebration on Monday 8th August 1988.

## CHANGES IN SCHOOL MATHEMATICS

The Council of the Society has set up a Committee (comprising P.M. Cohn (Chairman), R.L.E. Schwarzenberger, E.C. Lance and D.A. Brannan) to investigate what changes university departments envisage in their curriculum in a couple of years' time when students who have passed through the proposed GCSE - A level pairing will be entering the universities. The Committee has circulated a brief questionnaire to Heads of Departments, asking for an idea of their plans. Members of the Society are also invited to send their comments, to any member of the Committee - to arrive by 15th October, if possible, please.

D.A. Brannan.

## ELECTRONIC MAIL

This note is for those unaware of electronic mail (or e-mail) facilities provided through mainframe computers at each university in the country. These computers allow their users to send messages to each other. The linking up of computers in Britain allows messages to be sent quickly and freely within and between universities both in Britain (via the Joint Academic Network or JANET) and abroad (via a range of networks serving different regions; e.g. the European Academic Research Network or EARN serves Europe, US, the Middle and Far East). No knowledge of computing beyond logging in and typing in the simplest commands is needed. E-mail combines the convenience of ordinary mail, in that the recipients do not have to be at their address, with the speed of the telephone. A message can arrive within minutes inside Britain and within hours abroad. Moreover e-mail is free. In the future e-mail sent abroad might entail a small charge but for technical reasons it should apparently never be expensive.

There are some similarities with a telephone system. To receive an e-mail message only requires logging on to a computer and typing in a couple of elementary commands. To send a message by e-mail to an individual using the same computer, only a couple more commands and the username of the recipient of the message will be needed. For recipients elsewhere, the e-mail address of the institution will be needed as well. For institutions abroad, the analogue of 010 and the address of the country also have to be included. Just as dialling a telephone number, these addresses and usernames must be typed in correctly. Unfortunately the way of telling the computer to send mail varies from place to place and it is essential to consult the local Computing Service.

There is no standard form for the username nor is there at present anything like a national directory. However the Name Registration Scheme (NRS) means that each computer in each institution in the country has a standard address. For example York's is UK.AC.YORK.VAXA (United Kingdom ACademic; VAXA is the name of the computer). E-mail addresses and usernames should appear on letterheads and it is possible that in the future the LMS will produce a directory of e-mail addresses.

E-mail relies on the usual qwerty keyboard so that, apart from those that can be created on a typewriter, mathematical formulae cannot be sent straightforwardly (the symbols have to be encoded by a system such as TeX). Incidentally, papers for American Mathematical Society journals and reviews for Maths Reviews can be sent electronically if they are prepared in AmSTeX (details are given in Notices of the AMS 34 (1987), (906-907). One of the briefs of the EUROMATH Committee is to promote standardisation of these systems in Europe.

Many facilities are available given the investment of a little time. For instance Catherine Wattebot (CEH@UK.AC.WARWICK.MATHS) at the Nonlinear Systems Laboratory, Mathematics Institute, Warwick University uses e-mail to send news of visitors, lectures and up-to-date seminar programmes to anyone interested who sends them their username and address. Electronic Bulletin-boards are another facility; Professor Vámos, Department of Mathematics, University of Exeter (VAMOS.P@UK.AC.EX) is compiling information about these (see LMS Newsletter July 1988, No 152). Also it is possible to type a single message, say about a conference programme, to each intended participant, or to send files of text, such as this notice, to the members of say the EUROMATH Committee with no more effort than sending it to one.

Anyone intending to use e-mail should obtain the relevant user guides and documentation from their Computing Service. In fact anyone starting to use e-mail and who is not familiar with computers should if possible get an expert to help them through the initial stages. Commands are not standard but vary from place to place and cannot be described here. They are however simple and easy to master and it will be found that e-mail is a very quick and convenient means of communication.

M M Dodson
Department of Mathematics
University of York
York YO1 5DD
(MMD1@UK.AC.YORK.VAXA)

## MATHEMATICAL METHODS AND MODELS IN CHEMISTRY AND BIOLOGY

From September 19 to October 8 an intensive research programme on Mathematical Methods and Models in Chemistry and Biology will be held at the Scuola Normale Superiore, Department of Mathematics, Pisa, Italy. All interested mathematicians are invited to attend and in particular young researchers.

The programme will consist of intensive series of lectures, seminars, short visits of leading mathematicians, discussion of open problems, scientific collaboration between participants and introduction to the subject for beginners, as well as other informal research activites. Very limited funds will be available. Young researchers, both from Italy and abroad are encouraged to apply.

For further information contact Professor Luciano Modica, Dipartimento di Matematica, Universita di Pisa, Via F. Buonarroti 2, Pisa, Italy; electronic mail DIPARMAT@ICNUCEVM; telephone (39) (50) 599500.

## THE JOURNAL OF INTEGRAL EQUATIONS AND APPLICATIONS

The Journal of Integral Equations and Applications is a continuation of the "Journal of Integral Equations", and will be devoted to the theory, applications and numerical analysis of integral equations of all types. The primary aim of this international journal is to publish high-quality research papers in the area of integral equations and their applications.

The editors of the Journal of Integral Equations and Applications will be P.M. Anselone, Oregon State University; and M.Z. Nashed, University of Delaware. The institutional subscription price will be US$150.00 (rates for individual subscriptions available upon request). Enquiries and orders should be directed to the Rocky Mountain Mathematics Consortium, Department of Mathematics, Arizona State University, Tempe, AZ 85287-1904, U.S.A. (phone 602-965-3788).

## ROYAL SOCIETY NEWS

The Council of the Royal Society has made the following awards to members of the London Mathematical Society:

The Copley Medal to Sir Michael Atiyah, FRS, in recognition of his fundamental contributions to a wide range of topics in geometry, topology, analysis and theoretical physics.

The Michael Faraday Award, for the furtherance of the public understanding of science to Professor E.C. Zeeman, FRS, in recognition of his unique ability to convey the essence and elegance of mathematics to non-mathematicians through the simple elegance of his lectures, writing, and radio and television appearances.

The Sylvester Medal to Professor C.T.C. Wall, FRS, in recognition of his contributions to the topology of manifolds and related topics in algebra and geometry.

Professor Vladimir Igorevich Arnold, an Honorary Member of the London Mathematical Society was elected a Foreign Member of the Royal Society.

## WHAT MATHEMATICS FOR COMPUTER SCIENTISTS?

A one-day meeting, to discuss those areas of mathematics most appropriate for a modern undergraduate curriculum in computer science, will be held in the Department of Computer Science, University of Manchester, on Friday 16 December 1988. The speakers are: W.M. Holcombe (Sheffield); A. Ralston (SUNY at Buffalo); C.A.R. Hoare, FRS (Oxford). A panel discussion will be chaired by D.J. Cooke (Loughborough).

Those wishing to attend should write, preferably before 16 November, to Dr B. Banieqbal, Department of Computer Science, University of Manchester, Oxford Road, Manchester M13 9PL, enclosing a registration fee of £15 (cheques made payable to University of Manchester). This fee will cover lunch and refreshments.

A limited amount of University accommodation is available for those wishing to stay overnight on Thursday, 15 December. The cost will be £12 for bed and breakfast, and this should be paid at the time of application. It is expected that there will be a dinner on Thursday evening. The meeting is receiving financial support from the London Mathematical Society.

## INTERNATIONAL CONFERENCE ON COMPUTING AND INFORMATION

An international conference on Computing and Information will be held from 23 to 27 May 1989. It will be an international forum for presentation of new results in research, development, and applications in computing and information. The organizers expect both practitioners and theorists to attend. Mathematicians are particularly encouraged to participate in the event. Case studies, survey papers and position papers which reflect the joint interest of science and industry are welcome.

For further information contact Dr W.W. Koczkodaj, ICCI Secretary, Laurentian University, CoSc, Sudbury, Ontario, Canada P3B 3X8; E-mail ICCI@LAUVAX01.BITNET; Fax (705)673-6532.

## MATHEMATICS-PARTICLE PHYSICS INTERFACE

A conference on Mathematics-Particle Physics Interface, organized by the Institute of Mathematics and its Applications, will be held at the Mathematical Institute, University of Oxford from 12 to 14 September 1988. Speakers will include, L. Alvarez-Gaumé (Boston and CERN); M.F. Atiyah (Oxford); A. Connes (I.H.E.S.); S.K. Donaldson (Oxford); P. Goddard (Cambridge); S.K. Narain (CERN); R. Penrose (Oxford); D.G. Quillen (Oxford); A. Rogers (King's London); G.B. Segal (Oxford). P. Townsend (Cambridge) and S.T. Tsou (Oxford).

The conference fee is £50.00 for members of the IMA, and £65.00 for non-members, to include lunches, coffee and tea. The residential fee is £60.00 at St Anne's College for Monday and Tuesday nights. Further information can be obtained from Dr S.T. Tsou, Mathematical Institute, 24-29 St Giles, Oxford OX1 3LB. Tel (0865) 273527; Janet: TSOU@UK.AC.OXFORD.VAX; Bitnet: TSOU%UK.AC.OXFORD.VAX@UKACRL.BITNET.

## JOURNAL BACKLOG 1988

| | No. of Issues | No. of Pages | Backlog | Estimate |
|---|---|---|---|---|
| Math Proc. Camb | 6 | 1200 | 240 | 9-12 |
| Edinburgh Math Society | 3 | 470 | 160 | 14-18 |
| Glasgow Math Journal | 3 | 360 | 100 | 12-16 |
| L.M.S. Bulletin | 6 | 624 | 100 | 10-12 |
| Journal | 6 | 1152 | 300 | 14-17 |
| Proceedings | 6 | 1250 | 200 | 15-18 |
| Mathematika | 2 | 300 | 30-50 | 6-12 |
| Oxford Q.J.M. | 4 | 512 | 128 | 12-18 |
| R.S. Edin. Proc. A | 6 | 1080 | - | 8-12 |

## RECIPROCITY AGREEMENTS

The London Mathematical Society has reciprocity agreements with a number of Mathematical Societies. Further details and application forms may be obtained from the addresses shown below.

American Mathematical Society
PO Box 6248, Providence, RI 02940, U.S.A.

Australian Mathematical Society
Dr B.D. Jones, Department of Mathematics, University of Queensland, St. Lucia, Qld 4067, Australia.

Societé Mathématique de Belgique
c/o Professor G. Hirsch, Avenue Charles Woeste 317-Bte 11, B-1090 Brussels, Belgium.

Canadian Mathematical Society
577 King Edward, Suite 109, Ottawa, Ontario, Canada K1N 6N5.

Dansk Matematisk Forening
H.C. Orsted Institut, Universitetsparken 5, DK 2100 København Ø, Denmark.

Deutsche Mathematiker Vereinigung
J. Flum, Alberstrasse 24, 7800 Freiburg, Federal Republic of Germany.

Societé Mathématique de France
B.P. 126-05, 75226 Paris Cedex 05, France

Indian Mathematical Society
S.P. Arya, General Secretary, Dept of Mathematics, Maitreyi College, Bapu Dham Complex, Chanakyapuri, New Delhi 110 021, India.

Unione Matematica Italiana
Professor P.L. Papini, The Secretary, Dipartimento di Universita, Piazza Porta S. Donata 5, 40127 Bologna, Italy.

New Zealand Mathematical Society
Dr D.R. Breach, The Secretary, NZMS, Dept of Mathematics, University of Canterbury, Private Bag, Christchurch, New Zealand.

Nigerian Mathematical Society
c/o Professor J.O.C. Ezeilo, Dept of Mathematics, University of Nigeria, Nsukka, Nigeria.

Norsk Matematisk Forening
Matematisk Institutt, PO Box 1053, Blindern, N-0316 Oslo 3, Norway.

South East Asian Mathematical Society
Lim Chong Keang, President, SEAMS, Dept of Mathematics, University of Malaya, Kuala Lumpur, Malaysia.

Svenska Matematikersamfundet
Secretary, Matematiska Institutionen, Umea Universitet, S901 87 Umea, Sweden.

Wiskundig Genootschap
Membership Department, University of Utrecht, Postbus 80010, 3508 TA Utrecht, The Netherlands.

# THE UNIVERSITY OF ADELAIDE
# SOUTH AUSTRALIA

**invites applications from both women and men for the following position:**

## PROFESSOR OF MATHEMATICAL PHYSICS
## (Tenurable)

(Ref: 1516) in the DEPARTMENT OF PHYSICS AND MATHEMATICAL PHYSICS. The appointment follows the retirement of Professors H.S. Green, F.A.A. and C.A. Hurst, F.A.A. and is available from June 1989. The Department was formed from the Departments of Physics and Mathematical Physics by the amalgamation of the two Departments on 1 January 1988. The new Department is responsible for the teaching of physics and theoretical physics in the Faculty of Science and mathematical physics in the Faculty of Mathematical Sciences. The Department teaches undergraduate physics subjects to physics majors and Honours students and has a substantial responsibility for teaching physics to the professional faculties and to other departments in the faculties of Science and Mathematical Sciences.

The current research interests of the Department are atmospheric physics, cosmic rays and high energy astrophysics, mathematical physics, physical archaeometry, theoretical nuclear and particle physics and ultra-violet physics. There are two other Professors in the Department, Professors J.R. Prescott and A.W. Thomas.

The new professor will be expected to contribute to the academic leadership of the whole Department but will have a particular responsibility for teaching subjects in the discipline of mathematical physics in second, third and Honours year, leading to degrees in the Faculty of Mathematical Sciences. The new professor will be expected to promote and extend a strong programme of research and postgraduate studies within the new Department, and in Cooperation with other Departments, particularly in the Faculty of Mathematical Sciences. A commitment to excellence in teaching and research is expected.

Further information concerning the duties of the position may be obtained from Dr L.R. Dodd, telephone (618) 228 5113.

It is University policy to encourage women to apply for consideration for appointment to tenurable academic appointments. Holders of full-time tenured or tenurable academic appointments have the opportunity to take leave without pay on a half time basis for a specific period of up to ten years where this is necessary for the care of children.

**INFORMATION** about the general conditions of appointment may be obtained from the Senior Assistant Registrar (Personnel) at the University.

**SALARY per annum:** AUS$59,183 per annum (subject to second tier wage increase)

**APPLICATIONS, IN DUPLICATE,** quoting reference number 1516 and giving full personal particulars (including whether candidates hold Australian permanent residency status), details of academic qualifications and names and addresses of three referees should reach the Senior Assistant Registrar (Personnel) at the University of Adelaide, GPO Box 498, Adelaide, South Australia, 5001, Telex UNIVAD AA 89141/FAX No. (618) 224 0464 not later than 30 September 1988.

The University reserves the right to make enquiries of any person regarding any candidate's suitability for appointment, not to make an appointment or to appoint by invitation.

THE UNIVERSITY OF ADELAIDE IS AN EQUAL OPPORTUNITY EMPLOYER.

# UNIVERSITY OF GLASGOW
# CHAIR OF MATHEMATICS

Applications are invited for appointment to the Chair of Mathematics, which was founded in 1691 and is one of the three established Chairs presently extant in the department. The appointment will be tenable from 1st January, 1989, or as soon as possible thereafter. The successful candidate will be expected to provide academic leadership in both research and teaching. Preference may be given to candidates with research interests in analysis, but other areas compatible with current research in the Department will also be considered.

The stipend will be on the professorial scale.

Further particulars may be obtained from the Academic Personnel Office, University of Glasgow, Glasgow G12 8QQ, (Tel. 041-339 8855), where applications (3 copies; 1 copy in the case of overseas applicants), giving the names and addresses of three referees, should be lodged on or before 1st October, 1988.

# 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 1989, for research in Pure Mathematics. Preference will be given to candidates working in an area of Discrete Mathematics, such as Combinatorics and Graph Theory, Algebra or Number Theory. The scale of stipends is from £10460 at age 25 to £16345 at age 35. In addition, the Fellow will hold a part-time consultancy at GCHQ, Cheltenham, for two months each summer, with a supplementary stipend of £2000 a year. Funding will also be available from GCHQ up to £2000 per year for travel expenses. Appointment is restricted to British Nationals who are children of British Nationals or Commonwealth citizens, and the successful candidate must satisfy positive vetting before appointment.

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 7th October 1988.

## L.M.S. PUBLICATIONS

*Model Theory and Modules by M. Prest.*

In recent years the interplay between model theory and other branches of mathematics has led to many deep and intriguing results. In this, the first book on the topic, the theme is the interplay between model theory and the theory of modules. The book is a self-contained introduction to the subject and introduces the requisite model theory and module theory as it is needed.

Both algebraists and logicians will enjoy this account of an area in which algebra and model theory interact in a significant way. The book includes numerous examples and exercises and consequently will make an ideal introduction for graduate students coming to this subject for the first time.

LMS Lecture Note Series No. 130. LMS members discount price £16.88.

*Whitehead Groups of Finite Groups by Robert Oliver.*

This book's aim is to make accessible techniques for studying Whitehead groups of finite groups, as well as a variety of related topics such as induction theory and p-adic logarithms. Until now, most of the results have been available only in the research literature, and in a form suited only for experts.

The author has included a lengthy introduction to set the scene for non-specialists who want an overview of the field, its history and its applications. The rest of the book consists of three parts: general theory, group rings of p-groups and general finite groups. The book will be welcomed by specialists in K- and L-theory and by algebraists in general as a state-of-the art survey of the area.

LMS Lecture Note Series No. 132. LMS Members discount price £14.63.

*Linear Algebraic Monoids by Mohan S. Putcha.*

This book provides an introduction to the new and emerging field of linear algebraic monoids. This subject represents a beautiful synthesis of ideas from the theory of algebraic groups, algebraic geometry, matrix theory and abstract semigroup theory. Since every representation of an algebraic group gives rise to an algebraic monoid, the objects of study do indeed arise naturally.

The basic results in the subject have now been obtained and these are presented clearly in this book. At the same time, the subject is still in the developing stages, thereby providing an excellent opportunity for graduate students as well as established researchers to do fundamental research. For this reason, an extensive bibliography is included. This book is self-contained and as such the prerequisites are minimal.

LMS Lecture Note Series No. 133. LMS discount price £11.25.

*Automorphisms of Surfaces After Nielson and Thurston by A. Casson and S. Bleiler.*

This book, based on courses taught at the University of Texas, is an introduction to the applications of hyperbolic geometry to low-dimensional topology. In particular it provides a concise exposition of the work of Nielson and Thurston on the automorphisms of surfaces. It is accessible to anyone with a knowledge of basic algebraic topology and will be an invaluable introduction to the more advanced literature.

LMS Student Texts No. 9. LMS discount price, hard cover £15.00, paperback £5.63.

These books have recently been published and are available from Cambridge University Press, Customer Services Department The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU.

## GRANTS IN SUPPORT OF PUBLIC UNDERSTANDING OF SCIENCE

Grants are available for new or continuing activities or initiatives directly concerned with the promotion of the public understanding of science (including mathematics, technology and engineering). Applications should be made as soon as possible on forms obtainable from the Executive Secretary (Ref:ASB), The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG. (Tel:01-839 5561, ext 219).

Applicants will be 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.

All applicants must be resident in the UK. The maximum sum available for an individual grant is £2500 and allocations will often be less than this amount. The closing date for applications is *1 December 1988*: late applications cannot be considered.

The Council of the Royal Society is advised on suitable recipients for grants by the Committee on the Public Understanding of Science (COPUS).

# DEPARTMENT OF MATHEMATICS THE UNIVERSITY OF WESTERN ONTARIO

Applications or nominations are invited for the position of Chairman, Department of Mathematics, Faculty of Science. The effective date of the appointment is July 1,1989.

Applications or nominations should be addressed to:

Dr W.S. Fyfe,
Dean,
Faculty of Science
Natural Sciences Centre,
The University of Western Ontario,
London, Ontario, Canada. N6A 5B7.

Applications or nominations should be submitted by January 1, 1989. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

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# WARWICK SYMPOSIUM ON SINGULARITY THEORY & ITS APPLICATIONS 1988-9

All events take place in the Mathematics Institute

Dec.13-15, 1988 Introductory talks on Singularity Theory and applications (aimed at non-specialists).

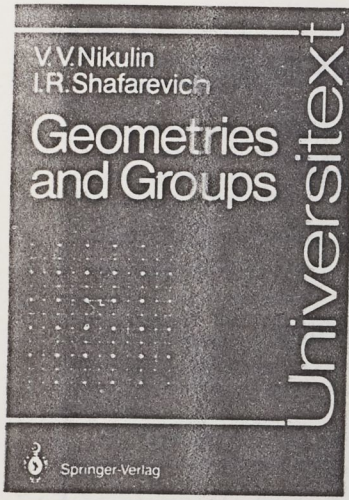
J. Damon (Chapel Hill, North Carolina)*Mather theory - infinitesimal conditions for stability, determinacy and versality.* C.T.C. Wall (Liverpool): *Algebraic geometry in singularity theory.* J.W. Bruce (Newcastle): *Applications of singularity theory to differential geometry.* I.N. Stewart (Warwick): *Singularities in bifurcation theory.*Each speaker will give three talks.

April 17-21, 1989 Workshop on algebraic and anaytic geometry aspects of singularity theory.

July 10-14 Workshop on dynamics, bifurcations and singularity theory. Includes London Mathematical Society Spitalfields Lectures (three lectures given by symposium participants to a general mathematical audience).

There will also be a programme of seminars throughout the year. We expect most activity in the Symposium to take place between March and mid-August, 1989.

*For further information please contact any of the following; David Mond, Mark Roberts or Ian Stewart, Mathematics Institute, University of Warwick, Coventry CV4 7AL*




**V. V. Nikulin, I. R. Shafarevich**

# Geometries and Groups

Translated from the Russian by M. Reid

Universitext

Springer Series in Soviet Mathematics

1987. 159 figures. VIII, 251 pages. Soft cover £ 20.00.
ISBN 3-540-15281-4

**Contents:** Forming geometrical intuition; statement of the main problem. – The theory of 2-dimensional locally Euclidean geometries. – Generalisations and applications. – Geometries on the torus, complex numbers and Lobachevsky geometry. – Historical remarks. – List of notation. – Index.

This is a quite exceptional book, a lively and approachable treatment of an important field of mathematics given in a masterly style. Assuming only a school background, the authors develop locally Euclidean geometries, going as far as the modular space of structures on the torus, treated in terms of Lobachevsky's non-Euclidean geometry. Each section is carefully motivated by discussion of the physical and general scientific implications of the mathematical argument, and its place in the history of mathematics and philosophy. The book is expected to find a place alongside classics such as Hilbert and Cohn-Vossen's "Geometry and the imagination" and Weyl's "Symmetry".

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## Order Form

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☐ V. V. Nikulin; I. R. Shafarevich: **Geometries and Groups**
1987. Soft cover £ 20.00. ISBN 3-540-15281-4

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Charles Watkins Merrifield (1827-1884) originally trained as a lawyer but never practised, becoming instead an Examiner at the Education Department. He was elected to the Royal Society in 1863, and in 1867 he became Vice-President of the newly-established Royal School of Naval Architecture. An expert on the evaluation of tables and interpolation methods, he served on a committee evaluating Babbage's Analytical Machine and was active in the Association for the Improvement of Geometrical Teaching. He was the Society's eighth President, from 1878-1880.

## DIARY

The diary lists Society meetings and other events publicised in previous issues of the Newsletter.

**1988**

| | |
|---|---|
| SEPTEMBER | |
| 1–3 | History of Mathematics, Leicester (150) |
| 5–8 | Undergraduate Mathematics Teaching Conference, Nottingham (150) |
| 5–23 | Dynamical Systems, Italy (152) |
| 12–14 | Many-sorted Logic and Its Application in Computer Science, Leeds (151) |
| 16–19 | Physical Interpretation of Relativity Theory, London (143) |
| 18–24 | Formal Systems for A1, Glasgow (152) |
| 19–23 | International Colloquium on Differential Geometry, Spain (146) |
| 21–22 | British Topology Meeting, Manchester (149) |
| 25–30 | René Thom – International Symposium, France (147) |
| OCTOBER | |
| 19–20 | Fractals in the Natural Sciences, The Royal Society, London (144) |
| 21 | LMS Meeting, London |
| 31–18 Nov | Mathematical Ecology, Italy (152) |
| NOVEMBER | |
| 18 | LMS Annual General Meeting, London |
| 21–16 Dec | Global Geometric and Topological methods in Analysis, Italy (152) |
| DECEMBER | |
| 8–9 | Physics and Mathematics of Strings, The Royal Society, London (144) |

**1989**

| | |
|---|---|
| JANUARY | |
| 9–27 | Theoretical Fluid Mechanics and Applications, Italy (152) |
| APRIL | |
| 3–7 | British Mathematical Colloquium, Nottingham |
| 17–28 | Hyperbolic Geometry and Ergodic Theory, Italy (152) |
| JUNE | |
| 14–16 | Nonlinear Control Systems Design, Italy (150) |
| JULY | |
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