

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No.147

February 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 W1V 0NL) to arrive before the first day of the month prior to publication.

FORTHCOMING SOCIETY MEETINGS

Friday 19 February 1988, Leeds

(K.A. Brown, J.C. McConnell)

Friday 18 March 1988, Scientific Societies Lecture Theatre

(J.H. van Lint, F.C. Piper)

Thursday, Friday 19-20 May 1988, Cardiff

Friday 17 June 1988, Burlington House

Friday 21 October 1988, Burlington House

Friday 18 November 1988, Royal Society

WILLIAM MORGAN SHEPHERD

Professor William Morgan Shepherd who was elected a member of the London Mathematical Society on 10 January 1929 died on 24 November 1987 at the age of 81. In 1935 he was appointed lecturer in Mathematics at Bristol University. In

1949 he became head of the newly created Department of Theoretical Mechanics, later renamed Engineering Mathematics. He retired from the chair of Theoretical Mechanics in 1971.

NUMERICAL MATHEMATICS

An International Conference on Numerical Mathematics will be held at the National University of Singapore from Tuesday 31 May to Saturday 4 June 1988.

To-date, overseas speakers who will deliver one-hour survey talks and 30 minute talks include: Ascher U.M., Babuska I., Baker C.T.H., Brezinski C., Bulirsch R., Butcher J.C., Butzer P.L., Chien W.C., Collatz L., Elliot C.M., Erdos P., Gatteschi L., Glowinski R., Goovaerts M.J., Gradimir V.M., Grunbaum A., Hansen P.C., Iserles A., Kress R., Lakshmikantham V., Lambert J.P., Mattheij R.M.M., Meyer G.H., Micchelli C., Mori M., Nashed M.Z., Nickel K., Niethammer D.W., Parlett B.N., Rall L.B., Russell R.D., Sloan I.H., Smale S., Stanton R.G., Stetter H.J., Thomee V., Twizell E.H., Yamamoto T., You Z.Y., van der Houwen P.J.

There will be sessions for short oral (15 min-

ute)/poster presentations of contributed papers on topics related to numerical mathematics. Many contributors have already sent in their abstracts. Some vacant slots are still available. The proceedings of the Conference will be published.

February 28th is the deadline for abstracts, registration forms and hotel reservation forms. May 1st for manuscripts.

The registration fee is S\$100/US\$50. The fee for members of the Department of Mathematics, NUS, the Singapore Mathematical Society or the Southeast Asian Mathematical Society is S\$50/US\$25. Full time students S\$30/US\$15.

For further information contact the Secretary I.C.N.M.S., Department of Mathematics, National University of Singapore, Kent Ridge, Republic of Singapore 0511. Electronic mail MATRAVIP @ NUSVM.BITNET.

GROUPS IN GALWAY 88

The tenth anniversary of Groups in Galway will be celebrated at the 1988 meeting, which takes place from lunch-time on Thursday May 26 to mid-afternoon on Saturday May 28. The programme will involve a number of lectures by invited speakers (including L. Kovacs and M.F. Newman of ANU, Canberra) on Group Theory and related topics.

There will also be some time available for short contributions and informal sessions.

The conference fee will be IR£10, and prospective participants should write to the organiser, Dr J. McDermott, Groups in Galway 88, Mathematics Department, University College, Galway, Ireland.

IN SEARCH OF EXCELLENCE

The Annual Conference of the Higher Education Group of the Higher Education Foundation will be "In Search of Excellence", taking place at St Anne's College, Oxford from 25-28 March 1988.

This Conference aims to bring together those who have concern for the development of excellence - academic and non-academic. The speakers are chosen to examine the concept from a variety of professional viewpoints and thus critically examine the ideas of intellect and personal development which inform the practice of higher education.

The speakers are: Patrick Coldstream, Director, Council for Industry & Higher Education 'Excellence in a Human Being'; Tony Nuttall, Fellow, New College, Oxford 'Academic Excellence: a Response'; Neil Spurway, Senior Lecturer in Physi-

ology and Sports Science, Glasgow University 'The Sporting Analogue'; Dame Janet Baker 'Performance: Artistic Excellence'; Graham Ashworth, CBE, Director General, Keep Britain Tidy Group, 'The Planner Between Two Worlds'; Frank Tijou, Partner, Trojan Management Search Consultants 'Hunting Heads: The Selection and Direction of Excellence'; Majorie Reeves, FBA Honorary Fellow St Anne's College, Oxford 'Excellence for Everybody' and Sir Geoffrey Warnock, Principal of Hertford College, Oxford 'Critical Thinking & Creativity'.

The registration fee is £40. Full board £65. Booking form available from Dr John Gray, Secretary HEF, The Malthouse, 60 East Saint Helen Street, Abingdon, Oxford OX14 5EB. Telephone 0235-20458.

LONDON MATHEMATICAL SOCIETY POPULAR LECTURE VIDEOS

The following annual LMS Evening of Popular Lectures have been video-taped and are available for hire or sale in VHS format:

Brown, R.	How mathematics gets into knots
Hodges, W.A.	Games that solve problems
Ledermann, W.	The rise and fall of matrices
Piper, F.C.	Codes and ciphers
Maynard Smith, J.	Games animals play
Zeeman, E.C.	Geometry and perspective

All enquiries to Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL. Please enclose £5 for hire charge.

We wish to purchase runs and odd Nos of: Sphinx, Revue Mensuelle des Questions Recreatives, Bruxelles, 1931-39, Journal of Recreational Mathematics, 1968-. Recreational Mathematics Magazine, 1961-64, Sphinx-Oedipe, Nancy, 1906-1932. Mathematical Pie, 1950 -. All books published in the series "Librairie du Sphinx" Bruxelles, Rouse-Ball, W.W. "Mathematical Recreations and Essays" all editions from the first (1891) to 11th (1939). Also mathematical books of all kinds from very elementary to advanced texts. Also biographies of mathematicians and physicists.

We also sell books in this field, indeed, we specialise in mathematics and will be pleased to receive your list of books wanted and to send you our current catalogue sent post free on request.

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LONDON MATHEMATICAL SOCIETY

K.A.Brown (Glasgow)

THE ARTIN-REES LEMMA: ITS DEATH AND REINCARNATION IN NOETHERIAN RING THEORY

J.C.McConnell (Leeds)

COMMUTATIVE AND NONCOMMUTATIVE NOETHERIAN RINGS – SOME INTERACTIONS

FRIDAY 19 FEBRUARY 1988 AT 3.30 p.m.

The meeting will be held in
**Lecture Theatre 14,
Roger Stevens Building,
The University of Leeds**

All interested are very welcome.
Tea will be served at 4.30 pm
in the School of Mathematics

NUMBER THEORY AND APPLICATIONS

A NATO Advanced Studies Institute on Number Theory and Applications will be held in Banff, Alberta, Canada from 27th April to 5th May 1988.

Interested Number Theorists may write to the Director of the NATO ASI (Professor R.A. Mollin, Mathematics Department, University of Calgary, Calgary, Alberta, Canada T2N 1N4) for details.

INTERNATIONAL SYMPOSIUM IN HONOUR OF RENÉ THOM

An International Symposium in honour of René Thom will be held at the Institut Henri Poincaré, Paris from 25th to 30th September 1988.

Further information can be obtained from the Organizing Committee at the following address: Colloque René Thom, IHES, 35 route de Chartres, 91440 Bures-sur-Yvette, France.

University of Bath, School of Mathematical Sciences An M.Sc. programme in Nonlinear Mathematics

The course is supported by SERC studentships.

In Research and Industry there is an ever-growing demand for mathematicians with knowledge of nonlinear theories. This programme will cater for students from a wide range of backgrounds and aims to equip them for modern nonlinear research in Mathematics, Science and Technology.

Among the courses offered are:

Applied Nonlinear Analysis	Nonlinear Analysis of Composite Materials
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Dynamical Systems: Stability and Control	Symmetry and the Maximum Principle
Numerical Solution of Nonlinear Boundary-Value Problems	
Numerical Methods for Bifurcation Problems	
Analytical Problems in Elastostatics	
Non-smooth Analysis and Optimal Control Theory	

In addition to the coursework, students will prepare a dissertation.

This course is also offered on a part-time basis to students from Industry.

**Get all details from
Professor J F Toland or Professor J R Willis
School of Mathematical Sciences
University of Bath, Bath, Avon BA2 7AY
Telephone (0225) 826188 or (0225) 826241**

GEOMETRIZATION OF STATISTICAL THEORY

Proceedings of the GST Workshop, Lancaster 29-31 October 1987
Editor C T J Dodson

Includes papers by S-I Amari, O E Barndorff-Nielsen, P Blaesild, C T J Dodson, P S Eriksen, B L Foster, B Hanzon, P E Jupp, W S Kendall, S L Lauritzen, T J Lyons, D B Picard, R W Tucker, G Tunnicliffe-Wilson.

Also a detailed account of the discussion sessions.

260 pages Softcover, ISBN 0 901272 40 X, December 1987

AMS Classifications 53B, 53C, 62A, 62E.

Price Postfree, Prepaid: £12 Europe, US \$25 elsewhere.

ULDM Publications, Department of Mathematics, University of Lancaster, UK.

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25%
DISCOUNT

Lectures on Bochner-Riesz Means

K. M. DAVIS and Y. C. CHANG

Concerned with the modern theory of Fourier series, this book presents a thorough discussion of the classical one-dimensional theory. The text then takes up developments of the 1970's including Fefferman's disc counterexample and Cordoba's geometric theory of Kayeka maximal functions and multipliers.

LMS Lecture Note Series 114

150 pp. 1987 0 521 31277 9 Pb £13.95 net

An Introduction to Independence for Analysts

H. G. DALES and W. H. WOODIN

This book explains clearly what forcing is, and how it can be used to establish independence results. It provides a full proof of the independence of CH from ZFC, and gives the first accessible proof of the theorem of Solovay and Woodin. The book also includes a discussion of Martin's axiom and of its applications.

LMS Lecture Note Series 115

256 pp. 1987 0 521 33996 0 Pb £15.00 net

Homotopy Theory

Proceedings of the Durham Symposium 1985

Edited by E. REES and J. D. S. JONES

This collection of papers surveys recent developments in the subject including some of the spectacular advances made in the last few years. Research workers in topology will find that this provides a valuable and up-to-date survey of present progress in the field and the direction of future research.

LMS Lecture Note Series 117

247 pp. 1987 0 521 33946 4 Pb £15.00 net

Non-Classical Continuum Mechanics

Proceedings of the London Mathematical Society Symposium, Durham, July 1986

Edited by R. J. KNOPS and A. A. LACEY

A major aim of this meeting was to bring together workers in both the abstract and practical aspects of non-classical continuum mechanics. As a result, this volume contains a series of articles which are both introductions to, and succinct accounts of, current activity in the subject.

LMS Lecture Note Series 122

335 pp. 1987 0 521 34935 4 Pb £20.00 net

Cambridge
University Press

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Notes on Logic and Set Theory

P. T. JOHNSTONE

This short textbook provides a succinct introduction to mathematical logic and set theory. It will be invaluable to all mathematics undergraduates as well as being an ideal summary of the subject for research mathematicians and computer scientists.

128 pp. 1987 0 521 33502 7 Hc £20.00 net
0 521 33692 9 Pb £6.95 net

Combinatorial Geometries

Edited by NEIL WHITE

This book is a continuation of *The Theory of Matroids* (CUP 1986). It consists of a series of related surveys by top authorities in this area and the volume can be used as a reference or as an introductory textbook for graduate students.

Encyclopedia of Mathematics and its Applications 29

224 pp. 1987 0 521 33339 3 £25.00 net

Fourier Analysis

T. W. KÖRNER

In this book, Dr Körner has provided a shop window for some of the ideas, techniques and elegant results of Fourier analysis and for their applications. These range from number theory, numerical analysis, control theory and statistics, to earth sciences, astronomy, and electrical engineering. Each application is placed in perspective by a short essay.

608 pp. 0 521 25120 6 £60.00 net

Forthcoming (February)

Irregularities of Distribution

JOZSEF BECK and WILLIAM W. L. CHEN

This book is an up-to-date and authoritative description of the various approaches to and methods in the theory of irregularities of distribution. The work is in three parts: the first is concerned with the classical problem; the second studies the generalizations of the classical problem, as pioneered by Schmidt; and the final part is devoted to the proving of Roth's '1/4 theorem'.

Cambridge Tracts in Mathematics 89

304 pp. 1987 0 521 30792 9 £32.50 net

For further information on all Cambridge Mathematics titles, please write to Sally Seed at the address below. LMS members are entitled to a 25% discount on LMS Series titles – please send payment with your order direct to the Customer Services Department quoting Account Number 099 5575.

Cambridge University Press

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU



James Joseph Sylvester (1814-1897) was for five months a student at University College, London, before he went to Liverpool, but anti-Semitic persecution forced him to leave, and he went to Cambridge, but being a Jew, he was unable to take a degree, and eventually he graduated from Trinity College, Dublin, by which time he was already a fellow of the Royal Society. He was saved for mathematics by his great friend and fellow lawyer, Arthur Cayley, in 1850, but his most successful appointment was as professor at the newly-founded John Hopkins University from 1876 to 1883, where he insisted on being paid in gold, and where he helped set up the **American Journal of Mathematics**. His colleague C.S. Pierce said of him that he had 'perhaps the most exuberant mind....since Gauss'. He is best remembered for his work in algebra, notably the theory of invariants, and number theory, and he belongs among those inventive mathematicians who seldom become acquainted with work of others. He was the second President of the London Mathematical Society from 1866 – 1868.

DIARY

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

1988

FEBRUARY

- 7-11 Applied Mathematics Conference, Australia (138)
19 LMS Meeting, Leeds

MARCH

- 10-11 Matrix Theory and its Applications, Ireland (145)
14-18 Second International Conference on Hyperbolic Problems, Federal Republic of Germany (138)
18 LMS Meeting, London

APRIL

- 11-15 British Theoretical Mechanics Colloquium, London (146)
12-14 British Mathematical Colloquium, Exeter (145)

MAY

- 19-20 LMS Meeting, Cardiff

JUNE

- 6-24 Séminaire de Mathématiques Supérieures, Canada (146)
17 LMS Meeting, London
20-24 Bail V Conference, China (141)
30-10 July Dynamical Systems, LMS Durham Symposia, Durham (145)

JULY

- 1 LMS Evening of Popular Lectures, London
3-7 British Combinatorial Conference, East Anglia (146)
5-8 Theory of Ordinary and Partial Differential Equations, Dundee (144)
5-15 Spinors, Twistors and Complex Structure in General Relativity, LMS Durham Symposia, Durham (145)
11 LMS Evening of Popular Lectures, Liverpool
13-20 1988 St Andrews Colloquium (138 & 145)
17-27 IXth Congress of the International Association of Mathematical Physics, Swansea (138)
18-28 Model Theory and Groups, LMS Durham Symposia, Durham (145)
24-30 Radicals – Theory and Applications, Japan (143)
25-30 Computational and Applied Mathematics, Belgium (142)
27-3 Aug ICME-6 1988, Hungary (144)

AUGUST

- 21-27 International Conference on General Algebra, Austria (145)

SEPTEMBER

- 16-19 Physical Interpretation of Relativity Theory, London (143)
19-23 International Colloquium on Differential Geometry, Spain (146)

OCTOBER

- 19-20 Fractals in the Natural Sciences, The Royal Society, London (144)
21 LMS Meeting, London

NOVEMBER

- 18 LMS Annual General Meeting, London

DECEMBER

- 8-9 Physics and Mathematics of Strings, The Royal Society, London (144)

For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter Number.

FAX NUMBER

The fax number of the London Mathematical Society office is :

01-439 4629