

LMS NEWSLETTER

No. 71

July 1980

DATES OF SOCIETY MEETS

Friday, 20 June 1980, Burlington House (J. G. Clunie and J. Eells).

Friday, 17 October 1980, Burlington House (W. Feit and J. G. Thompson).

Friday, 21 November 1980, Imperial College, London (C. T. C. Wall, Presidential Address and D. G. Kendall, Whitehead Lecture; Annual General Meeting).

Friday, 16 January 1981, Burlington House (A. M. Sinclair and W. Moran).

Friday, 20 February 1981, Burlington House.

Friday, 20 March 1981, Burlington House.

Friday, 15 May-Saturday 16 May 1981. Two-day meeting at Leeds.

Friday, 19 June 1981, Burlington House.

R. A. BAILEY

L.M.S. LOCAL REPRESENTATIVES

| | | | |
|-------------------------------|--------------------------|-------------------------------|---------------------------|
| Aberdeen | Dr. I. G. Craw | City of London Polytechnic | |
| Bath | Dr. R. Mitchell | | Dr. M. G. Smith |
| Belfast | Dr. D. H. Armitage | Polytechnic of North London | Dr. T. Harris |
| Birmingham | Dr. A. H. M. Hoare | Polytechnic of the South Bank | |
| Bradford | Dr. W. J. Robinson | | Dr. D. Singmaster |
| Bristol | Dr. M. Slater | Manchester | Professor B. Hartley |
| Brunel | Miss A. Grubb | Manchester UMIST | Dr. R. M. Bryant |
| Calgary | Professor H. K. Farahat | Manitoba | Professor G. Krause |
| Cambridge | Dr. J. E. Roseblade | Newcastle upon Tyne | |
| Dundee | Professor W. N. Everitt | | Dr. C. Kosniowski |
| Durham | Dr. L. M. Woodward | Nottingham | Dr. R. R. Laxton |
| East Anglia | Professor G. C. Shephard | The Open University | |
| Edinburgh | Dr. T. H. Lenagan | | Professor D. A. Brannan |
| Exeter | Dr. R. W. K. Odoni | Oxford | Dr. H. A. Priestley |
| Glasgow | Professor W. D. Munn | Reading | Professor J. D. M. Wright |
| Heriot-Watt | Dr. A. R. Prince | St. Andrews | Dr. C. M. Campbell |
| Hull | Dr. J. Wallington | Salford | Dr. L. R. Fletcher |
| Keele | Mr. R. M. Whitehouse | Sheffield University | Dr. R. Y. Sharp |
| Kent | Dr. J. R. Merriman | Sheffield Polytechnic | Dr. H. Porteous |
| Lancaster | Mr. G. H. Bailey | Southampton | Dr. D. Kirby |
| Leeds | Dr. J. F. Bowers | Strathclyde | Dr. G. F. Roach |
| Leicester | Dr. J. F. Watters | Stirling | Dr. R. M. F. Moss |
| Liverpool | Dr. P. J. Giblin | Surrey | Dr. A. D. Keedwell |
| London Colleges: | | Sussex | Dr. J. W. P. Hirschfeld |
| Bedford | Dr. Warren Dicks | The New University of Ulster | |
| Birkbeck | Dr. S. M. Ginn | | Dr. P. McGill |
| Chelsea | Dr. D. Charlton | Wales: | |
| Goldsmiths' | Dr. C. H. Chu | Aberystwyth | Dr. F. W. Long |
| Imperial | Dr. M. Keating | Bangor | Professor R. Brown |
| King's | Dr. J. Silvester | Cardiff | Dr. C. H. Houghton |
| LSE | Dr. E. Boardman | Swansea | Dr. H. P. Rogosinski |
| Queen Elizabeth | Dr. A. R. Pears | Warwick | Dr. C. R. Hajarnavis |
| Queen Mary | Dr. C. R. Leedham-Green | York | Dr. J. B. Fountain |
| Royal Holloway | Dr. G. De Barra | | |
| University | Dr. P. McMullen | | |
| Westfield | Dr. N. H. Biagham | | |
| City University | Dr. T. E. Stanley | | |
| Polytechnic of Central London | | | |
| | Dr. D. J. Emery | | |

Anyone wishing to represent an institution not on this list is requested to write to me.

A. W. GOLDIE

COUNCIL NEWS

The Council of the Society has made the following awards:

1980 Senior Whitehead Prize—D. G. Kendall

1980 de Morgan Medal—M. F. Atiyah

1981 Naylor Prize—H. C. Longuet-Higgins

and the following appointments:

Periodicals Editorial Board—G. Horrocks

Joint Mathematical Council—D. J. Roaf

Journal Executive Editor—E. Philpott-Kent

S. J. Jacob (a member since 1903) has bequeathed £1,000 to the Society; and the Society had made contributions to the Bertrand Russell Bust Fund, the George Green (Windmill) Memorial Fund, and the travel expenses of some U.K. participants in the International Conference on Mathe-

matical Education in Berkeley in August. A 52.25 acre holding, Holborn Piece, Letcombe Bassett near Wantage, Oxfordshire, has recently been purchased.

The size of the *Bulletin* has been increased to six issues of 80 pages each per year; a new Membership List is about to appear; and the 1980 Annual General Meeting will be held in Imperial College, London.

A number of proposed changes to the Statutes will be brought to a General Meeting in the autumn after preliminary discussion with the Privy Council Office. Apart from minor tidying-up changes, it is proposed to allow the Treasurer to invest Society funds in E.E.C. countries as well as those of the Commonwealth and in U.S.A. (Statute 30).

D. A. BRANNAN

MATHEMATICS COMMITTEE GRANTS AWARDED

The following grants were awarded by the Mathematics Committee of the Science Research Council in March 1980. The first name is the principal investigator and the dates are the period of the grant.

G. K. Eagleson (Cambridge): SVF for R. Gundry (New Brunswick) April–June 80.

D. J. H. Garling (Cambridge): SVF for W. J. Davis (Ohio) Sept. 80–Aug. 81.

J. E. Roseblade (Cambridge): SVF for G. Baumslag (New York), Oct. 80–June 81.

J. R. Ashford (Exeter): Data base construction and the development of statistical techniques, April 80–March 82.

J. C. Eilbeck (Heriot-Watt): Numerical and graphical study of various partial differential equations, Jan. 80–Dec. 81.

K. V. Mardia (Leeds): Models and inference problems in Kriging, Oct. 80–Sept. 82.

P. M. Cohn (Bedford, London): SVF for E. Formanek, Oct. 80–June 81.

R. F. Streater (Bedford, London): SVF for D. W. Robinson (Sydney), Oct. 80–March 81.

R. F. Streater (Bedford, London): Classical limit of non-linear quantum field theories, Oct. 80–Sept. 83.

D. R. Cox (Imperial): SVF for P. A. P. Moran (Australia), 2 months.

J. T. Stuart (Imperial): Three-dimensional disturbances in boundary layers and shear flows, Oct. 80–Sept. 82.

A. Frohlich (KCL): Galois Module Structure and Arithmetic Variants, Oct. 80–Sept. 82.

A. Frohlich (KCL): SVF for I. Reiner (Illinois), Aug. 80–Jan. 81.

F. T. Smith (Imperial): Numerical and structural solutions for high Reynolds number flows, April 80–March 83.

D. G. Larman (UCL): SVF for V. L. Klee (Seattle), July–Sept. 81.

J. D. Murray (Oxford): SVF for D. S. Cohen (California), May–July 80.

C. St. J. A. Nash-Williams (Reading): SVF for J. H. Spencer (New York), Jan.–June 81.

ROLLO DAVIDSON TRUST

The Trustees of the Rollo Davidson Trust announce that they have awarded Rollo Davidson Prizes for 1980 to David John Aldous (Berkeley), formerly Fellow

of St. John's College, Cambridge, and Erik Jørgensen (Institute for Electrical Systems, University of Aalborg, Denmark).

P. WHITTLE

GEORGE GREEN MEMORIAL

The name of George Green is familiar to most graduates of mathematics through Green's theorem—and in connection with potential theory. Green's functions are of

increasing importance in modern theoretical physics. When the impulsive forces are supplied by particles rather than external fields we have the situation characteristic

of quantum field theory and scattering theory. In these areas the Green functions are often called 'propagators' since the laws of wave mechanics, rather than classical mechanics, are needed.

Green's fundamental Essay, published in 1828 in Nottingham, was largely ignored during his lifetime. Fortunately William Thomson (later Lord Kelvin) realised its importance and had it republished in Berlin, a few years after Green's death. The Essay is all the more remarkable when one realises that it was the work of a young man, largely self-taught, whose formal schooling ceased at an early age when he began to work in his father's mill.

The restoration of the mill was initiated

by the George Green Memorial Fund and is now a joint project with Nottingham City Council. Further details are given in the Memorial Appeal Leaflet (enclosed for U.K. addresses only) and contributions are urgently requested. The Memorial Fund Trustees have recently received a gift of 50 hard-bound copies of a facsimile edition of Green's 1828 Essay. These are part of a limited edition of 1000 published for Professor Stig Ekelöf of Chalmers University, Göteborg in 1958. Anyone donating £10.50 or more to the George Green Memorial Fund, c/o Professor L. J. Challis, Department of Physics, Nottingham University, Nottingham NG7 2RD will be sent one of these rare volumes.

AUSTRALASIAN MATHEMATICS CONVENTION

The Second Australasian Mathematics convention will be held at the University of Sydney on 11-15 May 1981. The present list of speakers includes C. Curtis (Oregon), S. Eilenberg (Columbia, New York), E. Hewitt (Washington), T. Stuart (Imperial,

London), C. T. C. Wall (Liverpool). Further details can be obtained from T. M. Gagen, Dept. of Pure Mathematics, University of Sydney, N.S.W. 2006, Australia.

SCANDINAVIAN MATHEMATICAL CONGRESS

The Eighteenth Scandinavian Congress of Mathematicians will be held in Aarhus, Denmark on 18-23 August 1980. Invited speakers include L. Carleson (Stockholm), B. Fuglede (Copenhagen), W. Fulton (Brown), S. Helgason (M.I.T.), L. Hörmander (Lund), Ib. Madsen (Aarhus), R. Phillips (Stanford), A. Salomaa (Turku

and E. Størmer (Oslo). There will also be an algebra symposium in Aarhus on 12-15 August at which the main speakers will be W. Fulton and S. Kleidman. Further details of both meetings can be obtained from E. Balslev, Matematisk Institut, Universitetsparken, Ny Munkegade, 8000 Aarhus C, Denmark.

INSTRUCTIONAL COURSE IN HARMONIC ANALYSIS

The International Centre for Pure and Applied Mathematics is organizing a course in harmonic analysis in Nancy on 15 September-3 October 1980. The course will cover Euclidean Fourier analysis. Compact groups. $SL(2, \mathbb{R})$. Symmetric spaces of rank one. Nilpotent groups and

the method of orbits. The scientific committee is J. L. Clerc, P. Eymard, J. Faraut, S. Helgason, H. Leptin, N. Lohoue, M. Raïs, G. Schifffmann and R. Takahashi. Further details can be obtained from ICPAM, Villa "La Lézardière", 1 av. Edith Cavell, 06000 Nice, France.

ORDINARY DIFFERENTIAL EQUATIONS AND CONTROL THEORY

The International Centre for Pure and Applied Mathematics will hold an instructional conference on Ordinary Differential Equations and Control Theory on 29 September-30 December in Strasbourg. The course will cover differential equations,

dynamical systems, optimal control, asymptotics, non-linear oscillations and numerical methods. The lecturers are R. Gerard, C. Godbillon, J. Mawhin, G. Rebb and B. Schmitt. Further details can be obtained from ICPAM as above.

MATHEMATICS AND INFORMATICS

An international summer school on Mathematics and Informatics for socio-economic development will be held on 2-12 August 1980 at Aristotle University of Thessaloniki, Greece, under the auspices of U.N.E.S.C.O., the Balkan Union of Mathematicians, the Academy of Athens, the Greek Ministry of Science and Culture and the World Federation of Scientists. A provisional list of lecturers includes P. Bisogno (Rome), G. Boulay (Rennes), Brüter (Brest), R. Elliot (Hull), A. Forti (U.N.E.S.C.O.), S. Guiaşu (Bucarest),

U. Günger (München), P. Hodgson (Oxford), L. Iliev (Sofia), G. Kurepa (Belgrade), R. Khairov (Moscow), J. Legay (Lyon), Lemoigne (Aix-en-Provence), Machin (Durham), Marzollo (Udine), Orhon (Ankara), Poulakos (Athens), U. Simon (Berlin), N. Teodorescu (Bucarest), Van Tspigker (Rotterdam), Whittle (Cambridge) and J. Xanthakis (Athens). Further details can be obtained from Gr. Tsagas, Dept. of Mathematics, School of Engineering, Aristotle University of Thessaloniki, Greece.

GEOMETRY SYMPOSIUM

A Symposium to mark the 60th birthday of N. H. Kuiper will be held in Utrecht on 27-29 August 1980. Invited speakers are N. A'Campo (Orsay), T. Banchoff (Brown University), J. Eells (Warwick), N. Moulis (I.H.E.S.), W. Pohl (Minnesota), D. Sulli-

van (I.H.E.S.), R. Thom (I.H.E.S.), J. Tits (Collège de France). Further details can be obtained from S. Koorn, Mathematisch Instituut, Rijksuniversiteit Utrecht, Budapestlaan 6, 3508 TA Utrecht, The Netherlands.

OXFORD LECTURE NOTES

The following Lecture Notes are now available:

| | Price | Postage | |
|---|-------|---------|----------|
| | | Inland | Overseas |
| Bradley, C. J. <i>Electrostatics and current flow</i> (1974) .. | 55p | 31p | 43p |
| Carter, R. W. <i>Some aspects of the representation theory of finite groups of Lie type</i> (1979) .. | 35p | 21p | 24p |
| Collins, P. J. <i>A first course in topology</i> (1976, repr. 1978) .. | 46p | 21p | 24p |
| Kantor, W. M. <i>Classical groups from a non-classical viewpoint</i> (1979) .. | 45p | 26p | 24p |
| Martineau, R. P. <i>Decompositions of modules</i> (1977, repr. 1978) .. | 50p | 21p | 24p |
| Neumann, Stoy & Thompson. <i>Groups and geometry. Volumes I & II</i> (1980) | £2·00 | £1·22 | 70p |
| Ockendon & Tayler. <i>Inviscid fluid flows</i> (1972, repr. 1976, 1979) .. | 40p | 41p | 43p |
| Priestley, H. A. <i>An introduction to complex analysis</i> (1978, repr. 1979) .. | 60p | 31p | 43p |
| Rees, E. <i>Supplement to Notes on Geometry</i> (1979) .. | 25p | 13½p | 13p |
| Stirzaker, D. R. <i>Lecture notes on probability and random processes. Part I; I-V</i> (1979) .. | 60p | 36p | 43p |
| Thompson, E. C. <i>Notes on tensor and exterior products in vector spaces</i> (revised ed. 1979) .. | £1·10 | 31p | 43p |
| Woodhouse, N. <i>Notes on special relativity</i> (1977, revised ed. 1980) .. | 70p | 26p | 24p |
| Woods, L. C. <i>An introduction to information theory</i> (1970) | 10p | 16½p | 24p |

These Lecture Notes can be ordered from the Assistant Librarian, Mathematical Institute, 24-29 St. Giles, Oxford OX1 3LB. Enclose a cheque or money order (made payable to the Mathematical Institute, University of Oxford) for the cost of the Notes and the relevant postage. **ORDERS ARE SENT PRE-PAID ONLY,**

LONDON MATHEMATICAL SOCIETY LECTURE NOTE SERIES

Cambridge University Press wish to inform Members of the London Mathematical Society of new arrangements for ordering books in the LMS Lecture Note Series. As from now, orders, accompanied by the appropriate remittance (made payable to Cambridge University Press), should be sent directly to:

**The Science Publicity Controller
Cambridge University Press
P.O. Box 110, Cambridge CB2 3RL**

Members of the London Mathematical Society are entitled to buy books in the LMS Lecture Note Series at a discount of 25% off the published price. Price lists are available on request, and Members are requested to give full details of the titles they wish to order.

Some recent titles in the series: Members' Price

- | | |
|--|---------------|
| 34. Atiyah <i>et al.</i>: Representation Theory of Lie Groups | £8.21 |
| 35. Simon: Trace Ideals and their Applications | £4.46 |
| 36. Wall: Homological Group Theory | £12.00 |
| 37. Brumfiel: Partially Ordered Rings and Semi-Algebraic Geometry | £7.46 |
| 38. Bollobas: Surveys in Combinatorics | £6.71 |
| 39. Northcott: Affine Sets and Affine Groups | £7.46 |
| 40. Koosis: Introduction to H_p Spaces | £7.46 |

New publications will be advertised periodically in the LMS Newsletter as they become available.

CAMBRIDGE UNIVERSITY PRESS

**THE AUSTRALIAN
NATIONAL UNIVERSITY**

invites applications for appointment as

**POSTDOCTORAL
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OR
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**DEPARTMENT OF MATHEMATICS
Research School of Physical Sciences**

Current departmental research interests include number theory, group theory (computational group theory, Burnside problems, groups of prime-power order, and varieties), global analysis and harmonic analysis, ordinary differential equations and control theory, foundations and set theory, linear algebraic groups, and combinatorics, but applications will be considered in any field of modern mathematics. Appointment as Research Fellow will be for two or three years in the first instance. Postdoctoral Fellows are appointed for one or two years. Applications from persons able to obtain leave without pay from their own institutions will be welcome. Salary: Research Fellow \$17,024–\$22,222; Postdoctoral Fellow — a fixed point between \$17,024–\$22,222 Australian currency. Present exchange rate \$A1: UK 49NP: \$US 1.09. Superannuation benefits; reasonable appointment expenses; housing assistance.

Applications close with

The Registrar,
PO Box 4,
Canberra Act
2600 Australia

on 15 August 1980.

LONDON MATHEMATICAL SOCIETY

PROFESSOR J. G. THOMPSON (Cambridge)

THE DETERMINATION OF THE FINITE SIMPLE GROUPS

PROFESSOR W. FEIT (Yale)

THE CLASSIFICATION OF FINITE SIMPLE GROUPS AND SOME OF ITS CONSEQUENCES

FRIDAY, 17th October, 1980, at 3.30 p.m.

**Geological Society's Meeting Room,
Burlington House,
Piccadilly, London W1V 0NL**

All interested are very welcome

Tea will be served at 4.30 p.m.