

LONDON MATHEMATICAL SOCIETY

DR. R. FOOTE (Cambridge)

RECENT RESULTS IN THE THEORY OF FINITE SIMPLE GROUPS

PROFESSOR L.-K. HUA (Peking and Birmingham)

AN APPROACH TO POPULARIZE MATHEMATICAL METHODS

FRIDAY, 12th October, 1979, at 3.30 p.m.

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

All interested are very welcome
Tea will be served at 4.30 p.m.

LMS NEWSLETTER

No. 62

October 1979

DATES OF SOCIETY MEETINGS

Friday, 12 October 1979, Burlington House.

Friday, 16 November 1979, Burlington House. Annual General Meeting.

Friday, 18 January 1980, Burlington House.

Friday, 15 February 1980, Burlington House.

Friday, 21 March 1980, Burlington House.

Friday, 16 May–Saturday 17 May 1980, Manchester.

Friday, 20 June 1980, Burlington House. Whitehead Lecture.

The Annual Dinner will be held following the meeting on 16 November. Details will appear in the next issue of the *Newsletter*.

The Programme Committee feels that regularity of meeting dates is desirable. The Society will meet on the third Friday of each month during term from November onward. The normal months are thus October, November, January, February, March, May and June. We hope heads of departments and seminar organisers can make allowances for this and perhaps include the Society meeting in their arrangements.

Council meetings (in Burlington House) will be held in conjunction with all London meetings.
D. B. SINGMASTER.

L.M.S. SCHEME FOR OVERSEAS VISITORS

As part of its expanding programme, the Society is planning to invite a few distinguished speakers every year from overseas. We hope that each such visitor will stay for a short period, say 7 to 10 days, and visit one or two institutions in the U.K. in addition to speaking to the Society. The Society will pay for the overseas travel expenses and London accommodation, so the cost to institutions would need to cover only return travel from London and local accommodation. The dates and places of all the visitors' lectures would be advertised by the L.M.S.

The Society also offers some limited

support to U.K. institutions that wish to invite overseas visitors who are not addressing the Society but are speaking at a meeting which is at least regional in scope.

The Programme Committee of Council would be grateful for suggestions for such overseas visitors whom your department would particularly wish to invite. It may not be possible to accede to all requests for support and some preference will be given to small departments (i.e. ones which normally have few overseas visitors). Suggestions and enquiries should be addressed to me.

C. T. C. WALL

EDINBURGH MATHEMATICAL SOCIETY

The following meetings have been arranged for the session 1979–80.

1979

19 October (Edinburgh), A.G.M. and Presidential Address of R. A. Rankin.

16 November (Stirling), P. J. Cameron.

7 December (Edinburgh), A. F. Beardon.

1980

18 January (Edinburgh), J. Wiegold.

15 February (Edinburgh), W. A. Sutherland.

7 March (Dundee), D. E. Edmunds.

3 May (Aberdeen), B. D. Sleeman.

30 May (Glasgow), R. Penrose.

Further details of these meetings and of membership of the E.M.S. can be obtained from the Society's Secretaries: T. A. Gillespie (meetings) and J. D. P. Meldrum (membership), The Mathematics Department, James Clerk Maxwell Building, The King's Buildings, Mayfield Road, Edinburgh EH9 3JZ.
T. A. GILLESPIE

BRITISH MATHEMATICAL COLLOQUIUM

The Thirty-second British Mathematical Colloquium will be held at the University of Sheffield on 8–12 April 1980. The principal speakers will be D. Buchsbaum (Bandeis), B. Fuglede (Copenhagen) and D. Mumford (Harvard).

The registration fee will be £5 and the

cost of accommodation for the full period will be approximately £55. Application forms will be circulated to U.K. members with a later *Newsletter*, or fuller details can be obtained from V. W. Bryant, Department of Pure Mathematics, Sheffield University.

BACKLOG OF BRITISH JOURNALS

This information is published with the co-operation of the respective editorial boards. For the sake of uniformity, the same headings have been adopted as in the statements published biennially by the AMS Notices. The following explanatory statements are also so copied:

Backlog. This is an estimate of the number of printed pages which have been accepted but are not necessary to maintain copy editing and printing schedules.

Waiting times. The quartiles Q_1 and Q_3 are presented to give a measure of dis-

persion. They do not include misleading extremes, the result of unusual circumstances arising in part from the refereeing system.

Waiting times are measured in months from receipt of manuscript in final form to receipt of final publication at the library of Liverpool University. When a paper is revised, the waiting time between an editor's receipt of the final revision and its publication may be much shorter than is the case otherwise, so these figures are low to that extent.

C. T. C. WALL

JOURNAL	No. of issues per year	Approx. no. of pages per year	Backlog 30/6/79	Estimated time for paper submitted currently to be published (in months)	Observed waiting time in latest publ. issue (months)		
					Q_1	Median	Q_3
Cambridge Phil. Soc. Math. Proc.	6	1088	50	8–10	9	11	11
Edinburgh Math. Soc. Proc.	3	250	60	10–14	21	23	25
Glasgow Math. Journal	2	200	50	14–20	15	17	20
London Math. Soc. Bull.	3	336	145	9–13	12	13	16
London Math. Soc. Jour.	6	1152	200	8–11	11	12	16
London Math. Soc. Proc.	6	1152	727	22	22	23	28
Mathematika	2	300	NR	NR	12	14	15
Oxford Quart. J. of Math.	4	512	96	12–18	16	17	19
Royal Society of Edinburgh Proc. A. Math.	6	1100	Nil	9–12	8	11	12

NR means that no response was received to a request for information.

GENERAL RELATIVITY AND GRAVITATION

An International Conference on General Relativity and Gravitation (GR9) will be held in Jena on 14–19 July 1980. The programme committee consists of:

E. Schmutzer (Jena)
 P. G. Bergmann (Syracuse)
 B. Bertotti (Pavia)
 V. B. Braginsky (Moscow)
 B. Carter (Paris)
 C. B. Collins (Waterloo)
 J. Ehlers (Munich)
 W. Kundt (Hamburg)

B. Laurent (Stockholm)
 Y. Ne'eman (Tel-Aviv)
 I. Novikov (Moscow)
 R. Penrose (Oxford)
 A. Trautman (Warsaw)
 H.-J. Treder (Berlin), and
 J. Wheeler (Austin)

Further details can be obtained from E. Schmutzer, GR9 FSU, Sektion Physic, Max-Wein-Platz 1 DDR 6900 Jena, Germany.

OXFORD LECTURESHIP IN MATHEMATICAL STATISTICS

Applications are invited for a University Lectureship in Mathematical Statistics. Stipend according to age on the scale £4,232-£9,000. The successful candidate may be offered a tutorial fellowship by Lady Margaret Hall (open to men and women) for which separate application need not be

made. Details can be obtained from the Chairman of the Mathematics Board, Mathematical Institute, 24-29 St. Giles, Oxford OX1 3LB, to whom completed applications (fifteen typed copies or one for overseas applicants) should be sent by 5 November 1979.

MATHEMATICS COMMITTEE GRANTS AWARDED

The following grants were awarded by the Mathematics Committee of the Science Research Council in the academic year 1978-79. The first name is the principal investigator and the dates are the period of the grant.

- P. C. W. Davies (King's, London): Quantum Field Theory in Curved Space-Time. Oct. 79-Sept. 81.
T. J. Willmore (Durham): Ergodic Theory (Symposium). July 80.
T. J. Willmore (Durham): Stochastic Integrals (Symposium). July 80.
R. J. Elliott (Hull): Stochastic Differential Equations. Jan. 79-Dec. 80.
J. T. Stuart (Imperial): SVF for J. T. C. Liu (Brown). July 79-June 80.
R. A. Gandy (Oxford): SVF for W. W. Boone (Illinois). Nov. 78-Sept. 79.
J. D. Murray (Oxford): SVF for R. Sperb (Zurich). Oct. 79-March 80.
K. W. Morton (Reading): Generalised Galikin Methods for Hyperbolic Systems. Oct. 79-Sept. 82.
G. Eason (Strathclyde): Engineering Summer School in Biomechanics. Sept. 79-Aug. 80.
D. Livingstone (Birmingham): SVF for L.-K. Hua (Peking). July-Dec. 79.
D. Singerman (Southampton): Kleinian Groups and 3-Dimensional Manifolds. Jan.-Dec. 79.
B. P. H. Rivett (Sussex): Stochastic Continuous Hypergame Models and their applications. Jan. 79-Dec. 80.
A. Frolich (King's, London): SVF for H. W. Leopoldt (Karlsruhe). Jan. 79-March 80.
O. L. Davies (Aberystwyth): Design Storage Tests for Pharmaceutical Products. Jan.-Dec. 79.
J. R. Whiteman (Brunel): SVF for R. E. Barnhill (Utah). Aug. 79-Jan. 80.
J. F. Toland (Essex): Outgoing SVF to Madison. Aug. 79-Feb. 80.
D. R. Cox (Imperial): SVF for N. Breslow (Washington). Feb. 79.
W. K. Hayman (Imperial): SVF for L. V. Ahlfors (Harvard). Dec. 78.
S. S. Wainer (Leeds): SVF for D. Norman (Oslo). Aug.-Oct. 79.
D. B. Fairlie (Durham): SVF for J. Nuyts (Mons). March-May 79.
R. Brown (Bangor): SVF for F. Waldhavsfen (Bielefeld). May-Dec. 79.
D. K. Bose (Brighton Poly.): Outgoing SVF to Oxford. July-Dec. 79.
R. B. Flavell (Imperial): Study of Allocating Resources in Decentralised Systems with Satisficing under Uncertainty. March 79-Feb. 82.
W. J. Harvey (King's, London). Outgoing SVF to Princeton. Nov. 78-Nov. 79.
P. R. Graves-Morris (Kent): Rational Interpolation. Nov. 79-Sept. 80.
D. F. Griffiths (Dundee): Finite Element Methods for Incompressible Viscous Flow. March 79-Feb. 81.
L. M. Delves (Liverpool): Generalised Algorithms for Integral Equations. March 79-Feb. 81.
Dr. P. Hall (Imperial): Imperfect Bifurcations in Hydrodynamic Stability. July 79-June 81.
D. R. Hughes (Westfield): SVF for R. Wilson (Ohio State). May 79.
M. J. Powell (Cambridge): SVF for J. J. More (Argonne Lab.). Jan. 78-Sept. 79.
L. Fox (Oxford): Consortium for Numerical Research in Industrial Problems. Oct. 79-Sept. 82.
R. Penrose (Oxford): Twistor Theory and Geometric Methods in Physics. Oct. 79-Sept. 81.
Sir James Lighthill (Cambridge): Oscillation Damping Mechanisms in Blood Flow. Oct. 79-Sept. 81.

- N. Christophides (Imperial): Combinatorial Optimisation Procedures for the Set Covering and Routing Problems. Oct. 79–Sept. 82.
- R. K. Bullough (Manchester): SVF for A. Degasperis (Rome). Sept. 79–June 80.
- A. Baker (Cambridge): SVF for H. L. Montgomery (Michigan).
- B. Bollobas (Cambridge): SVF for R. F. Gundy (Rutgers). April 79–June 79.
- C. Kearton (Durham): Hermitian Forms Arising in Knot Theory. Sept. 79–Aug. 81.
- G. J. Cooper (Sussex): Stability Criteria for Linear Methods for Ordinary Differential Equations. July 79–June 81.
- C. T. C. Wall (Liverpool): Topology of singularities of mappings. Sept. 79–Jan. 80.
- C. T. C. Wall (Liverpool): SVF for J. Damon (North Carolina). Sept. 79–Jan. 80.
- I. C. Percival (Queen Mary): Hamiltonian Dynamics of Systems with finite number of degrees of freedom. Oct. 79–Sept. 81.
- I. G. Macdonald (Queen Mary): SVF for L. Soloman (Wisconsin). Sept. 79–Jan. 80.
- R. O. Gandy (Oxford): SVF for S. Feferman (Stanford). Sept. 79–June 80.
- I. C. Percival (Queen Mary): SVF for F. Calogero (Rome). Sept. 79–June 80.
- L. Fox (Oxford): Gatlinburg VIII Symposium on Numerical Linear Algebra. July 81.
- T. J. Willmore (Durham): Finite element methods for non-linear and singular problems (Symposium). July 80.
- M. J. D. Powell (Cambridge): Quadratic programming algorithms for non-linearly constrained optimization. Oct. 79–Sept. 81.
- Sir James Lighthill (Cambridge): Improved theories of biochemical oscillation closely associated with experiments. Oct. 79–Sept. 81.
- A. Land (L.S.E.): SVF for A. N. Elshafe (Cairo). May 79–April 80.
- N. M. Bingham (Westfield): Subexponentiality and regular variation in probability and analysis. Oct. 79–Sept. 80.
- H. N. V. Temperley (Swansea): Study of percolation and colouring problems on periodic lattices. Feb. 79–Sept. 81.
- E. J. Godolphin (Royal Holloway): Investigation of structural properties of linear forecast models. Oct. 79–Sept. 82.
- C. W. Clenshaw (Lancaster): SVF for F. W. J. Olver (Maryland). June–July 80.
- A. J. Lawrence (Birmingham): Models for sequences of observations with non-gaussian marginal distribution and simple dependency structure. July–Dec. 79.
- D. E. Edmonds (Sussex): SVF for H. Triebel (Jena). April 80.
- D. Rees (Essex): SVF for S. Lubkin (Rochester). April–May 79.
- H. K. Moffat (Bristol): SVF for A. D. Sneyd (Waikato). Aug. 79–Jan. 80.
- L. M. Delves (Liverpool): SVF for I. Barrodale (Pittsburgh). May–June 80.
- P. Hall (Imperial): Imperfect bifurcations in hydrodynamic stability. July 79–June 80.
- J. H. Williamson (York): SVF for G. Brown (N.S.W.). July–Dec. 79.
- A. Land (L.S.E.): Solution procedures for facility location. May 79–Oct. 80.
- C. St J. A. Nash-Williams (Reading): Investigations in graph theory and combinatorics. Aug. 80–July 83.
- C. J. S. Clark (York): Twistor techniques in general relativity. Oct. 79–Sept. 81.
- R. A. Fildes (Manchester Business School): An evaluation of Bayesian forecasting methods. Oct. 79–March 81.
- D. Williams (Swansea): Weiner-Hopf factorization for operators. Oct. 79–Sept. 81.
- R. M. Bryant (UMIST): Sylow theory. Oct. 79–Sept. 81.
- J. R. Willis (Bath): Wave propagation in composites and related problems. Sept. 79–Aug. 81.
- J. S. Dowker (Manchester): Quantum field theory on multiply connect space-times. Oct. 79–Sept. 82.
- S. C. Mathewson (Imperial): SVF for R. E. Nance (Virginia Poly.). Sept. 79–June 80.
- J. S. Pym, J. W. Baker (Sheffield): Topological semilattices and applications. Oct. 79–Sept. 80.
- J. Walsh (Manchester): SVF for M. R. Osbourne (A.N.V.) June–Aug. 80.
- B. H. P. Rivett (Sussex): Further development of the theory and applications of hypergames. Sept. 79–Aug. 82.
- T. B. Benjamin (Oxford): Studies of hydrodynamic bifurcation phenomena. Aug. 79–July 82.
- J. F. Adams (Cambridge): SVF for D. C. Ravenal (Washington). Sept. 79–March 80.
- B. Straughan (Glasgow): A study of jets in interfacial phenomena with particular reference to magneto hydrodynamics. Aug.–Oct. 79.
- G. F. Vincent-Smith (Oxford). Development of a Markov process for quantum theory. Sept.–Nov. 79.
- F. M. Leslie (Strathclyde). SVF for S. C. Cowin (Tulane). May–July 80.

LIBRARY

Members are entitled to use the mathematics library at University College London which houses the L.M.S. collection of books and periodicals. A list of the periodicals can be found at the back of the membership list. The rules governing borrowing are as follows:

- (1) L.M.S. members may borrow in person or by postal applications and have up to five items on loan at any one time. When an item is borrowed by post, the member is responsible for the return postage.
- (2) A photocopy of a periodical article will normally be provided when the cost of this is less than £1. Items borrowed may be retained for as long

as required, except that they must be returned at the Annual Recall in June, or if recalled for another reader.

- (3) Certain categories of material may not be lent, such as reference books, restricted loan items and current issues of periodicals. The loan of rare material is at the discretion of the L.M.S. Librarian.

- (4) When a photocopy request is made, the item together with the invoice will be sent to the L.M.S. member. The current charge is 5p per exposure plus postage.

Borrowing by members will be facilitated if application is made on a copy of the form printed below. P. McMULLEN

MEMBER'S APPLICATION TO BORROW FROM L.M.S./U.C. LIBRARY

Author

Title

Title of Periodical or Series (if any)

Date

Vol. No.

Part, Page Nos.

Place of Publication

Source of reference

Member's name

Return to: Assistant Librarian
Physical Sciences Library,
University College London,
Gower Street,
London WC1 6BT

Date of Election to L.M.S.*

Address

*Not needed for members whose names appear on current L.M.S. membership list.

UMIST
LECTURER IN MATHEMATICS

Applications are invited from candidates of either sex for the above post. Applicants should have research interests in some branch of Pure Mathematics.

Salary will be in the range of £4,333–£8,922 per annum and the appointee will be expected to commence duties by 1st January 1980, or as soon as possible thereafter, by arrangement. The closing date for applications is 19th October 1979.

Requests for application forms and further particulars, quoting reference MAT/168 should be addressed to the Registrar, UMIST, PO Box 88, Manchester M60 1QD.

University of Bristol
PURE MATHEMATICS

Applications are invited for the post of LECTURER IN PURE MATHEMATICS in the Department of Mathematics. The post is tenable from 1st January 1980 or later, and the initial salary will be within the range £4,232 to £6,886 per annum on the lecturer salary scale (under review).

Further particulars may be obtained from the Registrar and Secretary, University of Bristol, Senate House, Bristol BS8 1TH, to whom applications should be sent by 31st October 1979 (please quote reference EB).

Applications of Graph Theory

edited by **Robin J. Wilson** and **Lowell W. Beineke**

September/October 1979, xii + 424 pp., £18·50 0.12.757840.4

One of the consequences of the recent rapid expansion of graph theory is that it has become increasingly difficult to determine what is currently known about any particular topic in the field. When it comes to the application of graph theory to the Sciences or Social Sciences this difficulty is compounded by the problem of understanding the language and literature of the area in question. In view of this the editors have collected together a series of expository surveys written by a distinguished group of authors, in the hope that such a collection might prove useful both to professional graph theorists interested in the applications of their subject and to those who may want to learn about the uses of graph theory.

Unlike other books of this subject, this volume is written for graph theorists by people actively working in the various fields of its applications such as chemistry, geography, engineering and social sciences. The wide range of topics covered, and the uniform terminology, style and notation which have been adopted throughout, will assist those who wish to learn about the applications of the subject, whether they be applied mathematicians embarking on new fields of research, or students with only an elementary knowledge of graph theory. Research workers in all the fields covered, who want to know more about the use of this technique in their own and other areas, will also find much to interest them.

Contents

Graph Theory and Communications Networks, **K. W. Cattermole**. Flowgraphs, **Frank Nielsen**. Graph Theory and Electrical Networks, **P. R. Bryant**. Graph Theory and Continuum Statistical Mechanics, **H. N. V. Temperley**. Lattice Models in Discrete Statistical Mechanics, **H. N. V. Temperley**. Chemical Applications of Graph Theory, **Dennis H. Rouvray** and **Allexandru T. Balaban**. Graph Theory and Operations Research, **G. Avondo-Bodino**. Graph Theory and the Social Sciences, **Fred S. Roberts**. Graph Theory and Geography, **Andrew D. Cliff**, **Peter Haggett** and **J. K. Ord**. Architectural Applications of Graph Theory, **C. F. Earl** and **L. J. March**. Graph Theory and Linguistics, **Ladislav Nebesky**. Algorithms in Graph Theory, **Ronald C. Read**.

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