LMS NEWSLETTER

DATES OF SOCIETY MEETINGS

Friday, 19 February 1982, Burlington House (J. T. Stafford and I. N. Herstein).

Friday, 19 March 1982, Burlington House (S. Sternberg and E. C. Zeeman).

Friday, 16 April–Saturday, 17 April 1982. Two-day meeting at Oxford.

Friday, 14 May–Saturday, 15 May 1982. Two-day meeting at Sheffield.

Friday, 21 May–Monday, 24 May 1982. Weekend meeting at Gregynog.

Friday, 18 June 1982, Burlington House (P. J. Cameron and R. Bieri).

Friday, 15 October 1982, Burlington House.

Friday, 19 November 1982, Burlington House.

Although the Society usually meets on the third Friday of the month, the ordinary meeting in May 1982 is that in Sheffield, as the Gregynog meeting is more specialized.

R. A. Bailey

PROGRAMME COMMITTEE

At its meeting on 19 February, Programme Committee will plan LMS meetings for January–June 1983. Suggestions for speakers, particularly overseas Mathematicians who will be visiting Britain during that period, will be welcome, and should be sent to the Meetings and Membership Secretary, R. A. Bailey, Statistics Department, Rothamsted Experimental Station, Harpenden, Herts.

R. A. Bailey

ICM 1982

The Second Announcement of the Congress has been circulated to those who asked for it, and during the next few months the *Newsletter* will contain the latest information about the arrangements. The Royal Society has announced a Block Grant to assist those wishing to attend the Congress, and the procedure for application has been widely advertised throughout UK universities and polytechnics. Further details may be obtained from Miss B. M. de Vere, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, tel. 01–839 5561.

PROFESSOR M. F. ATIYAH

The Feltrinelli Prize for Mathematical Sciences (1981) has been awarded to Professor M. F. Atiyah, Royal Society Research Professor at the University of Oxford. The prize is awarded by the Accademia Nazionale dei Lincei and rotates amongst all the fields of arts and sciences. Previous recipients in mathematics were Hadamard (1951), Lefschetz (1961), and Leray (1971). Well-known names from other fields that appear on the list include Henry Moore, Igor Stravinski, Thomas Mann and J. B. S. Haldane.

BRITISH MATHEMATICAL COLLOQUIUM

The BMC for 1982 will be held at the University College of North Wales, Bangor from 30 March to 3 April. Application forms were distributed with the December *Newsletter*, but unfortunately a few members did not receive one. The forms have also been distributed to Mathematics Departments, or they can be obtained by writing to Dr. C. J. Wright, School of Mathematics, University College of North Wales, Bangor, Gwynedd LL57 2UW.

SPATIAL ANALYSIS OF CENSUS DATA

A two-day workshop, organized jointly by the Birmingham local group of the Royal Statistical Society and the quantitative methods study group of the Institute of British Geographers, is planned for the 15–16 April 1982 at Birmingham University. Speakers from both statistical and geographical backgrounds have been invited, and a wide range of topics will be discussed. The workshop will be held in a hall of residence on the University's attractive Vale site, beginning after lunch on Thursday, 15 April and ending with lunch on Friday, 16 April. The cost, to include all meals and overnight accommodation, is expected to be about £19. Further details may be obtained from Dr. A. M. Nevill, Hon. Sec. Birmingham RSS, Department of Physical Education, University of Birmingham, PO Box 363, Birmingham B15 2TT.

TOPOLOGY—BRAZIL—1982

The third conference on Topology of Manifolds and Homotopy Theory will be held at IMPA, Rio de Janeiro, Brazil, 2–6 August 1982. Further information may be obtained from Antonio Conde, IMECC-UNICAMP, 13.100 Campinas-SP, Brazil.

ADVERTISING IN THE *NEWSLETTER*

The revenue from advertising makes a useful contribution to keeping down the cost of the *Newsletter*, and members are asked to keep publishers and other prospective advertisers informed of this possibility. The details of the arrangements, as circulated to prospective advertisers, are as follows.

The London Mathematical Society *Newsletter* is sent to all LMS members at home and abroad (by airmail outside Western Europe) and to other mathematical societies and institutions. Thus advertising reaches 1500 members, mostly in University Departments of Mathematics. These are the people who buy books on higher mathematics for themselves, who decide which books will be used in graduate and undergraduate courses and who decide which books their university libraries should order.

The *Newsletter* is published each month, except August and September and is circulated about a week before the beginning of the nominal month of issue. Copy must be received by the first day of the preceding month. The page size is A5, and advertisements are accepted for nominal full page, half-page, and quarter-page sizes. The charges are based on a rate of £80 per page if camera-ready copy is supplied, with a surcharge of 10% for advertisements requiring typesetting.

As an alternative, we distribute leaflets with the *Newsletter*. Material should normally be folded to fit in standard 22×11 cm envelopes. We make a charge of £40 for distribution to 1000 members at addresses in the UK plus the cost of any increased postage. The charge for distribution to the 500 overseas members is £20, plus extra postage (which may be substantial).

All enquiries regarding the *Newsletter* should be addressed to the Editor: Mr. N. L. Biggs, Department of Mathematics, Royal Holloway College, Egham, Surrey TW20 0EX.

BOOKS RECEIVED FOR REVIEW IN THE *BULLETIN*

Complimentary copies of the books listed below have been received from their publishers by the Society. Those for which the *Bulletin* is unable to publish a review will be lodged in the Society's Library at University College, London, where they are available for inspection and use by members.

J. T. Pitts: Existence and regularity of minimal surfaces on Riemannian manifolds, pp 329, £8·50 (Princeton University Press).

A. Libgober, P. Wagreich (eds): Algebraic geometry, Proceedings, University of Illinois at Chicago, Circle, 1980, pp 281, DM 29, US $13·20 (Lecture Notes in Mathematics, 862) (Springer-Verlag).

H. Korezlioglu, G. Mazziotto, J. Szpirglas (eds): Processus aléatoires a deux indices, Proceedings, Paris, 1980, pp 274, DM 29, US $13·20 (Lecture Notes in Mathematics, 863) (Springer-Verlag).

V. P. Havin, N. K. Nikol'skii (eds): Complex analysis and spectral theory, Seminar, Leningrad, 1979/80, pp 480, DM 48·50, US $22·10 (Lecture Notes in Mathematics, 864) (Springer-Verlag).

R. W. Bruggeman: Fourier coefficients of automorphic forms, pp 201, DM 25, US $11·40 (Lecture Notes in Mathematics, 865) (Springer-Verlag).

J.-M. Bismut: Mécanique aléatoire, pp 563, DM 59, US $26·90 (Lecture Notes in Mathematics, 866) (Springer-Verlag).

M.-P. Malliavin (ed): Séminaire d'algèbre Paul Dubreil et Marie-Paul Malliavin, Proceedings, Paris, 1980, pp 476, DM 48·50, US $22·10 (Lecture Notes in Mathematics, 867) (Springer-Verlag).

J. Giraud, L. Illusie, M. Raynaud (eds): Surfaces algébriques, Séminaire de Geometrie Algebrique d'Orsay, 1976–78, pp 314, DM 34·50, US $15·70 (Lecture Notes in Mathematics, 868) (Springer-Verlag).

B. J. West: On the simple aspects of nonlinear fluctuating deep water gravity waves, pp 341, DM 33, US $15 (Lecture Notes in Physics, 46) (Springer-Verlag).

G. Graff, E. Klempt, G. Werth (eds): Present status and aims of quantum electrodynamics, Proceedings, Mainz, Germany, 1980 (Lecture Notes in Physics, 143) (Springer-Verlag).

P. E. Gill, W. Murray, M. H. Wright: Practical optimization, pp 401, £19·20, US $46·50 (Academic Press).

T. L. Vincent, W. J. Grantham: Optimality in parametric systems, pp 243, £21·45 (John Wiley & Sons).

S. Bochner: The role of mathematics in the rise of science, pp 386, £4·90 p/b (Princeton University Press).

A. Barr, E. A. Feigenbaum (eds): The handbook of artificial intelligence, Vol. 1, pp 409, US $30 (William Kaufmann, Inc.).

G. F. Simmons: Precalculus mathematics in a nutshell: Geometry, Algebra, Trigonometry, pp 119, US $4·95 (William Kaufman, Inc.).

E. Sondheimer, A. Rogerson: Numbers and infinity; A historical account of mathematical concepts, pp 172, £9·50 h/b, £3·95 p/b (Cambridge University Press).

S. Helgason: Topics in harmonic analysis on homogeneous spaces, pp 141, SFr 26 (Birkahuser Verlag).

G. E. Welters: Abel-Jacobi isogenies for certain type of fano three-folds, pp 139, DFl 17·85 (MC Tract 141) (Mathematisch Centrum).

H. Abelson, A. di'Sessa: Turtle Geometry, pp 477, £14 (MIT Press).

J. B. Garnett: Bounded analytic functions, pp 467, US $59 (Academic Press, New York).

F. A. Szasz: Radical rings, pp 283, £14·75 (John Wiley & Sons).

H. J. Baues: Commutator calculus and groups of homotopy classes, pp 160, £11·25 (Lecture Note Series, 50) (Cambridge University Press).

A. Kock: Synthetic differential geometry, pp 311, £13 (Lecture Note Series, 51) (Cambridge University Press).

M. Nisio: Stochastic control theory, pp 83, Rs 25 (Macmillan, India).

L. S. Shapley, L. K. Raut: Theory of games and its application to economics and politics, pp 90, Rs 35 (Macmillan, India).

H. Furstenberg: Recurrence in ergodic theory and combinatorial number theory, pp 202, £10·90 (Princeton University Press).

R. Fletcher: Practical methods of optimization, Vol. 2, Constrained optimization, pp 224, £13·30 (John Wiley & Sons).

C. W. Curtis, I. Reiner: Methods of representation theory with applications to finite groups and orders, Vol. 1, pp 819, £40·70 (John Wiley & Sons).

S. Mandelbrojt: Selecta, pp 639 (Gauthier-Villars).

P. R. Baxandall, H. Liebeck: Differential vector calculus, pp 243, £7·95 (Longman Group Ltd.).

P. J. Giblin: Graphs, surfaces and homology, pp 329, £6·95 (2nd edition) (Chapman & Hall).

R. L. Devaney, Z. H. Nitecki: Classical mechanics and dynamical systems, pp 256, SFr 106 (Lecture Notes in Pure & Applied Mathematic Series, Vol. 70) (Marcel Dekker Inc.).

J. B. Conway: Subnormal operators, pp 476, £15·75 (Research Notes in Mathematics, 51) (Pitman Books Ltd.).

A. Salomaa: Jewels of formal language theory, pp 144, £12·95 (Pitman Books Ltd.).

Kh. O. Ondar (ed.): The correspondence between A. A. Markov and A. A. Chuprov on the theory of probability and mathematical statistics, pp 181, DM 74, US $34·50 (Springer-Verlag),

J. P. Bickel, N. El Karoui, M. Yor: Ecole d'eté de probabilités de Saint-Flour IX-1979, pp 280, DM 74, US $34·50 (Lecture Notes in Mathematics, 876) (Springer-Verlag).

J. Erven, B.-J. Falkowski: Low order cohomology and applications, pp 126, DM 18, US $8·20 (Lecture Notes in Mathematics, 877) (Springer-Verlag).

E. L. Allgower, K. Glashoff, H. O. Peitgen (eds): Numerical solution of nonlinear equations, Proceedings, Bremen, 1980, pp 440, DM 48·50, US $20·70 (Lecture Notes in Mathematics, 878) (Springer-Verlag).

V. V. Sazonov: Normal approximation—some recent advances, pp 105, DM 18, US $8·20 (Lecture Notes in Mathematics, 879) (Springer-Verlag).

J. Carmona, M. Vergne (eds): Non commutative harmonic analysis and Lie groups, Proceedings, Marseille-Luminy, 1980, pp 553, DM 59, US $25·10 (Lecture Notes in Mathematics, 880) (Springer-Verlag).

R. Lutz, M. Goze: Nonstandard analysis—A practical guide with applications, pp 261, DM 20, US $12·40 (Lecture Notes in Mathematics, 881) (Springer-Verlag).

K. W. Roggenkamp (ed.): Integral representations and applications, Proceedings, Oberwolfach, Germany, 1980, pp 479, DM 48·50, $20·70 (Lecture Notes in Mathematics, 882) (Springer-Verlag).

L. Henkin, J. D. Mong, A. Tarski, H. Andreka, I. Nemeti: Cylindrical set algebras, pp 323, DM 34·50, US $16·10 (Lecture Notes in Mathematics, 883) (Springer-Verlag).

V. P. Maslov, M. V. Fedoriuk: Semi-classical approximation in quantum mechanics, pp 301, DFl 125 (MPAM 7) (D. Reidel Publishing Company).

W. O. Amrein: Non-relativistic quantum dynamics, pp 237, DFl 70 (MPS 2) (D. Reidel Publishing Company).

C. Clark: Elementary mathematical studies, pp 259, US $19·95 (2nd edition) (Wadsworth International Group).

F. Bloom: Ill-posed problems for integrodifferential equations in mechanics and electromagnetic theory, pp 213, £19·50 (SIAM 3) (Heyden Publishers).

D. H. Owens: Multivariable and optimal systems, pp 300, £22·80, US $47 h/b, £8, US $16·50 p/b (Academic Press).

M. B. Marcus, G. Pisier: Random Fourier series with applications to harmonic analysis, pp 150, £12·40, £4·95 (Princeton University Press).

D. S. Kubert, S. Lang: Modular units, pp 358, DM 98, US $45·70 (Band 244) (Springer-Verlag).

P. L. Butzer, F. Feher (eds): E. B. Christoffel: The influence of his work on mathematics and the physical sciences, pp 761, SFr 92 (Birkahuser Verlag).

J. W. S. Cassels: Economics for mathematicians, pp 145, £7·50 (Cambridge University Press).

M. Gardner: Mathematical circus, pp 272, £1·95 p/b (Penguin Books Ltd.).

J. P. Killingbeck: The creative use of calculators, pp 220, £1·95 p/b (Penguin Books Ltd.).

STOP PRESS—LMS HALTED BY SNOW!

One of the speakers at the meeting planned for 15 January was isolated by snowdrifts, and the meeting had to be postponed. Efforts were made to inform prospective members of the audience, but the Society apologies to anyone who had a wasted journey. The talks will now be given at an additional meeting of the Society on *Friday, 7 May 1982*. Full details will be announced later.

THE AUSTRALIAN NATIONAL UNIVERSITY

POSTDOCTORAL FELLOWSHIPS

The Department of Mathematics under Professor D. W. Robinson, FAA is one of ten departments in the Research School of Physical Sciences and carries out research in the following areas: Operator Algebras and Mathematical Physics (D. W. Robinson), Partial Differential Equations and Geometry (L. Simon), Foundations (R. E. Edwards), Lie Groups and Algebraic Groups (R. W. Richardson), Ordinary Differential Equations and Control Theory (W. A. Coppel), Global Analysis (S. Yamamuro), and Group Theory (L. G. Kovács, M. F. Newman).

The School conducts competitions twice yearly for two-year Postdoctoral Fellowships for offer to outstanding young postdoctoral researchers in any relevant field of research in the School. Salaries are within the range $A18,068 to $A20,699 per annum, according to qualifications and experience.

Potential applicants should obtain further particulars from:

> The Registrar,
> The Australian National University,
> P.O. Box 4,
> Canberra, ACT 2600,
> Australia

before submitting applications. Closing dates for such fellowships commencing in 1983 are 31 March and 30 September 1982.

LONDON MATHEMATICAL SOCIETY

Professor S. Sternberg (Harvard)

THE MOMENT MAP AND COLLECTIVE MOTION

Professor E. C. Zeeman (Warwick)

THE CURRENT STATE OF CATASTROPHE THEORY

FRIDAY, 19 MARCH 1982, at 3.30 p.m.

Geological Society's Meeting Room,
Burlington House,
Piccadilly, London W1

All interested are very welcome

Tea will be served at 4.30 p.m.