

LMS NEWSLETTER

No. 79

May 1981

DATES OF SOCIETY MEETINGS

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

Friday, 19 June 1981, Burlington House
(E. Bombieri (Hardy lecturer) and J.-P. Serre).

Friday, 16 October 1981, Burlington House
(P. Newstead and B. Eckmann).

Friday, 20 November 1981, Burlington House
(T. Brooke-Benjamin and J. B.

Paris).

Friday, 15 January 1982, Burlington House.

Friday, 19 February 1982, Burlington House.

Friday, 19 March 1982, Burlington House.

Friday, 18 June 1982, Burlington House.
R. A. BAILEY

TWO-DAY MEETING AT LEEDS

The academic programme for this meeting appears on the front page of the April *Newsletter*.

The meeting will be held at Albert Mansbridge Hall, a Leeds University hall situated at 72 Clarendon Road, Leeds 2. (Number 58 bus from Infirmary Street near the main Railway Station in City Square. By car, follow A660 Otley–Skipton Road from City Centre and turn left at Clarendon Road traffic lights after passing the University.)

Suggested hotels within reasonable distance of the University: City Centre; Draganora (442000); Metropole (450841);

Merrion (39191); Wellesley (30431). Most of these hotels offer cheaper rates for Friday and Saturday nights. Suburban hotels: Cliff Lawn (785442); Hartrigg (751568); Parkway (672551).

The Dinner on Friday evening and lunch on Saturday, will be taken at Albert Mansbridge Hall. A charge of £8 will cover both meals (not including wine). Those wishing to attend should inform Dr. S. S. Wainer, Department of Pure Mathematics, University of Leeds, Leeds LS2 9JT, to whom cheques (payable to University of Leeds) should also be sent *BEFORE 5 MAY*.

HARDY LECTURER

The 1981 Hardy Lecturer is Professor E. Bombieri, who will visit this country for about six weeks from 1 June. Apart from his address to the LMS on 19 June, Professor Bombieri's programme will include visits to the universities of Glasgow, Manchester, Birmingham, Oxford, Cambridge; the University of Wales at Cardiff; Trinity College, Dublin; Imperial College, London; and a talk to the Edinburgh Mathematical Society. His talk for the LMS will be entitled "Minimal Submanifolds and Variational Problems". It is a survey lecture for a general public. The other lectures he is offering are:

1. "Sieving with Weights". This is a more technical lecture, meant for number theorists.

2. "The Thue-Siegel Theorem Revisited". This is a technical lecture which however deals with new effective results on approximation of algebraic numbers by rationals.

3. "A Liouville Theorem on Curves". This lecture deals with some new results on the arithmetic of curves with applications to integral points. This is suitable for a relatively wide audience; knowledge of p -adic numbers is useful.

4. "Linear Independence of Values of G -functions". A survey lecture on the diophantine approximation of values of solutions to certain ordinary differential equations.

5. "The Radius of Convergence of Taylor Series Expansions of Solutions of Ordinary p -adic Differential Equations". An elementary lecture on p -adic differential equations.

6. "Thompson's Automorphism and the Uniqueness of Ree Groups". An elementary lecture on the characterization of Thompson's automorphism; only elementary algebra is involved.

7. "The Gauss Map of a Classical Minimal Surface in \mathbf{R}^3 ". A survey lecture, with some proofs, suitable for a wide audience.

The details of dates, time, places and topics are not yet decided. I hope these will be published in the June *Newsletter*. Members wishing more detailed information should contact Miss S. M. Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, telephone 01-437 5377.

R. A. BAILEY

LMS PROGRAMME COMMITTEE

Council has set aside a fund to enable the committee to support conferences. Six grants for 1981 have already been made: £300 to K. D. Elworthy for a workshop on stochastic differential equations in Warwick (6-10 April); £600 to J. F. Adams, I. M. James and E. Rees for a topology symposium in Edinburgh (30 June-2 July), £500 to L. Fox for the Gatlingburg VIII conference on Numerical Analysis in Oxford (5-11 July), £600 to P. T. Johnstone for a conference on category theory in Cambridge (19-25 July), £500 to the British Combinatorial Committee for the 8th British Combinatorics Conference in Swansea (20-24 July), and £400 to C. M. Campbell and E. F. Robertson for a conference on group theory in St. Andrews (25 July-1 August).

The fund may also be used to support overseas visitors speaking at a meeting which is at least regional in scope. If there are more requests than we can meet, preference will be given to small departments (i.e. ones which normally have few overseas visitors). In cases accepted for

support the Society pays the overseas fare and the proposing institutions are expected to cover subsistence. A condition of all grants is that lectures are advertised in the *Newsletter* and open to all Society members.

In 1980 three overseas visitors were supported: G. Betsch (Tübingen) visited Teesside Polytechnic and Edinburgh from 25 February to 9 March; J. Aaronson (IHES) visited Imperial College and Warwick in mid-March; A. Hulanicki (Wroclaw) visited Manchester, Aberdeen, Newcastle and Cambridge during the period 8-15 May. The only visitors so far supported for 1981 are A. Kumpera, who will be visiting Bangor, Durham, Warwick and Southampton (see below), and B. Mandelbrot (New York), who will be visiting Paisley College of Technology in September/October 1981.

Enquiries about either scheme and applications for support should be addressed to the President. It is desirable to apply at an early stage.

R. A. BAILEY

VISIT OF A. KUMPERA

Professor Kumpera (Brazil, at present visiting IHES) will be speaking at several universities in this country in May/June 1981, partially supported by LMS funds. He will visit Durham (May 19-22), Bangor (May 25-28), Warwick (May 29) and Southampton (June 1-2). The topics of his

lectures are likely to include: "The local equivalence problem for structures on manifolds", and "The Lie theory of pseudogroups". Further information may be obtained from the Departments concerned.

R. BROWN

SRC GRANTS AWARDED

The Mathematics Committee of the SRC awarded the following research grants in November 1980.

N. G. Lloyd (Aberystwyth): VF for Prof. D. A. Sanchez; Periodic differential equations and applications.

N. G. Lloyd (Aberystwyth): Limit cycles for polynomial differential equations.

R. Brown (Bangor): VF for Prof. R. H. Crowell; Algebra related to knot theory.

R. W. Ogden (Brunel): Time-dependent finite deformations, bifurcations and stability of elastic solids.

J. R. Whiteman (Brunel): VF for Prof. J. T. Oden; The analysis of finite element methods for singular problems in elasticity and plasticity.

J. E. Roseblade (Cambridge): VF for Prof. R. L. Snider; Infinite group rings.

F. F. Bonsall (Edinburgh): VF for Dr. H. Upmier; Operator algebras and complex analysis.

J. M. Ball (Heriot-Watt): Non-linear systems of partial differential equations.

W. A. Light (Lancaster): VF for Prof.

E. W. Cheney; Approximation of bivariate functions by combinations of univariate functions.

J. Brindley (Leeds): Non-linear behaviour of wave trains and wave packets in models of baroclinic flow.

A. Frohlich (King's College): VF for Prof. J. Ritter; Galois module structure and arithmetic invariants.

A. Frohlich (King's College): VF for Dr. J. Coughard; Galois module structure and arithmetic invariants.

K. W. Gruenberg (Queen Mary College, London): VF for Prof. F. T. Farrell.

B. Hartley (Manchester): VF for Prof. A. O. Asar; Structure of locally finite groups.

N. C. Freeman and R. S. Johnson (Newcastle): Propagation of solitons in two and three dimensions.

B. E. Johnson (Newcastle): VF for Prof. W. B. Arveson; Perturbations of algebras of operators.

C. Kosniowski (Newcastle): VF for Prof. J. H. Ewing; Algebraic number theory and group actions on manifolds.

C. Kosniowski (Newcastle): VF for Prof. R. K. Lashof; Equivariant geometric topology.

A. B. Tayler (Oxford): VF for Prof. R. P. Gilbert; Applications of analysis to problems in heat transfer and elasticity.

T. B. Benjamin (Oxford): Studies of unsteady couette flow.

J. F. C. Kingman (Oxford): VF for Dr. D. J. Daley; Theory and applications of random point processes.

J. D. M. Wright (Reading): VF for Prof. S. K. Berberian; Operator algebra and AW*-Algebras.

F. Rhodes (Southampton): Nonlinear block maps.

P. Townsend (Swansea): The numerical simulation of time-dependent flows of non-newtonian liquids.

R. K. Bullough and P. J. Caudrey (UMIST): Integrable systems, solitons and related problems in statistical mechanics.

M. B. Priestley (Warwick): VF for Prof. M. Rosenblatt.

D. B. A. Epstein (Warwick): VF for Prof. W. Tiller; Closed geodesics.

C. Hajarnavis (Warwick): Symposium on ring theory.

GEOMETRIC TOPOLOGY CONFERENCE

A conference on Geometric Topology will be held at the White House Conference Centre, University of Sussex, from 2-6 August 1982. The subjects covered will include: topological surface theory, knots,

links, three-manifolds, and related topics. Further details can be obtained from R. A. Fenn, Mathematics Division, University of Sussex, Brighton BN1 9QH, England.

MATHEMATICS AT THE SERVICE OF MAN

The second world conference on Mathematics at the Service of Man will take place from 28 June to 3 July 1982 in Las Palmas, Canary Islands. The work of the conference will be divided into eight topics: Multivariate Statistical Analysis and Econometric Models, Concrete Mathematics, Functional Equations, Pattern Recognition and Artificial Intelligence, Mathematical Models in Biology and Ecology, Mathematics in Medical Research, Deviance in Non-Classical Logics and Modelling, Non-linear Wave Propagation.

Papers must be submitted with explicit reference to one of these topics. The deadline for submission of a preliminary version is 31 July 1981, and accepted papers must be resubmitted in a form suitable for publication by 28 February 1982. All correspondence should be addressed to: Second World Conference on Mathematics at the Service of Man, Universidad Politécnica de Las Palmas, Casa de Colón, Herrerías, 1, Las Palmas de Gran Canaria, Canary Islands, Spain.

ROYAL SOCIETY

The following were among those recently elected as Fellows of the Royal Society: Dr. J. H. Conway, Reader in Pure Mathematics, Cambridge University; Prof. R. P. Langlands, Institute for Advanced Study, Princeton; Dr. J. A. Nelder, Head of

Department of Statistics, Rothamsted Experimental Station; Prof. J. C. Taylor, Professor of Mathematical Physics, Cambridge University, Prof. D. J. Wheeler, Professor of Computer Science, Cambridge University.

**THE AUSTRALIAN
NATIONAL UNIVERSITY**

invites applications for appointment
to the position of

**RESEARCH FELLOW
OR
POSTDOCTORAL
FELLOW**

in the

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

Preference will be given to those working in Differential Geometry, Partial Differential Equations, Algebraic Geometry or Lie Groups. Appointment will be for one or two years and applications would be welcomed from those able to obtain leave of absence from their own institutions. Salary on appointment will be in accordance with qualifications and experience within the range: Research Fellow \$19,132–\$24,972; Postdoctoral Fellow a fixed point within the range \$19,132–\$24,972 per annum. \$A1 = 0.51NP. Superannuation, housing assistance, reasonable appointment costs. The University reserves the right not to make an appointment or to make an appointment by invitation at any time. Intending applicants should write for further particulars to:

The Registrar,
Australian National University,
PO Box 4,
Canberra ACT 2600,
Australia

before submitting applications which close on 31 May 1981.

LONDON MATHEMATICAL SOCIETY

PROFESSOR J.-P. SERRE (Collège de France)

THE RAMANUJAN FUNCTION

PROFESSOR E. BOMBIERI (Princeton)

The 1981 Hardy Lecture

MINIMAL SUBMANIFOLDS AND VARIATIONAL PROBLEMS

FRIDAY, 19th June, 1981, 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.