LMS NEWSLETTER

No. 78 *April 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).

Members who wish to arrange their diaries a long time in advance are reminded that the Society meets on the third Friday of the months of January, February, March, May, June, October, and November.

R. A. BAILEY

RECIPROCITY AGREEMENTS

Société Mathématique de France (SMF)

The Society has recently made a reciprocity agreement with the SMF. In general terms, this means that individual members of one society may become reciprocity members of the other society by paying half the normal individual subscription fee, and may buy publications of the other society at preferential rates.

For the year 1981 the fees for LMS members who become reciprocity members of the SMF are *either* 55 FF for basic membership, Circulaire mensuelle d'information, and Gazette; *or* 175 FF for the above, plus Bulletin volume 109 (4 issues), and 4 volumes of Astérisque to be chosen from those published by 31 December 1981.

LMS members interested in becoming reciprocity members of the SMF should apply to Mme. Noctan, Société Mathématique de France, B.P. 126–05, 75226, PARIS CEDEX 05, France.

American Mathematical Society (AMS)

The Executive Director of the AMS has indicated that members who wish to pay their dues for 1982 in pounds Sterling may do so. The relevant rate of exchange should be ascertained from the member's bank on the day the cheque is drawn.

Application forms for reciprocity membership of the AMS may be obtained from the Meetings and Membership Secretary, R. A. Bailey, Mathematics Faculty, The Open University, Milton Keynes MK7 6AA.

Others

Apart from the AMS and the SMF, the LMS has reciprocity agreements with the following Mathematical Societies: Australian Mathematical Society, Société Mathématique de Belge, Canadian Mathematical Congress, Dansk Matematisk Forening, Deutsche Mathematiker-Vereinigung, Indian Mathematical Society, New Zealand Mathematical Society, Norsk Matematisk Forening, South East Asian Mathematical Society, Svenska Matematikersamfundet, Wiskundig Genootschap (Netherlands).

R. A. BAILEY

ROYAL WEDDING

It has been suggested that the LMS might make a small presentation to Prince Charles and his bride to mark their wedding. Suggestions as to the form of the presentation should be sent to the President, Professor B. E. Johnson, School of Mathematics, The University, Newcastle upon Tyne NE1 7RU, to arrive on or before 1 April.

EEC HIGHER EDUCATION GRANTS

Higher education institutions seeking to co-operate with partners in other EEC countries in the development of "joint programmes of study", and teaching, research and administrative staff wishing to carry out a "short study visit" elsewhere in the Community, will once again be able to benefit from EEC support this year, Ventures involving Greece are eligible for the first time.

Further details and application forms are available from the Brussels Office of the Institute of Education, European Cultural Foundation, 51 rue de la Concorde, B-1050 Brussels, which supports the Commission of the EEC in the administration of the schemes.

Closing dates for applications are 1 April 1981 for joint study programmes, and 1 August 1981 for short study visits.

Joint Programmes of Study. To be eligible for a joint study programme grant from Brussels, co-operative ventures—in any sector of higher education and in any area of study—must be the subject of joint academic planning between institutions in at least two EEC countries. The actual type of co-operation may in practice vary widely.

Short Study Visits. EEC grants are available to members of the teaching, research and administration staffs of higher education institutions wishing to undertake a study visit to other EEC countries, the aim being to improve the basis for co-operation by facilitating the establishment of contacts, an exchange of experiences and the analysis of specific aspects of the higher education system of the countries visited. Results of the visits, which frequently give rise at a later stage to the development of joint programmes of study, are written up in reports to be submitted to the Commission, The grants are not, however, intended to finance research projects being carried out by the persons concerned.

Of the 350 grants awarded so far under the terms of the Scheme, 88 have gone to British applicants, including 33 in the current academic year.

BILINGUAL FUNCTION THEORY

A session of the Seminaire de Mathématiques Supérieures—NATO Advanced Study Institute will take place at the Université de Montréal, August 3-21, 1981. under the title: Function Theory—Approximation and Geometric Aspects.

The meeting will be supported by NATO, the Ministry of Education of Quebec, the Natural Sciences and Engineering Research Council of Canada, and the Université de Montreal.

The principal speakers will be T. Genalius (Swedish Academy of Sciences), on Degree of Rational Approximation; F. W. Gehring (University of Michigan), on Topics in the Theory of Plane Quasiconformal Mappings with Applications to Complex Function Theory; W. K. Hayman (Imperial College, London) on Distribution des valeurs et ensembles exceptionnels; W. Hengartner (Université Laval), on Approximation qualitative sur des ensembles non bornés; D. J. Newman (Temple University), on a subject to be announced; Q. I. Rahman (University de Montréal), on L'approximation et les inégalités de Markoff-Bernstein; S. Ruscheweyh (University of Wurzburg), on Convolutions in Geometric Function Theory, R. S. Varga (Kent State University), on Zeros of Special Polynomials in Approximation Theory.

Partial financial support is available to selected participants, in particular citizens of NATO countries. For further information write to Ghislaine David, secretary, Séminaire de Mathématiques Supérieures. Université de Montréal, C.P. 6128, succ. A., Montréal, H3C 3J7, Canada.

MATHEMATICAL SPECTRUM

Mathematical Spectrum is a magazine intended for students in sixth forms, colleges and universities, and covers all branches of mathematics. Each volume consists of three issues published in September, January and May, and totals about 100 pages. Volume 13 (1980/81) contains articles on Fourier, careers in mathematics the problem of Buffon's needle, the life and work of Turing, odd binomial coefficients, continuous transformation groups, mathematics and sport, and the birthday problem and biological research. Letters to the editor are welcomed, and there are also

book reviews and problems to which solutions from readers are invited.

Short contributions on any mathematical topic at a level suitable for sixth formers are welcomed.

The price of Volume 13 is £2·00 for subscribers in Britain and Europe, and £4·00 elsewhere. Orders (with remittance to "Mathematical Spectrum") should be sent to The Editor, Mathematical Spectrum (Ref. L), Hicks Building, The University, Sheffield S3 7RH. A price list giving details of back issues will be sent on request.

D. W. SHARPE.

NEW AMS SERIES

The first books in the new AMS softcover series, *Contemporary Mathematics,* have recently appeared. Books in this series are published in the shortest possible time after the manuscript has been accepted and camera copy has been prepared. The cost will be kept low so that copies can be afforded by individuals.

The series can include proceedings of a conference, whether or not sponsored by the Society, or lecture notes submitted by an individual author. As is the case with the proceedings of many symposia, authors are encouraged to provide camera-ready copy for papers that have been accepted for publication. The Society will pay a typing fee of $5 or more per page for author-prepared copy, depending upon the number of lines to the inch, and will provide model paper and typing instructions. If necessary, papers can be prepared by the Society, but this increases costs and production time, and therefore sale price.

The manuscripts will be refereed by an editorial board, with proceedings of a conference being regarded as a unit. Acceptance might therefore precede a conference and be based upon the identity of the sponsor or organizing committee.

Typescripts or preprints of papers for this new series should be submitted to Professor James Milgram, Department of Mathematics, Stanford University, Stanford, California 94305, for transmission to the editors. If authors wish to type their papers in the format of *Contemporary Mathematics* prior to submission for publication, information about specifications and model paper is also available from Professor Milgram.

It is the policy of the AMS to keep its publications in print indefinitely. Papers published by the Society are therefore assured of being permanently available to scholars.

The first two titles in this series are: Markov Random Fields and their Applications by Ross Kinderman and J. Laurie Snell, and Proceedings of the Conference on Integration, Topology, and Geometry in Linear Spaces edited by William H. Graves.

ROYAL SOCIETY

A meeting for discussion, entitled Gauge Theories of the Fundamental Interactions, will be held on 29-30 April 1981. The organisers are P. T. Matthews, D. H. Perkins, J. C. Polkinghorne, A. Salam and C. H. Llewellyn Smith. Further information may be obtained from the Executive Secretary, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG.

VISITING MATHEMATICIANS

This list is the final one for the current academic year.

Name	*Home University*	*Visiting*	*Dates*
K. R. Ito	Kyoto	Bedford	Jan. 1981–July 1983
D. W. Robinson	New South Wales	Bedford	Jan.–July 1981
G. Strang	M.I.T.	Cambridge	May–June 1981
G. W. Whitehead	M.I.T.	Imperial	Jan.–July 1981
B. C. Rennie	Queensland	Sheffield	April–Sept. 1981

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. E. Smith, G. Otis Kenny & R. V. Ball (Eds.): Ordered groups (LN Pure & Appl. Maths 62), pp 192, S.Fr. 56 (Marcel Dekker).

K. H. Kim & F. W. Roush: Introduction to mathematical consensus theory (LN Pure & Appl. Maths 59), pp 192, S.Fr. 54 (Marcel Dekker).
M. Kline: Mathematics: The loss of certainty, pp 366, £11·50 (Oxford U.P.).
Soo Bong Chae: Lebesgue integration, pp 328, S.Fr. 75 (Marcel Dekker).
O. A. Nielsen: Direct integral theory, pp 165 (Marcel Dekker).
B. Dreben & W. D. Goldfarb: The decision problem, pp 271, £15·15 (Addison-Wesley).
C. Herbert Clemens: A scrapbook of complex curve theory, pp 186, £22·50 (Plenum).
F. Treves: Introduction to pseudodifferential and fourier integral operators, Vol. 1, pp 299, £29·95. Vol. 2, pp 348, £35 (Plenum).
J. Banas & K. Goebel: Measures of noncompactness in Banach spaces (LN in Pure & Appl. Maths 60), pp 97, S.Fr. 38 (Marcel Dekker).
L. A. Segal (Ed.): Mathematical models in molecular and cellular biology, pp 757, £45·00 (Cambridge U.P.).
I. R. Porteus: Topological goemetry (2nd), pp 486, £25 H/c, £9·95 P/b (Cambridge U.P.).
W. A. Gruver & E. Sachs: Algorithmic methods in optimical control, pp 231, £8·50 (Pitman).
I. S. Murphy: Basic mathematical analysis, pp 245, £4·95 (Arklay Pub.).
H. M. Farkas & I. Kra: Riemann surfaces (Graduate Texts in Maths, Vol. 71), pp 337, DM 58, U.S. $34·30 (Springer).
N. H. McClamroch: State Models of Dynamic Systems (A case study approach), pp 248, DM 34, U.S. $20 (Springer).
C. Truesdell: Studies in history of mathematics and physical sciences, Vol. 4: The tragicomical history of thermodynamics 1822–1854, pp 372, DM 99, U.S. $58·50 (Springer).
G. Kallianpur: Stochastic filtering theory, pp 316, DM 59·50, U.S. $35·10 (Springer).
J. C. Fraunthal: Mathematical modelling in epidemiology, pp 118, DM 36, U.S. $21·30 (Springer).
J. Heidmann: Relativistic cosmology, An introduction, pp 168, DM 48, U.S. $28·30 (Springer).
J.-P. Serre: Trees, pp 142, DM 48, U.S. $28·40 (Springer).
M. J. Collins (Ed.): Finite simple groups II, pp 345, £25, $57·50 (Academic Press).
J. A. Green: Polynomial representations of GL_n (LNM830), pp 118, DM 18, U.S. $10·70 (Springer).
V. Dlab, P. Gabriel: Representation Theory I (LNM 831), pp 373, DM 39, U.S. $23·10 (Springer).
V. Dlab, P. Gabriel: Representation Theory II (LNM 832), pp 673, DM 68, U.S. $40·20 (Springer).
T. Jeulin: Semi-martingales, et grossissement d'une filtration (LNM 833), pp 148, DM 21·50, U.S. $12·70 (Springer).
L. Pacholski, J. Wierzejewski & A. J. Wilkie: Model theory of algebra and arithmetic (LNM 834), pp 410, DM 43·50, U.S. $25·70 (Springer).
H. Zieschang, E. Vogt & H.-D. Goldeway: Surface and planar discontinuous groups (LNM 835), pp 334, DM 34·50, U.S. $20·40 (Springer).
S. A. Boorman & P. R. Levitt: The genetics of altruism, pp 459, U.S. $29·50 (Academic Press).
A. W. Michel & C. J. Herget: Mathematical foundations in engineering and science-algebra and analysis, pp 484 (Prentice Hall).
Jack F. Conn: Non-abelian minimal closed ideals of transitive lie algebras, pp 220, £4·15 (Princeton Univ. Press).
N. Woodhouse: Geometric quantization (Oxford Monograph), pp 316, £27·50 (Clarendon Press).
D. Kramer, H. Stephani, M. MacCallum & E. Herlt: Exact solutions of Einstein's field equations, pp 425 £30 (Cambridge U.P.).
S. Small: The mathematics of time-essays on dynamical systems, Economic processes and related topics, pp 151, DM 32, U.S. $18·90 (Springer).
B. Mercier: Lectures on topics in finite element solution of elliptic problems (Springer).
P. L. Bhatnagar: Nonlinear waves in one-dimensional dispersive systems, (Oxford Monographs), pp 142, £7·50 (Clarendon Press).
G. Gierz, K. H. Hofmann, K. Keimel, J. D. Lawson, M. Mislove & D. S. Scott: A compendium of continuous lattices, pp 371, DM 38, U.S. $22·50 (Springer).

NEW JOURNALS from the Institute of Mathematics and its Applications

In response to the continuing demand for a British journal devoted exclusively to numerical analysis, the *Journal of the Institute of Mathematics and its Applications* is to be divided, from January 1981, into two wholly independent journals—the *IMA Journal of Applied Mathematics* and the *IMA Journal of Numerical Analysis*. This will enable the editors to exercise tight control over the content and balance of every issue and will allow readers better access to papers on current research in their own field.
Initially, both journals will be published quarterly and each will contain approximately 500 pages a year. Special reduced rate is being introduced for subscribers ordering both journals.

IMA Journal of Applied Mathematics

(Formerly the Journal of the Institute of Mathematics and its Applications)

Editor: D. A. Spence

Publication: Quarterly
Subscription: Volume 27 (1981)
£48.00 (UK) £60.00 (overseas)
$141.00 (overseas)

Reduced rate for combined subscription to both journals:
£85.00 (UK) £106.00 (overseas)
$250.00 (overseas)

The journal will retain the emphasis on mathematical modelling and applied analysis for which the *Journal of the Institute of Mathematics and its Applications* now has a well-established reputation. In particular, the number of papers dealing with the applications of mathematics to control theory and mechanics will be increased.
It is also hoped that the journal will, in future, contain book reviews and specially commissioned review articles.

IMA Journal of Numerical Analysis

Editors: K. W. Morton and M. J. D. Powell

Publication: Quarterly
Subscription: Volume 1 (1981)
£48.00 (UK) £60.00 (overseas)
$141.00 (overseas)

Reduced rate for combined subscription to both journals:
£85.00 (UK) £106.00 (overseas)
$250.00 (overseas)

Numbering among its Editors and Associate Editors many of Britain's most distinguished mathematicians in this field, the journal will help to stimulate and co-ordinate numerical research in Britain.
The journal will present a balanced coverage of both the practical and theoretical aspects of the subject. Thus, papers providing a thorough and detailed analysis of a class of methods will appear alongside articles on new methods that have been developed with the promise of wide applicability. At the same time it should be noted that if the main purpose of a paper is to describe an application of mathematics, even though it may include some numerical analysis, it will normally appear in the Applied Mathematics journal.
By attracting the best and most original papers on the subject, it is hoped that the *IMA Journal of Numerical Analysis* will become the voice of numerical analysis research in Britain.

Academic Press

A Subsidiary of Harcourt Brace Jovanovich, Publishers
London New York Toronto Sydney San Francisco
24-28 Oval Road, London NW1 7DX, England
111 Fifth Avenue, New York, NY 10003, USA

European Journal of Combinatorics

Journal Européen de Combinatoire
Europäische Zeitschrift für Kombinatorik

Editors: M. Deza, M. Las Vergnas and P. Rosenstiehl

Publication: Quarterly
Subscription: Volume 2 (1981)
£30·00 (UK) £37·50 (overseas)
$88·50 (overseas)

The *European Journal of Combinatorics* is a new international quarterly journal of pure mathematics, specializing in theories arising from combinatorial problems. The Journal is primarily open to papers dealing with mathematical structures within combinatorics and/or establishing direct links between combinatorics and other branches of mathematics.
The Journal policy includes a strong emphasis on rigour in content and refereeing standards, and on ensuring rapid publication. It also aims to open the subject of combinatorics to a wider audience by keeping specialised references to a minimum. The Journal, edited and managed in Europe, welcomes contributions from all parts of the world. In addition to full length research papers, there are sections containing short notes, research problems and information.
The Journal has already been welcomed and enjoyed not only by workers in combinatorics but by mathematicians in other specializations.

Analytic Sets*

C. A. Rogers, J. E. Jayne, C. Dellacherie, F. Topsoe, J. Hoffman-Jorgensen, D. A. Martin, A. S. Kechris and A. H. Stone

1980, x+498 pp., £48·00 (UK only)/$115·50, 0.12.593150.6
Main headings—*K*-analytic sets. Un cours sur les ensembles analytiques. Analytic spaces and their application. Infinite games and effective descriptive set theory. Analytic sets in non-separable metric spaces. Problems. Indices.

Aspects of Contemporary Complex Analysis*

Proceedings of an International Conference Organized by the London Mathematical Society at the University of Durham (A NATO Advanced Study Institute)

Edited by D. A. Brannan and J. G. Clunie

1980, xiv+572 pp., £45·00 (UK only)/$108·00, 0.12.125950.1
Various presentations and problems of contemporary analysis by many of the world's most eminent mathematicians have been brought together in these proceedings, making a work without precedent in the field of complex analysis.

* These titles are available at a special price to individual members of the LMS. For details please apply to: **The Promotions Department, Academic Press, 24-28 Oval Road, London NW1**

Academic Press

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