

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 218

July 1994

FORTHCOMING SOCIETY MEETINGS

Friday 21 October 1994, Burlington House
Mathematical Biology

A. Fowler, V. Isham, T. Pedley, D. Rand

Friday 18 November 1994, Burlington House
Annual General Meeting

B.E. Johnson, J.R. Ringrose (Presidential Address)

LMS COUNCIL DIARY

Council met on Friday 20 May 1994. This was the meeting at which we designed the Council slate of nominees for next year's Council. Formally speaking, Council is chosen by a democratic ballot of the LMS membership, and members of the LMS can propose names. A passing Martian might see it differently: names rarely come forward from the members, and the Council slate tends to be elected without a contest. Be that as it may, to build its slate Council first includes people who are needed for specific purposes (for example as society officers), and then it aims for a reasonable spread of universities and subjects. The universities have normally been 'old' ones, but nothing compels this.

Happily some letters did arrive from the membership in response to the appeal in the April Newsletter for suggestions on the work of the Society. Council committees are considering them, together with the suggestions made during the London Mathematical Society Forum at the British Mathematical Colloquium in March. Some of the suggestions look distinctly interesting.

This was also the meeting at which we agreed citations for this year's LMS prize

winners - a very enjoyable activity, particularly if one happens to know the prize winners and their work.

The Education Committee is putting together a leaflet about career prospects in mathematics, intended for distribution to schools. We shall have a 'polished' version for the careers office and a black and white version for the pupils. There is no reason why mathematics should continue to fall behind other sciences in advertising its career possibilities.

As often, a large part of Council business was taken up with Publications. When this diary made a similar remark a few months ago, an anxious publisher wrote to us to ask if anything was happening that she ought to know about. So let me add at once that the bulk of it is routine business such as agreeing prices and sizes of journals. The task of running the Publications section grows every year, and we have to discuss how to keep our administrative structures up to date. Though we may have to change, the LMS has no intention of following our sister organisation the American Mathematical Society and employing a full-time bureaucracy to run its publications.

Wilfrid Hodges

NOMINATIONS FOR COUNCIL

Members of the Society are reminded that nominations of members for election to the Council may be made by writing to the Council and General Secretary (Professor R. Y. Sharp, Pure Mathematics Section, School of Mathematics and Statistics, University of Sheffield, Hicks Building, Sheffield S3 7RH). Such nominations must arrive before noon on 01 September 1994, must be made in accordance with the Charter, Statutes and By-Laws of the Society, must state the Office or term of Membership-at-Large to which nomination is made, and must be signed by the member nominated, by the nominator and by a seconder who is also a member of the Society. The sample nomination form at the foot of this notice, which could be photocopied or imitated, may help members of the Society.

All valid nominations received are added to those made by the Council, and circulated to the Society on a Ballot Paper which is used for the Council Elections at the Annual General Meeting in November. It should be noted that Council will make just enough nominations to fill the expected vacancies, so that, if this notice leads to no additional nomination, then the 1994 Council Elections will, like those of the last six years, be essentially a formality.

Council's decisions about its nominations are indicated in the following list.

COUNCIL'S NOMINATIONS FOR THE 1994 ELECTIONS

OFFICERS (one-year terms)

President

N. J. Hitchin

Vice-Presidents

D. G. Crighton

*E. G. Rees

Council and General Secretary

R. Y. Sharp

Publications Secretary

D. A. Brannan

Treasurer

A. O. Morris

Meetings and Membership Secretary

D. J. Collins

Librarian

J. A. Erdos

MEMBERS-AT-LARGE (two-year terms)

R. A. Bailey

A. Gardiner

*J. F. Toland

F. H. J. Cornish

*J. D. S. Jones

C. T. C. Wall

MEMBERS-AT-LARGE (one-year terms)

W. A. Hodges

J. C. Robson

*U. Martin

M. J. Taylor

Notes. (i) Members are reminded that J. C. Robson is Chair of the Society's Education Committee. U. Martin will take over the Chair of the Society's Computer Science Committee from W. A. Hodges with effect from 01 January 1995.

(ii) The persons whose names are marked with an asterisk are not on the retiring Council.

(iii) Members should note that the following two Members-at-Large of Council elected for two-year terms in November 1993 will have one remaining year to serve: K. A. Brown, P. T. Saunders.

R. Y. Sharp
Council and General Secretary

We, the undersigned members of the London Mathematical Society, nominate

(block letters)
for election as (delete as applicable) Member-at-Large of Council (one-year/two-year term)/Officer (insert Office for which nominated)
in the 1994 Council Elections of the Society.

Nominator's signature and printed name

Seconder's signature and printed name

I confirm that I am willing to stand for election as indicated above.

Nominee's signature

OXFORD UNIVERSITY PRESS

Knots and Quantum Gravity

Edited by J. C. BAEZ

The first title in a new series from Oxford, this book is the proceedings of a workshop on knot theory held in 1993. There are contributions from experts in the field.

Oxford Lecture Series No. 1

0-19-853490-6, 256 pp., 43 line illustrations, Clarendon Press, July 1994

£27.50

Groups of Finite Morley Rank

ALEXANDRE BOROVIK and ALI NESIN

The first book available providing comprehensive coverage of a new research area in algebra and model theory. The exposition starts from scratch and ultimately progresses on to discussion of open problems.

Oxford Logic Guides No. 26

0-19-853445-0, 422 pp., Clarendon Press, August 1994

£45.00

Automorphisms of First-order Structures

R. W. KAYE and H. D. MACPHERSON

This book covers how mathematical structures are described by model theoretic methods and permutation theoretic methods, and the relationships between the two. It provides an introduction to current research concerning the connections between model theory and permutation group theory.

0-19-853468-X, 400 pp., Clarendon Press, July 1994

£50.00

Borel's Methods of Summability

BRUCE L. R. SHAWYER and BRUCE B. WATSON

The only book available to provide coverage of recent research developments and applications in the expanding field of Borel summability.

Oxford Mathematical Monographs

0-19-853585-6, 256 pp., Clarendon Press, July 1994

£37.50

Diagonalization and Self-Reference

RAYMOND SMULLYAN

The main purpose of this book is to present a *unified* treatment of fixed points as they occur in Gödel's incompleteness proofs, recursion theory, combinatory logic, semantics, and metamathematics.

Oxford Logic Guides

0-19-853450-7, 288 pp., Clarendon Press, July 1994

£35.00

***For further information
about mathematics
titles from OUP please fax
Gill Heasman for a
catalogue:
+ 44 (0)865 267782***



***Use our fast ordering, credit card
hotline service:***

Tel: + 44 (0)536 454534 or

Fax: + 44 (0)536 746337

LMS PROGRAMME AND CONFERENCE FUND

The Society's Programme and Conference Fund is used to give financial support to various mathematical activities in the UK. This fund is administered by the Society's Programme Committee. Grants are made under four main headings.

1. Scheme 1 Visitors

Under this scheme, a speaker from abroad is invited to spend about two weeks in the UK, to address a Society Meeting and to give lectures in three or four separate institutions. The Society pays the cost of the visitor's travel to and from the UK and living expenses in London, and the host institutions are expected to share the cost of travel within the UK and local accommodation. LMS Council is anxious that greater use should be made of this scheme to enhance, by such visits, the benefit of LMS membership to those who are not easily able to attend London meetings. In planning the Society's future meetings, Programme Committee will have this scheme in mind, and suggestions from UK institutions for visitors they would like to receive but whose expenses they could not normally afford are strongly encouraged. Programme Committee tries to plan Society Meetings at least six months in advance. Thus a suggestion for a visitor under this scheme should best be made about one year before the proposed visit.

2. Scheme 2 Visitors

Under this scheme, some financial support is provided for visitors to the UK who do not address a Society Meeting but will give lectures in at least three separate institutions. Exceptionally, support under this scheme might be provided for a speaker addressing just one meeting which is regional in scope. The LMS contribution under this scheme would be for the visitor's travelling expenses to and from the UK. Host

institutions are expected to share the cost of travel within the UK and local accommodation. All arrangements for a visit supported under this scheme are the responsibility of the member who makes the application. An application, in the form of a letter to the Meetings and Membership Secretary (address below), can be submitted at any time. A letter of application should contain a brief statement of the academic standing of the proposed visitor and of the justification of the visit, together with an estimated fare at advance purchase or other advantageous rate.

Ideally applications should be made at least three months before the starting date of the proposed visit, so that the lectures to be given can be publicized in the Society's Newsletter but straightforward applications can be processed quickly if necessary. Grants made under this scheme do not normally exceed £300.

Since 1 December 1993, grants have been made under Scheme 2 to support the following visits: Professor M. Gharamani (H.G. Dales), Professor V.A. Kozlov (A.B. Movchan), Professor H. Glover (C.B. Thomas), Dr E. Strouse (N.J. Young), Professor R.M. Kauffmann (D.E. Edmunds), Professor A. Adem (W. Sutherland), Professor S. Treil (G. Blower).

3. fSU Visitor Scheme

Under this scheme the London Mathematical Society will fund a limited number of short visits either by mathematicians from the former Soviet Union (fSU) to the United Kingdom (UK) or by mathematicians from the UK to the fSU. The level of funding will be such that basic travel and subsistence costs will be covered.

Visits to a single institution, to a number of institutions or attendance at a conference will be eligible for funding. Success of an application will depend mainly on the likelihood of potential benefit to mathematics in the fSU.

Applications for a grant under this scheme should be made by mathematicians at UK institutions, both for visits to the UK and for visits to the fSU. They should be supported and counter-signed by a member of the Society if the applicant is not already a member of the Society. There is no application form as such: a letter of application should be sent to the Meetings and Membership Secretary (address below) giving details of the academic case for support and details of anticipated costs. This can be done at any time, but normally at least three months before the date of the proposed visit to allow for consideration by the Society's Programme Committee and in the case of visits to the UK, an announcement of the visit in the Society's Newsletter. A grant under the scheme would normally be for less than £1000.

All arrangements for a visit under this scheme are the responsibility of the applicant. The fSU Scheme has its own allocation within the Programme and Conference Fund.

Grants for the following visits have been made since 1 December 1993: M. Shanahan for M. Soutchanski, B. Hartley for V.D. Mazurov and others, N.J. Young to Irkutsk, R.L. Hudson to Moscow and Kazan, A.B. Movchan for S.A. Vavilov, P.M. Higgins to Moscow, Ivanova and Saratov, C.T.H. Baker for G. Bocharov, A.S. Fokas for I.M. Gelfand, C.T.H. Baker to Moscow, H.G. Dales for L.I. Pughach, C.J. Chapman to St Petersburg

4 Conference Grants

Grants are made to the organisers of conferences to be held in the United Kingdom. Programme Committee tends to give priority to the support of meetings where an LMS grant can be expected to make a significant contribution to the viability and success of the meeting. Support of larger meetings of high quality is not ruled out but for such meetings an LMS grant would normally cover only a modest part of the total cost. An application form, obtainable from the Meetings and Membership Secretary

(address below) sets out conditions under which grants are normally made and requests the information Programme Committee usually requires when considering an application. Potential applicants should note that the Society is reluctant to award grants to conferences which clash with the British Mathematical Colloquium.

The following grants for support of conferences have been made since 1 December 1993: £3000 to H. Ockendon for the Oxford Centre for Industrial and Applied Mathematics; £325 to A.J.W. Hilton for the Reading 'One-Day Combinatorics Colloquium', £1125 to P.E. Newstead for the conference 'Vector Bundles on Algebraic Curves', £2000 to B.D. Sleeman for the '13th Conference on ODEs and PDEs', £817 to T.H. Lenagan for the Scottish Algebra Day, £928 to D.A. Lavis for 'STATMECH-10', £1100 to G.A. Niblo for the 9th British Topology Meeting, £1828 to M.Y. Prest for the conference 'Model Theory: Stability and its Relationship to Algebraic Geometry', £750 to A.H.M. Hoare for the W.N. Everitt 70th birthday conference, £644 to S.J. Hogan for the conference 'The Mathematics of Impact', £2000 to R.L. Hudson and V.P. Belavkin for the conference 'Quantum Communications and Measurement', £1750 to S.M.J. Wilson for the 'Workshop on Natural Representations of Galois Groups', £255 to I.N. Baker for the conference 'One-day Function Theory'.

Further information about these functions of Programme Committee can be obtained from the Meetings and Membership Secretary, Dr. D.J. Collins, School of Mathematical Sciences, Queen Mary and Westfield College, Mile End Road London E1 4NS (telephone 071-975-5480; e-mail d.j.collins@qmw.ac.uk) who will be pleased to discuss proposals informally with potential applicants and give advice on the submission of an application. The next meeting of Programme Committee will be held in September and it would be appreciated if applications to be considered at that meeting could be submitted no later than 31st August 1994.

VISIT OF PROFESSOR A.G. ELACHVILI

Professor A.G. Elachvili of the Institute of Mathematics, Tbilisi, Georgia (currently visiting the Department of Mathematics, Martin Luther University, Halle, Germany) will visit the United Kingdom in September 1994. The visit is supported by the London Mathematical Society scheme for the promotion of mathematical contacts between the United Kingdom and the states of the former Soviet Union.

Professor Elachvili will visit the Mathematics Department of Warwick University from 5-14 September (host: Professor R.W. Carter), the Mathematics Department of U.M.I.S.T. from 15-23 September (host: Dr A.V. Borovick), and the Mathematics Department of Queen Mary & Westfield College, London from 26-30 September (host: Professor S. Donkin).

DEPARTMENTAL NEWS

Imperial College Dr E.L. Ortiz has been appointed Professor of Mathematics and the History of Mathematics.

Leeds University The following appointments have been made in Pure Mathematics: Dr Bill Crawley-Boevey, Dr Joerg Eschmeier, and Dr Dugald Macpherson. The Heads of the three departments will be as follows from 1 August 1994: Applied Mathematics: Professor Malcolm Bloor; Pure Mathematics: Professor Chris Lance; Statistics: Professor John Kent; and the Chairman of the School of Mathematics is Professor John Brindley.

Queen Mary & Westfield College Professor R.A. Bailey will be joining the School of Mathematical Sciences on 1 October 1994 as Professor of Statistics. Charles Goldie has been appointed Professor of Probability Theory.

Sussex University The Mathematics and Statistics Subject Group will have two Russian visitors coming on 1 October: Professor V.B. Lidskii (Moscow) for 1 month and Professor S.Z. Levendorskii (Rostov-Don) for 2 months.

QUANTUM COMMUNICATIONS AND MEASUREMENT WORKSHOP

As announced previously an International Workshop on Quantum Communications and Measurement will be held at the University of Nottingham from 10-16 July 1994. The workshop is supported financially by a grant from the London Mathematical Society, as well as by Hitachi, Mitsubishi, KDD, Tamagawa University, the Soros Foundation and other sponsors. Confirmed speakers include L. Accardi, A. Barchielli, S.L. Braunstein, P. Busch, C. Fabre, K. Haubold, K. Kasai, P.L. Knight, J.T. Lewis, G. Milburn, M. Ohya, M. Ozawa, K.R. Parthasarathy, I.C. Percival, A. Rimini, C.M. Savage, P. Staszewski and H.P. Yuen.

For further information contact the organisers V.P. Belavkin and R.L. Hudson, Department of Mathematics, University of Nottingham, University Park, Nottingham NG7 2RD, tel: 0602 514931, fax: 0602 514951, e-mail: qcm@maths.nott.ac.uk.

EPSRC MATHEMATICS NEWS

The first issue of "Mathematics News", a newsletter of the Mathematics Committee of the Engineering and Physical Sciences Research Council, appeared in May 1994 and was circulated to all Mathematics Departments. The aims of the newsletter are to publicise the activities funded by the Mathematics Committee and to inform readers of policy and procedural news. The committee is keen to achieve a high publicity profile for mathematics. Input to future issues is invited and readers are encouraged to send articles, letters or suggestions to EPSRC, Polaris House, North Star Avenue, Swindon SN2 1ET.

The mathematical community is encouraged to disseminate the newsletter as widely as possible and anyone wishing to receive copies should telephone Dr Philippa Hemmings at EPSRC on 0793 - 444162.



UNIVERSITY OF
OXFORD

Savilian Professorship of Geometry

The electors intend to proceed to an election to the Savilian Professorship of Geometry, which will fall vacant upon the retirement of Professor I.M. James, FRS, with effect from 1 October 1995. The stipend of the professorship is at present £35,859 per annum.

The professor will be required to lecture and give instruction in Geometry or some other branch of Pure Mathematics.

A non-stipendiary professorial fellowship at New College is attached to the professorship.

Applications (ten copies, or one only from overseas candidates), naming three referees, should be received not later than **26 September 1994** by the Registrar, University Offices, Wellington Square, Oxford OX1 2JD, from whom further particulars may be obtained.

MATHEMATICS AND COMPUTING

a m turing



ANONYMOUS FTP ARCHIVE

In the December 1993 Newsletter we gave instructions for reaching the LMS ftp archive from a Unix terminal. Here we repeat those instructions, together with instructions for VMS users (which were very kindly sent to us by Tony Wickstead):

1. At a Unix terminal, log in and type

```
ftp ftp.qmw.ac.uk <return>
```

After a pause the terminal will ask you for your Name, and you should reply

```
anonymous <return>
```

You will then be asked for your Password, and for this you type your e-mail address (followed by <return>). When the next prompt appears, type

```
cd /pub/LMS <return>
```

This will get you into the archive. To get the file 'README', type

```
get README <return>
```

The archive files are in 'filestore' and to reach them you type

```
cd filestore <return>
```

You can then list the files by typing

```
dir <return>
```

You can transport any of the files to your home directory by typing

```
get (name of file) <return>
```

Wait until a message appears on the screen to tell you that the transfer is complete. When you have finished transporting items from the archive, type

```
quit <return>
```

and you will be returned to your home directory.

2. If you are at a VAX machine using

VMS, then follow these instructions:

After logging in, type

```
FTP FTP.QMW.AC.UK <return>
```

Reply to prompt for name with

```
ANONYMOUS <return>
```

Reply to password request with

```
Your e-mail address <return>
```

Change to the correct directory by the following command (in it and all subsequent strings enclosed by "..." the case of letters is important).

```
SET DEFAULT "/pub/LMS" <return>
```

Get the file 'README' by

```
GET "README" <return>
```

Change to 'filestore' by

```
SET DEFAULT "filestore" <return>
```

List files by typing

```
DIR <return>
```

or by

```
DIR/FULL <return>
```

which gives file sizes as well. Retrieve a file by typing

```
GET "(name of file)" <return>
```

When finished type

```
EXIT
```

3. The archive is also reachable by gopher and world wide web. Your local system manager can tell you whether you have these facilities, and how to use them.

The archive directory contains three items, a file called 'README', a directory called 'filestore' and a directory called 'tmp'. The file 'README' contains instructions for using the archive, and a list

of the items in it. To read it, you have to transport it to your home directory as above. The directory 'tmp' is for putting files into the archive; see the instructions on 'README'.

Two recent items in the archive are a summary of the LMS grant schemes for

meetings and visitors, and how to use them; and a report on electronic publishing by the LMS Computer Science Committee.

Wilfrid Hodges, w.hodges@qmw.ac.uk
Derek Holt, dfh@maths.warwick.ac.uk

===== :
This occasional column is for the discussion of topics on the boundary between mathematics and computer science, thus covering both applications of mathematics in computer science and uses of computers in mathematics. Relevant material such as opinions, notices about Maths & CS meetings and reviews of research, teaching and support software is solicited. Contributions should be sent to the editors of the column: w.hodges@qmw.ac.uk (Wilfrid Hodges, Queen Mary & Westfield College) dfh@maths.warwick.ac.uk (Derek Holt, University of Warwick).

LMS 1994 PRIZES

The Polya Prize is awarded to D. Williams of the University of Bath in recognition of his distinguished original work in probability theory, his exceptional quality as an expositor of that subject, and his influence on the development of the subject in the United Kingdom.

The Senior Berwick Prize is awarded to A.A. Ranicki of the University of Edinburgh for his book 'Lower K- and L-Theory' (London Mathematical Society Lecture Notes 178, Cambridge University Press, 1992).

Junior Whitehead Prizes are awarded to P.H. Kropholler of Queen Mary and Westfield College for his work in the cohomology of groups and geometric group theory, and to R.S. MacKay of the University of Warwick for his work in both the pure and applied aspects of dynamical systems.

R. Y. Sharp
Council and General Secretary

LMS SPITALFIELDS DAY

A Spitalfields Day will be held at the Isaac Newton Institute, Cambridge, on Monday 19 September 1994 on 'Moduli Spaces and Soliton Dynamics'. The speakers will include Sir Michael Atiyah, Dr Gary Gibbons and Professor Richard Montgomery. For further information contact Professor R.S. Ward at the Isaac Newton Institute.

LMS INVITED LECTURES - 1995

The London Mathematical Society organises an annual series of 10 expository lectures by a distinguished mathematician given over the space of one week. The lecturer for 1995 will be Professor Paul F. Baum of Pennsylvania State University who will speak on 'Trees, Buildings, Symmetric Spaces and K-Theory'. The lectures will take place between 18 April and 22 April 1995 at the University of Manchester.

A further notice giving more details will appear in a subsequent issue of the Newsletter. Enquiries may be addressed to Professor R.J. Plymen at the University of Manchester, tel. 061-275-5853, e-mail: mbbgsrp@uk.ac.mcc.cms.

LMS RECEPTION ICM 1994

The London Mathematical Society will be holding a Meeting and Reception, for its members, during ICM-94 at 6.30 pm on Monday 8 August in Rooms E11 and E13 (ground floor) in the Kollegiengebäude (main building) of the Universität Zürich for which the street address is 71 Rämistrasse. Members who wish to attend should apply for their free ticket to the Administrator, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, no later than 15 July. The Society hopes to entertain as many as possible of its members who are attending the International Congress but numbers are limited by the capacity of the rooms.

Neural Networks and Qualitative Physics

A Viability Approach

JEAN-PIERRE AUBIN

This book is devoted to mathematical methods.

£29.95 net HB 0 521 44532 9 288 pp. 1994

The Theory of Finite Linear Spaces

Combinatorics of Points and Lines

L. M. BATTEN and A. BEUTELSPACHER

This is the first comprehensive text to cover finite linear spaces.

£30.00 net HB 0 521 33317 2 240 pp. 1994

Computational Geometry in C

JOSEPH O'ROURKE

This is the first textbook suitable for introducing undergraduate students to the design of geometry algorithms.

£35.00 net HB 0 521 44034 3 358 pp. 1994

£16.95 net PB 0 521 44592 2

Mathematics, Machines, and Gödel's Proof

NATARAJAN SHANKAR

This book describes the use of computer programs.

£25.00 net HB 0 521 42027 X 248 pp. 1994

*Cambridge Tracts in Theoretical Computer Science 38***Arithmetic of Blowup Algebras**

WOLMER V. VASCONCELOS

This volume is a reference guide to the theory of Rees algebras and related topics.

£22.95 net PB 0 521 45484 0 352 pp. 1994

London Mathematical Society Lecture Note Series 195

Special price for LMS Members £17.21

Locally Presentable and Accessible Categories

J. ADAMEK and J. ROSICKY

This book provides an exposition of both the theory and the applications of these categories at a level accessible to graduate students.

£25.00 net PB 0 521 42261 2 330 pp. 1994

London Mathematical Society Lecture Note Series 189

Special price for LMS Members £18.75

*Now in paperback***Algebraic Graph Theory**

Second Edition

NORMAN BIGGS

In this substantial revision of his excellent book Professor Biggs has clarified and updated the text, whilst leaving the structure unchanged.

£14.95 net PB 0 521 45897 8 210 pp. 1994

*Cambridge Mathematical Library***Categories for Types**

ROY L. CROLE

This textbook explains the basic principles of categorical type theory and the techniques used to derive categorical semantics for specific type theories.

£40.00 net HB 0 521 45092 6 320 pp. 1993

£14.95 net PB 0 521 45701 7

Microlocal Analysis for Differential Operators

An Introduction

ALAIN GRIGIS and JOHANNES SJÖSTRAND

This book corresponds to a graduate course given many times by the authors, and will be useful to mathematicians and theoretical physicists.

£19.95 net PB 0 521 44986 3 176 pp. 1994

London Mathematical Society Lecture Note Series 196

Special price for LMS Members £14.96

The Algebraic Characterization of Geometric 4-Manifolds

J. A. HILLMAN

This book describes work on the characterisation of closed 4-manifolds.

£19.95 net PB 0 521 46778 0 187 pp. 1994

London Mathematical Society Lecture Note Series 198

Special price for LMS Members £14.96

*Reissue***Methods of Algebraic Geometry**

The late W. V. D. HODGE and D. PEDOE

Together, these books give an insight into algebraic geometry that is unique and unsurpassed.

Volume 1 £14.95 net PB 0 521 46900 7 448 pp. 1994

Volume 2 £14.95 net PB 0 521 46901 5 416 pp. 1994

Volume 3 £14.95 net PB 0 521 46775 6 348 pp. 1994

Cambridge Mathematical Library

Phyllotaxis

A Systemic Study in Plant Morphogenesis

ROGER V. JEAN

This book is the first to deal with phyllotaxis and will be of interest to physicists, botanists and mathematicians.

£45.00 net HB 0 521 40482 7 400 pp. 1994

The Algebraic Theory of Modular Systems

F. S. MACAULAY

Introduction to this edition by PAUL ROBERTS

The wealth of thinking expounded here by Macaulay will still be a source of inspiration to all workers in commutative algebra.

£12.95 net PB 0 521 45562 6 144 pp. 1994

Cambridge Mathematical Library

The Riemann Approach to Integration

Local Geometric Theory

WASHEK F. PFEFFER

Presents a detailed and mostly elementary exposition of the generalised Riemann-Stieltjes integrals.

£30.00 net HB 0 521 44035 1 320 pp. 1994

Cambridge Tracts in Mathematics 109

Geometric Differentiation

For the Intelligence of Curves and Surfaces

IAN PORTEOUS

This textbook provides a unique exposition of surface theory.

£35.00 net HB 0 521 39063 X 315 pp. 1994

Arithmetical Functions

WOLFGANG SCHWARZ and J. SPILKER

This book covers the characterization of multiplicative and additive arithmetical functions.

£25.00 net PB 0 521 42725 8 388 pp. 1994

London Mathematical Society Lecture Note Series 184

Special price for LMS Members £18.75

An Introduction to Homological Algebra

C. WEIBEL

Paints a portrait of the subject of homological algebra as it exists today.

£55.00 net HB 0 521 43500 5 448 pp. 1994

Cambridge Studies in Advanced Mathematics 38

ORDER FORM

To order please send this form to Tom Peacock at the address below, phone 0223 325970 or fax 0223 315052.

Qty	Author	ISBN	Price
Total			

I enclose a sterling cheque/eurocheque (payable to Cambridge University Press)

Please debit my credit card (Access/Mastercard/VISA/Amex)* *Please delete as applicable

Card no. _____

Expiry Date _____

Signature _____

Name of cardholder _____

Address _____



CAMBRIDGE
UNIVERSITY PRESS

FREEPOST, The Edinburgh Building,
Shaftesbury Rd., Cambridge CB2 1BR
E-mail: SCIENCE@CUP.CAM.AC.UK

"NATURE" AND SOVIET CENSORSHIP

This story started at the end of the 1950s and has now finished. I was a student in the Mathematics Department of Leningrad (now St Petersburg) University. One day our lecturer on the History of the Mathematics called me after his lecture and asked: "Do you know the name Hardy?". "Of course, I have heard of him", I answered, "He was one of the most prominent British mathematicians". "Well, he continued, Hardy died in 1948, and some years ago I found the issue of "Nature" with Hardy's obituary. I was very surprised that one paragraph in that short obituary was cut out! Hardy, was a pure mathematician, and far from politics. I tried to check in another library the same result: that paragraph was cut out. What does it mean? You are young, the lecturer told me, maybe sometime you will find out what was in that paragraph," he finished.

I immediately ran to the main library the State Public Library - and found that issue of "Nature". My professor was quite right: there was a hole instead of the small paragraph in the end of the obituary. I tried to imagine what kind of "antisoviet propaganda" could be in that article.

Here I want to explain that in that time (during Stalin's era and later till the 80s) Soviet censorship was incredibly savage. Any mention of Soviet history, Soviet leaders, Soviet affairs and realities had to be either in support or had to be cut out. Only a few scientific foreign journals were accessible and almost no popular magazines could be found in public libraries. There were no private subscriptions and even those magazines which were allowed had been strictly censored and a lot of articles were pulled out or had gaps as in our case. Some of the journals you could read only by special permission of the administration in so called special rooms, but such permission could not be obtained by everybody. The censors tried to preserve the "innocence" of the consciousness of the people!

That lecturer died many years ago and I had forgotten the story. For a long time - up to the 1990s - I had no permission to go

abroad. Apparently the KGB did not trust me as that professor had. During my first visit to the UK as a Kapitza Fellow I recalled the story and as more than 30 years had elapsed, went to the library of the University for the same reason: to find the issue of "Nature" No. 4099, May 22, 1948, p.798, and to read the obituary of Hardy, perhaps, without gaps. With great impatience I looked for the paragraph. Now I give you the opportunity to read that paragraph in its entirety:

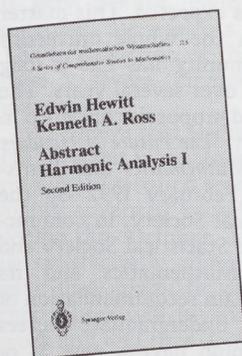
Hardy had one ruling passion - mathematics. Apart from that his main interest was in ball-games, of which he was a skilled player and an expert critic. An illustration of some of his interests and antipathies is given by this list of "six New-Year wishes" which he sent on a postcard to a friend (in the 1920s):

- (1) prove the Riemann hypothesis;
- (2) make 211 not out in the fourth innings of the last Test Match at the Oval;
- (3) find an argument for the non-existence of God which shall convince the general public;
- (4) be the first man at the top of Mount Everest;
- (5) be proclaimed the first president of the USSR of Great Britain and Germany;
- (6) murder Mussolini.

What can we say? How stupid and malicious were the ideologists in communist Russia, who had considered even a professor's jokes as unacceptable for the poor Soviet readers! How many stories of such a type one can find - this is only one of millions of examples. And even this funny story is rather sad, isn't it?

A.M. Vershik,
St Petersburg Math. Inst.

Providing a Better Understanding of Harmonic Analysis



V. Havin, B. Jöricke

The Uncertainty Principle in Harmonic Analysis

1994. Approx. 550 pp. (Ergebnisse der Mathematik und ihrer Grenzgebiete. 3. Folge/A Series of Modern Surveys in Mathematics, Vol. 28) Hardcover DM 188,- ISBN 3-540-56991-X

The authors approach the subject of the uncertainty principle in various ways taking into account new mathematical results which were established within the last 15 years. There is no comparable book on this topic and hence Havin's and Jöricke's work fills a gap in the literature.

E. Hewitt, K.A. Ross

Abstract Harmonic Analysis I

Structure of Topological Groups.
Integration Theory. Group Representations

2nd ed. 1979. 2nd printing 1994. IX, 519 pp. (Grundlehren der mathematischen Wissenschaften / A Series of Comprehensive Studies in Mathematics, Vol. 115) Softcover DM 98,- ISBN 3-540-94190-8

This book begins with preliminaries in notation and terminology, group theory, and topology. It continues with elements of the theory of topological groups, the integration on locally compact spaces, and invariant functionals; and concludes with convolutions and group representations, and characters and duality of locally compact Abelian groups.

V.P. Khavin, N.K. Nikol'skij
(Eds.)

Commutative Harmonic Analysis I

General Survey.
Classical Aspects

1991. IX, 268 pp. 1 fig. (Encyclopaedia of Mathematical Sciences, Vol. 15) Hardcover DM 144,- ISBN 3-540-18180-6

This is the first volume of four already scheduled in the subseries **Commutative Harmonic Analysis** of the EMS. Starting from the level of the average graduate student, it ends with some topics in modern Fourier analysis. Besides its primary audience, the book should be useful to researchers in neighbouring fields, e.g. ODE, PDE, and mathematical physics.

Distribution rights for Taiwan:
Unifacmanu Trading Co.,
Taipei, Taiwan

In preparation:

V.P. Gurarij

Commutative Harmonic Analysis II

Coeditor: N.K. Nikol'skij
1995. (Encyclopaedia of Mathematical Sciences, Vol. 25) Hardcover ISBN 3-540-51998-X

Distribution rights for Taiwan:
Unifacmanu Trading Co.,
Taipei, Taiwan

Prices are subject to change without notice. In EC countries the local VAT is effective. Customers in EC countries, please state your VAT-identification-number if applicable.

For information on prices in Austrian schillings and Swiss francs please consult the German book directory "VLB - Verzeichnis lieferbarer Bücher" or our general catalogue.



Springer

pr.1751.MNT/SF

Springer-Verlag Heidelberger Platz 3, D-14197 Berlin, F.R. Germany 175 Fifth Ave., New York, NY 10010, USA Sweetapple House, Catteshall Rd., Godalming, Surrey GU7 3DJ, England 26, rue des Carmes, F-75005 Paris, France 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong Avinguda Diagonal, 468-4° C, E-08006 Barcelona, Spain Wesselényi u. 28, H-1075 Budapest, Hungary

LMS RESPONSE TO OST CONSULTATIVE DOCUMENT

'A New Structure for Postgraduate Research Training'

This response comes from the London Mathematical Society, which is the oldest national learned society for mathematics in the United Kingdom.

The London Mathematical Society has read with great interest the new consultative document. It welcomes many of the features which have been added to the original White Paper proposals, but has serious reservations about some of the implications of the detailed proposals regarding the institution of MRes degrees. A summary of its recommendations comes at the end of this document.

In general, our belief is that different subjects have different needs, and so great flexibility is needed in any structures which are to be applied across disciplines. We welcome the evidence that flexibility is being proposed, and we express our hope that it will be extended even further in the final recommendations. Our comments henceforth are specific to the needs of mathematics, both within academic areas and in industry and commerce. We recognise differences between the education systems in Scotland and those in the rest of the UK, in particular in the traditional length of an honours undergraduate degree. Our comments are mainly concerned with the system in England, Wales and Northern Ireland.

First we discuss the overall training programme, from starting an undergraduate degree to completing a PhD. We are delighted that the OST has accepted the case, put forward by many science disciplines, that there is a genuine need to extend, from 6 years to 7 years, the normal length of time devoted to this programme. Since we agree on this point we will not labour it. We would, however, wish the regulations not to be punitive with regard to the submission of the thesis precisely within this 7-year period, but would recommend a period of grace thereafter similar to that currently granted.

Having accepted this need for a 7-year programme, we turn our attention to the best way to organise both 3-year, 4-year

+ and 7-year programmes for the different student progressions expected. This matter is one upon which the whole university mathematical community has had a long and detailed debate over several years. The debate led to detailed proposals contained in the Neumann report, '*The Future of Honours Degree Courses in Mathematics and Statistics*', published in February 1992 by the London Mathematical Society, in conjunction with the Royal Statistical Society and the Institute of Mathematics and its Applications. The main recommendation of the report was that undergraduate degrees in mathematics should have a new 3- or 4-year degree structure whereby students would first take a common two year course, thereafter splitting into two groups. These two groups would follow two different programmes. One group would take a further year to graduate with a BSc, which would be an excellent preparation for most types of employment usual to a mathematics graduate - in industry, finance, commerce etc. The other group would take a further two years to complete the 4-year undergraduate degree - entitled MMath or MSci. The members of this group would be suitably trained to work in industry, research council establishments, etc., as professional mathematicians. They would also be well fitted to start on a 3-year PhD programme. Attached is a document*, entitled *Proposed Four-year First Degree in Mathematics*, which gives a summary of the proposals and of the reasons underlying them. This was submitted to the DfE in December 1992 and accepted by the DfE in March 1993 as being in accordance with existing regulations for first degrees.

The reasons we have expanded on the theme of our new undergraduate degrees are twofold. On the one hand, they clearly impact on the OST proposals. Indeed we have noted with pleasure that the OST document suggests that exemption from an MRes might be accorded to graduates of a 4-year MMath or MSci degree: we wish to emphasise that we believe it to be essential that such exemption be agreed. On the other hand, *our proposals have already been implemented*. Indeed, over 40 mathematics

departments in English and Welsh universities are already committed to introduce them, and many students are already involved. Moreover, this pattern of provision is very flexible, giving very satisfactory outcomes for students after 3 and 4 years. The introduction of the new MRes would have a severe, disruptive effect on this innovation.

We believe that the main needs for a new PhD student in mathematics are not formal training in research techniques, but rather a highly advanced knowledge and skill base within the discipline. This, we believe, will be satisfactorily addressed by the new 4-year undergraduate degree. Nevertheless, this degree will invariably include project work and will thus accomplish some of the objectives set for the MRes. There is no reason why the other objectives could not be achieved within the 3-year PhD programme following a 4-year undergraduate degree. In particular, this applies to the relatively small amount of formal research training which might be relevant.

(The situation in Scotland is different in that the traditional Honours degree is four years in length. There is a strong consensus within the mathematics departments of the older Scottish universities to the effect that a 4-year first class Honours degree in mathematics can provide a suitable background for a 3-year PhD. These 4-year degrees already involve (or are about to involve) a substantial project element; moreover the flexibility of the Scottish degree structure allows the best students to cover more advanced work. This latter feature could be extended, and appropriate 'research training modules' included, as necessary, to enable top undergraduates from Scotland to proceed directly to a PhD. The alternative - an 8-year minimum from school to PhD in Scotland - might well deter high flying students from studying north of the border.)

We must be aware, however, that not all mathematics departments will wish, or be able, to operate the 4-year undergraduate programmes described above. For their graduates, and for those graduates who have chosen to follow a 3-year undergraduate course, it is vitally important that avenues should exist which would lead them, through a further year of training, to

be ready for employment as professional mathematicians, statisticians, operational researchers, etc., and to be ready to undertake a 3-year PhD programme thereafter. It is in this respect that the London Mathematical Society is in most sympathy with the proposals of the OST. However, we note that there already exist a whole variety of 1-year postgraduate MSc degrees which fulfil these needs. These courses are constantly reviewed on a number of criteria which will, in future, take explicit account of the White Paper philosophy and recommendations, and the courses cover large areas of pure and applied mathematics, and operational research and statistics. It seems wisest therefore to continue these rather than replace them with a new and untried concept.

There is one additional point about which we are extremely concerned. Without the necessary input of additional resources, the proposals contained in the consultation document will lead to a substantial decrease in the number of PhD students in mathematics. This will occur at a time when both the Kingman Report and the more recent report of the Institute of Manpower Studies commissioned by the SERC show that an *increase* in the number of PhD students in mathematics is required. In particular, this will cover the period when a growing number of academic staff in universities will be retiring and the need of high calibre replacements will be at a peak. Any action which decreases these numbers at such a crucial time will be unacceptably damaging to a key component in the UK science base.

In summary, therefore, our comments are as follows:

- that many of the aims of the OST proposals are already being met by the varied courses offered by mathematics departments in this country, including especially the new 4-year MMath and MSci first degrees;
- that those aims which are not met in the new 4-year first degrees in mathematics could be incorporated in the subsequent 3-year PhD programme;
- that existing styles of 1-year MSc degrees should continue;
- that there is no scope for reductions in numbers of PhD students in mathematics.

* This document was published in Issue No 203 (March 1993) of the Newsletter.

FESTSCHRIFT IN HONOUR OF PROFESSOR P.D. BARRY First Announcement

Professor Paddy Barry's sixtieth birthday falls on 20 October 1994, at which point he will have held the Chair of Mathematics in University College, Cork, for thirty years. To mark the occasion, and to celebrate Paddy's contributions to his subject, to College and the general community, the Department of Mathematics is organising a Conference on Aspects of Analysis on Friday and Saturday, 21 - 22 October 1994. A banquet will be held in his honour on Friday night, 21 October 1994. Principal speakers at these events will include Professors Jim Clunie and Walter Hayman, University of York, Professor Dan Shea, University of Wisconsin, and Professor Brendan O'Mahony and Dr Siobhan Vernon, University College, Cork.

The organisers feel that many of Paddy's co-workers in classical analysis, friends, colleagues, and former staff and students would wish to be associated with these events and to be present at either the conference, banquet or both. In order that we may have some idea of the number of people who are likely to attend these functions, please let us know if you are interested in attending and wish to receive a second communication. Do you think you are likely to attend (a) the Conference only; (b) the Banquet only; (c) the Conference and Banquet? Would you like to contribute a paper at the Conference? Reply to The Secretary, Department of Mathematics, University College, Cork, telephone: (021) 276871, ext 2540; fax: (021) 272642; e-mail: mathdep@iruc.cvax.bitnet.

Organising Committee: Jim Clunie (University of York); Finbarr Holland, Donal Hurley and Gerard Murphy (all at University College, Cork).

NETWORK OF COMMUNICATION IN MATHEMATICS

A series of invited papers will discuss changing patterns in channels of communication within the mathematical community and beyond in the 19th and early 20th century. Topics to be covered include the role of national societies and journals in different countries of Europe and relations between them. Congresses, prizes and competitions, as well as efforts to unify terminology and improve on mathematical documentation, will be discussed in the context of a mathematical community which, as business, commerce and industry, was becoming more professional and more international. The public impact of textbooks and of special areas of mathematics, such as recreational mathematics, in this period will also be considered. There will be round-table discussions on several of these topics and a special session on mathematical correspondence, in which reports will be given on recently discovered correspondence and on innovative current research projects, such as using optical and magnetic media and computer databases.

Invited speakers will include: J. Barrow-Green (Milton Keynes), V. Blondel (Louvain-la-Neuve), J. Burt (London), M. Dampier (Leicester), J. Dhombres (Paris), J. Fauvel (Milton Keynes), H. Gispert (Paris), C. Goldstein (Paris), J.J. Gray (Milton Keynes), K. Hoskin (Warwick), A. Malet (Barcelona), E.L. Ortiz (London), L. Pepe (Ferrara), M. Price (Leicester), L. Saraiva (Lisbon), D.B. Singmaster (London), R. Tobies (Berlin) and R. Wilson (Milton Keynes).

The meeting will be held at Gonville and Caius College, Cambridge, from Friday 16 to Sunday 18 September. Further information from: Eduardo L. Ortiz, Imperial College, London SW7 2BZ (fax: 071 225-8361).

ONE-DAY FUNCTION THEORY MEETING

This year's meeting will be held between 10.30 am and 5.00 pm on Monday 26 September in the Huxley Building, Imperial College, London. Financial support from the London Mathematical Society is grate-

fully acknowledged. All those interested are welcome. There are no registration fees.

For further details contact Professor I.N. Baker, Department of Mathematics, Imperial College, London SW7 2BZ.

NEW BOOKS IN MATHEMATICS

Elements of Linear Algebra

NEW

P M Cohn, Professor Emeritus of University of London, UK

A complete revision of Professor Cohn's popular books, **Linear Equations** and **Solid Geometry**. Material has been expanded and updated with examples added. Linear equations are covered in the first few chapters in which vectors, matrices and determinants are introduced, followed by an introduction to coordinate geometry.

- includes a clear proof of the Jordan normal form - usually omitted from elementary books
- explains in simple language the main applications in the calculus of several variables

Contents: The solution of a system of equations: the regular case. The solution of a system of equations: the general case. Determinants. Coordinate geometry. Coordinate transformations and linear mappings. Normal forms of matrices. Applications I: Algebra and Geometry. Applications II: Calculus, mechanics, economics. Answers to the exercises. Special notations and symbols used. Bibliography. Index.

Chapman & Hall Mathematics Series. Series editors: D Goldrei, K Devlin and J Montaldi
June 1994: c.240pp, 35 line illus: Pb: 0-412-55280-9: £13.99

Markov Models and Optimization

NEW

M H A Davis, Imperial College, University of London, UK

Presents a radically new approach to problems of evaluating and optimizing the performance of continuous-time stochastic systems.

- emphasises the so-called extended generator of the process, which gives a general method for calculating expectations and distributions of system performance functions.
- ideal for engineers and scientists in the application areas as well as to mathematicians interested in applications of stochastic analysis.

"An excellent compact treatment of Markov models and their control...highly recommended to anybody who is interested in the control of systems subject to random occurrences at discrete times." **-Short Book Reviews**

Contents: Analysis, probability and stochastic processes. Piecewise-deterministic Markov processes. Distributions and expectations. Control theory. Control by intervention. Appendix: Jump processes and their martingales. Bibliography. Index of notation. Subject index.

Monographs on Statistics and Applied Probability Series 49
August 1993: c.320pp, 25 line illus: Hb: 0-412-31410-X: £27.50

Network Optimization

NEW

V K Balakrishnan, University of Maine, USA

The mathematics of network optimization are clearly introduced and developed in this accessible book aimed at upper graduates or beginning postgraduate students in mathematics, operations research and computer science. The focus is mainly on developing the mathematical underpinnings of the techniques that make it possible to solve such problems.

Contents: Some graph theory concepts. Spanning trees and matroids. Uncapacitated transshipment problems. Shortest path problems. Capacitated transshipment problems. Matchings in networks. Appendix. Bibliography.

Chapman & Hall Mathematics Series. Series editors: D Goldrei, K Devlin and J Montaldi
October 1994: c.320pp: Hb: 0-412-55670-7: c. £24.95

For further information or to order books, please contact
Caitlin Wright at the address below.
Chapman & Hall, 2-6 Boundary Row, London SE1 8HN
Tel: 071 865 0066. Fax: 071 522 9623.



CHAPMAN & HALL

History of Mathematics Books

American Mathematical Society

London Mathematical Society

The titles in the exciting History of Mathematics series present historical perspectives on individuals who have profoundly influenced the development of mathematics as well as those who have made great contributions to the mathematical community. The series also traces development of special areas of research. Beginning with Volume 4, this series is published jointly with the London Mathematical Society.

Lectures in the History of Mathematics, Henk J. M. Bos

Vol. 7, ISBN 0-8218-9001-8, 197 pp., 1993, List \$86, Indiv. mem. \$52, Inst. mem. \$69

Golden Years of Moscow Mathematics, edited by Smilka

Zdravkovska and Peter L. Duren

Vol. 6, ISBN 0-8218-9003-4, 271 pp., 1993, List \$94, Indiv. mem. \$56, Inst. mem. \$75

The Scope and History of Commutative and Noncommutative Harmonic Analysis, edited by G. W. Mackey

Vol. 5, ISBN 0-8218-9903-1, 370 pp., 1992, List \$52, Indiv. mem. \$31, Inst. mem. \$42

Operations Analysis in the U.S. Army Eighth Air Force in World War II, Charles W. McArthur

Vol. 4, ISBN 0-8218-0158-9, 349 pp., 1990, List \$36 (no discounts)

A Century of Mathematics in America, edited by Peter Duren

Part I, ISBN 0-8218-0124-4, 477 pp., 1988, List \$75, Indiv. mem. \$45, Inst. mem. \$60

Part II, ISBN 0-8218-0130-9, 585 pp., 1989, List \$87, Indiv. mem. \$52, Inst. mem. \$70

Part III, ISBN 0-8218-0136-8, 675 pp., 1989, List \$93, Indiv. mem. \$56, Inst. mem. \$74

Parts I, II, III set, ISBN 0-8218-0138-4, List \$232, Indiv. mem. \$139, Inst. mem. \$186

Parts II, III set, ISBN 0-8218-0152-X, List \$162, Indiv. mem. \$97, Inst. mem. \$130

The London Mathematical Society is incorporated under Royal Charter and is registered with the Charity Commissioners.

To receive the discounted prices, LMS members must order directly from the AMS and mention that they are LMS members. To order directly from the AMS call 401-455-4000. Customers in **Europe, Middle East and Africa** should order directly from Oxford University Press, Walton Street, Oxford OX2 6DP, England, Telephone: 0865-56767, Telefax 0865-56646, Telex 837330 OXPRES G; exclusive distributor of AMS books.



L. KRONECKER
Honorary Member 1875

DIARY

The diary lists Society meetings and other events publicized in previous issues of the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter number.

JULY 1994

- 1-11 Quantum Concepts in Space and Time, LMS Durham Symposium (211)
4-7 Conference on Nonlinear Dynamics and Pattern Formation in the Natural Environment, The Netherlands (210)
5-10 The Mathematical Theory of Phase Transitions Summer Workshop, Sussex University (214)
10-16 Combinatorial Geometry Euroconference, Anogeia, Greece (214)
11-15 Algebraic and Number Theoretic Aspects of Ergodic Theory Workshop, Warwick University (214)
11-16 Quantum Communication and Measurement Workshop, University of Nottingham (212)
11-22 Topological Methods in Differential Equations and Inclusions Seminar, University of Montreal Canada (212)
12-22 Geometry and Cohomology in Group Theory, LMS Durham Symposium (211)
15-16 W.N. Everitt Seventieth Birthday Meeting, Birmingham University (215)
17-23 Workshop on Elliptic PDEs & related areas of Harmonic Analysis, ICMS, Edinburgh (210)
17-23 Actions of Lie Groups and Discrete Subgroups on Manifolds Euroconference, Anogeia, Greece (214)
18-22 Non-Standard Mathematics Colloquium, University of Averio, Portugal (212)
18-22 Workshop on Lattice Dynamics, Statistical Mechanics and Ergodic Theory, Warwick University (214)
20-22 International Symposium on Symbolic and Algebraic Computation, Oxford (213)
20-27 3rd Souslin Conference, Saratov, Russia (209)
25-29 Category Theory European Colloquium, France (213)
25-29 Evolution Equations Conference, University of Strathclyde (211)
26-30 Differential Geometry International Colloquium, University of Santiago de Compostela, Spain (210)
28-1 Aug Differential Geometry Workshop, University of Leeds (211)

AUGUST 1994

- 1-5 Real and Complex Singularities International Workshop, University of Sao Paulo, Sao Carlos, Brazil (217)
3-11 International Congress of Mathematicians, 1994, Zurich, Switzerland (189)(197)(207)(216)(217)
12-20 Classical & Quantum Geometry of

- Homogeneous Spaces Workshop/Conference, Moscow, Russia (213)
14-17 Asymptotics in Mechanics International Conference, Marine Technical University, St Petersburg, Russia (213)
14-17 Finite and Locally Finite Groups, NATO Advanced Study Institute, Bosphorus University, Istanbul, Turkey (210)
15-26 Advanced Workshop on Algebraic Geometry, ICTP, Trieste, Italy (207)
18-25 Third International Conference on Group Theory, Pusan, Republic of Korea (209)
22-24 Galois Modules Workshop, College of St Hild & St Bede, Durham University (216)

SEPTEMBER 1994

- 5-10 Model Theory and Algebraic Geometry Workshop, Manchester University (217)
5-16 Electron-Phonon Workshop, Warwick University (214)
9-12 Physical Interpretations of Relativity Theory, Imperial College, London (216)
19-24 Analytic Aspects of Partial Differential Equations Instructional Conference, University of Bath (213)
21-22 British Topology Meeting, Southampton University (213)
26 One-Day Function Theory Meeting, Imperial College London (215)
28-30 Open Taniguchi Symposium, Warwick University (214)

OCTOBER 1994

- 10-28 School/Workshop on Variational and Local Methods in the Study of Hamiltonian Systems, ICTP, Trieste, Italy (207)

DECEMBER 1994

- 12-17 Pacific Rim Geometry Conference, National University Singapore (214)

FEBRUARY 1995

- 7-10 Fractals in the Natural and Applied Sciences International Working Conference, Marseilles, France (217)

MARCH 1995

- 19-22 Carolus Magnus on Arithmetic and Geometry Colloquium, Aachen, Germany (217)

APRIL 1995

- 3-6 British Mathematical Colloquium, Heriot-Watt
23-26 Korteweg and de Vries International Symposium, Amsterdam, The Netherlands (210)

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, to arrive before the first day of the month prior to publication. Telephone 071-437 5377, fax 071-439 4629, e-mail lms@uk.ac.kcl.cc.bay. The London Mathematical Society is registered with the Charity Commissioners.