THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 228 **June 1995**

FORTHCOMING SOCIETY MEETINGS

Friday 16 June 1995, Burlington House
D.G. Vassiliev, K.R. Parthasarathy
Friday-Saturday 20-21 October 1995,
Scientific Societies' Lecture Theatre
Stochastic Analysis
D. Bakry, E. Bolthausen, L. Gross,
J.F. LeGall, D. Nualart, H.T. Yau,
Friday 17 November 1995, Burlington House
I. Ekeland, J.M. Ball

FURTHER SOCIETY GRANT SCHEME

Continuing its policy of finding additional ways of offering support to mathematical activities, the Society's Council approved the following new grant scheme, to be referred to as Scheme 4 (for collaborative small grants), at the March 1995 meeting of Council.

Scheme 4 The aim of the scheme is to provide small grants to members of the Society working within the United Kingdom to help support a visit for collaborative research, either by the grantee to another institution within the UK or abroad, or by a named mathematician from within the UK or abroad to the home base of the grantee. The time available for joint research arising from the grant would be expected to be several working days. The maximum sum available will be £300 and, where necessary, grantees would have to cover further costs from other sources such as departmental or personal funds. The intention is to provide sufficient funds so that the call on other sources is held within manageable bounds.

Applications should be in the form of a letter setting out the proposed academic case for the visit, including a detailed description of a specific project, the standing of the collaborator and an estimate of costs. Brief reports on the use of the grant would be expected.

Grants will be awarded three times annually, in September, February and June, with respective deadlines for applications of 31 August, 31 January and 31 May. The first deadline for applications is 31 August 1995. Awards will be restricted to one in any given academic year (September to August) and in the event of over subscription in any particular round, applicants who received an award in the previous academic year would not be considered.

DR W.J. RAE MITCHELL

Dr W.J.R. Mitchell, who was elected a member of the London Mathematical Society on 17 March 1978, died on 28 July 1994.

VISIT OF PROFESSOR V. TONCHEV

Professor Vladimir Tonchev (Michigan Technical University) will be visiting the UK under the LMS Grant scheme. The talks will be in the area of codes and designs, given at the following universities: 26-27 June, Aberystwyth, contact V.C. Mavron; 28 June, Royal Holloway College, contact P. Wild; 29 June, Queen Mary and Westfield College, contact P.J. Cameron; 30 June, Birmingham, contact C.W. Parker.

VISIT OF PROFESSOR A. MATASOV

Professor Alexander Matasov (Moscow University) will be visiting Professor Christopher Baker (Manchester University) for a few weeks in June with the support of the London Mathematical Society. Precise dates are to be confirmed but are expected to include 19 to 30 June; further information may be obtained from Professor Baker, e-mail: cthbaker@ma.man.ac.uk, tel: 0161 275 5817.

VISIT OF PROFESSORS Y.O.GOLOVIN AND Y.V.SELIVANOV

Professor Y.O.Golovin and Professor Y.V.Selivanov (Moscow) will be visiting the United Kingdom from 17 July to 4 August. Their visit has been made possible by fSU Visitor Scheme grants from the London Mathematical Society. Their interests are in the homology of Banach algebras. They will both be speaking at the Banach Algebras '95 Conference and attending the EPSRC Workshop in Completely Bounded Maps and Cohomology in Operator Spaces which will take place at the University of Newcastle during this period. Further information can be obtained from M.C. White, Department of Mathematics and Statistics, University of Newcastle, Newcastle upon Tyne NE1 7RU (e-mail: Michael.White @ uk.ac.newcastle).

VISIT OF PROFESSORS KONDRAT'EV AND MAZUROV

Professor Anatolii Kondrat'ev, of the Institute of Mathematics and Mechanics, Ekaterinburg, and Professor Victor Mazurov, of the Institute of Mathematics, Novosibirsk, will be visiting Manchester and Birmingham for two weeks from 9 to 23 July 1995. They will speak at the Meeting 'ATLAS: Ten Years On', to be held at the University of Birmingham, 10-13 July 1995, and will give talks at UMIST and the University of Manchester on their work in finite group theory. This visit is supported by fSU Visitors Scheme grant from the London Mathematical Society. Further information can be obtained from Alexandre Borovik, Department of Mathematics, UMIST, PO Box 88, Manchester M60 1QD; e-mail: borovik@lanczos.ma.umist.ac.uk.

LMS 1995 HONORARY MEMBER

The election of Professor D. Mumford of Harvard University as an Honorary Member of the London Mathematical Society was confirmed at the Society Meeting on 12 May 1995. The citation drew attention to Professor Mumford's work in algebraic geometry, and in particular in geometric invariant theory and in the subject of toroidal embeddings, of which he is the originator.

LONDON MATHEMATICAL SOCIETY

FRIDAY 16 JUNE 1995

D.G. Vassiliev (Sussex)
will speak at 3.30 pm on

Spectral asymptotics for partial differential operators

K.R. Parthasarathy
(Indian Statistical Institute, Delhi)
will give the 1995 Hardy Lecture at 5.00 pm

Quantum stochastic calculus

Tea will be served at 4.30 pm

The meeting will be held at the Linnean Society, Burlington House, Piccadilly, London W1

All interested are very welcome

TENTH BRITISH TOPOLOGY MEETING
First Announcement

This year's British Topology Meeting will be held at the University of Glasgow on the afternoon of Tuesday 12 September and the morning of Wednesday 13 September 1995. The programme will consist of talks of about 30 minutes, and offers to speak on any aspect of topology will be most welcome. Accommodation will be available on the night of 12 September. The cost, including registration, dinner, bed and breakfast will be about £40. The meeting is being supported by the Edinburgh Mathematical Society and the London Mathematical Society, and some money will be available for the expenses of participants unable to obtain support from their own institutions.

If you are interested in attending, please contact the organisers as soon as possible at British Topology Meeting, Department of Mathematics, University of Glasgow, University Gardens, Glasgow G12 8QW or by e-mail at btop@maths.gla.ac.uk. We also have a World Wide Web page at http://www.maths.gla.ac.uk/andy/btop.html.

THE ROYAL SOCIETY
Clifford Paterson Lecture

Professor Frank Kelly, FRS (Statistical Laboratory, Cambridge), will give the Clifford Paterson Lecture on 'Modelling Communication Networks: Present and Future' at 17.30 on Wednesday 14 June 1995 at The Royal Society.

Modern communication networks are able to respond to randomly fluctuating demands and failures by allowing buffers to fill, by rerouting traffic and by reallocating resources. They are able to do this so well that, in many respects, large-scale networks appear as coherent, almost intelligent, organisms. The design and control of such networks present challenges of a mathematical, engineering and economic nature. In this lecture Professor Kelly will describe some of the models that have proved useful in the analysis of stability, statistical sharing and pricing, in systems ranging from the telephone networks of today to the information superhighways of tomorrow.

All are welcome to attend. Tea will be served at 17.00. For further information contact: The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG, telephone: 0171-839 5561, ext. 202. The Lecture will also be given at Heriot-Watt University on 1 August 1995.

1996 LMS INVITED LECTURES
Professor F.J. Almgren, Jr.

The Society organises an annual series of about 10 expository lectures given over the space of one week by a distinguished mathematician. The 1996 Invited Lecturer will be Professor F.J. Almgren, Jr., of Princeton University who will lecture on the topic 'Geometric Measure Theory and the Calculus of Variations' at University College, London between 15 and 19 April 1996.

A further notice giving more details will appear in a subsequent issue of the Newsletter. Enquiries may be addressed to Professor D. Preiss at University College; e-mail: dp@math.ucl.ac.uk, tel: 0171-387-7050 (ext.2850).

VISIT OF PROFESSOR L.A. LAMBE

Professor L.A. Lambe (Rutgers and Stockholm) will be visiting the UK under the LMS Grant scheme. He will lecture on "Current trends in symbolic computation: new technology to aid in research in topology and algebra" at the Department of Pure Mathematics, Liverpool University, 4 pm Friday June, at University of Wales, Bangor, on June 19 or 20, and to Aberystwyth, Swansea, and Cardiff by videolink, at the University of Manchester, 2pm Friday 23 June. The contacts are respectively Dr H. Morton, Professor R. Brown, Professor N. Ray.

LONDON MATHEMATICAL SOCIETY

Spitalfields Day

Saturday 10 June 1995

Royal Society of Edinburgh
22/24 George Street, Edinburgh

BIOMATHEMATICS

(associated with the ICMS Programme "Mathematics in Medicine")

Programme

10:00	Dr J. Sherratt (Warwick) *Mathematical modelling of wound healing*
11:15	Coffee
11:45	Professor T.J. Pedley FRS (Leeds) *Flow and mass transport in the lungs and cardiovascular system*
13:00	Lunch
14:15	Dr M. Nowak (Oxford) *Evolutionary dynamics of HIV*
15:30	Tea
16:00	Professor R.M. May FRS (Oxford) *The immune system as a nonlinear dynamical system*

Anyone who is interested is welcome to attend. Further details may be obtained from: Louise Williamson, ICMS, 14 India Street, Edinburgh EH3 6EZ; e-mail: icms@maths.ed.ac.uk; tel: 0131 220 1777; fax: 0131 220 1053. Lunch will be provided at a nominal charge; please let the ICMS know as soon as possible if you intend to come.

DIFFERENTIAL EQUATIONS, GROUP THEORY, CALCULUS OF VARIATIONS

There will be an advanced 5-day course on differential equations, group theory and calculus of variations, with applications to engineering sciences and mathematical physics, at Hradec n. Moravici, Czech Republic, from 4th to 8th September 1995. The programme will cover Differential Equations (jet theory, Spencer cohomology, formal integrability, linear systems and differential sequences, nonlinear systems and differential algebra) Group Theory (Lie groups and pseudo-groups, differential invariants, nonlinear Janet and Spencer sequences, symmetries of differential equations) Calculus of Variations (exterior calculus on jet spaces, basic fibred structures, variational sequence, first and second Noether theorems) Applications (control theory, analytic and continuum mechanics, thermodynamics, electromagnetism and gauge theory, gravitation and general relativity). The lecturers will be J. Kijowski (Polish Academy of Sciences), D. Krupka (Silesian University), J.F. Pommaret (Ecole Nationale des Ponts et Chaussees). Further information can be obtained from Open Education and Sciences, PO Box 84, 746 20 Opava 1, Czech Republic or from the Local Organizer: Professor D. Krupka, Silesian University, Opava, Czech Republic; tel: 42-653-454214; fax: 42-653-215029; e-mail: Demeter.Krupka@fpf.slu.cz.

RAISING THE PROFILE OF WOMEN EXPERTS

WITEC (Women in Technology), based at Sheffield Hallam University, has been commissioned by the Equal Opportunities Unit of the European Commission to produce a European handbook of women experts in science, technology and engineering. WITEC is now looking for women experts who would like to feature in the handbook to raise their profile at national and European level.

"This is an exciting new project which will improve the support network for women scientists, technologists and engineers. We are working with our partners across Europe to ensure that women experts in every Member State are represented in the handbook. I hope that it will lead to an increase in the number of women participating in research work and that it will improve their representation on expert committees and working groups." Claire Molyneux, Project Co-ordinator.

Established in 1988, as a European network of universities, enterprises and organisations, WITEC works for the motivation, development and support of women in science, technology and engineering. Over the past six years WITEC has undertaken numerous activities across Europe to increase the number of women studying and working in these fields. These activities include a student placement programme providing funding and support for female students to work in another member state; a short training course programme aimed at women working in advanced technological fields; and a series of workshops, conferences and publications relating to equal opportunities issues.

With this new project WITEC will address some of the issues of equality of opportunity for women at senior levels in science, technology and engineering. The handbook will facilitate the further career progression of women experts in academic and industrial fields. It will give them the opportunity to work in the European arena and will facilitate the establishment of transnational research partnerships.

Any expert who is interested in this project should contact the WITEC Secretariat (tel: 0114 2532041) immediately for an information pack.

LONDON MATHEMATICAL SOCIETY
1995 HARDY LECTURE TOUR

In June, the 1995 Hardy Lecturer, Professor K.R. Parthasarathy (Indian Statistical Institute, Delhi) will give the following lectures:

Day	Topic/Time/Location	Contact Person
Friday 2 June	*Quantum stochastic calculus starting from Brownian motion* 2.30 pm School of Mathematics Loten Hall, University of Hull, **Hull**	Professor N.J. Cutland
Thursday 8 June	*Construction of classical and quantum self-similar fields from Maasen kernels* 4.00 pm School of Mathematics, University of Leeds, **Leeds**	Professor J.T. Kent
Friday 9 June	*What is a quantum Markov process?* **Edinburgh Mathematical Society** 4.30 pm Theatre B, David Hume Tower, George Square, **Edinburgh**	Dr P. Heywood
Wednesday 14 June	*Quantum stochastic calculus starting from Brownian motion* Room S013, Social Studies Building, 2.30 pm University of **Warwick**	Dr M-C. van Lieshout
Thursday 15 June	*Azéma martingales as perturbations of the Wiener process* 4.30 pm Dept of Mathematics, **Imperial College**, Huxley Building, Exhibition Road, London	Professor C.M. Goldie Professor T.J. Lyons
Friday 16 June	*Quantum stochastic calculus* **LMS Hardy Lecture** 5.00 pm Linnean Society Rooms, Burlington House, Piccadilly, London W1V 0NL	Dr D.J. Collins

All interested are welcome to attend any of the meetings addressed by the Hardy Lecturer, but it is advisable to check the time and venue with the department concerned. General enquiries about Professor Parthasarathy's visit may be directed to the LMS Administrator, Susan Oakes, telephone 0171 437 5377

1995 LMS EDITORIAL BOARD ADDRESS

Please note the following correct address for Professor K.J. Falconer, member of LMS Editorial Board: Department of Mathematical & Computational Sciences, University of St Andrews, North Haugh, St Andrews, Fife KY16 9SS.

MATHEMATICS AND COMPUTING

THE EUROMATH EDITOR

There was an informative article by John Slater and Jill Tardivel in the LMS Newsletter in November 1994, providing general information on the Euromath project. The long-term aim of this project is to offer a uniform editing environment for European mathematicians, from which they can prepare mathematical documents and slides, consult common and personal bibliographical databases (with possible access to Zentralblatt), retrieve remote documents, send e-mail, and so on. Mathematics departments can subscribe to Euromath for a modest annual sum.

In this article, I am going to restrict myself to reviewing the document editor, as far as its use for preparing mathematical articles and papers is concerned. This is currently the principal facility offered by Euromath. I was provided with a free copy of the editor for this purpose, together with extensive documentation. In general, the latter was clearly written and easy to follow. Modulo a minor hitch with font directories, I had no problem installing the system on a SUN Workstation, running X-windows under UNIX. (I believe that PC-versions will be released shortly.)

I have previously used two types of electronic media for writing mathematics, TeX (usually LaTeX) under UNIX, and various Apple Macintosh word-processors. In the former, you essentially describe what you want in a text file written in the TeX language, whereas in the latter, you produce what you want yourself in a WYSIWYG environment, using the mouse and menu-driven tools provided. TeX has the big advantage that it is oriented specifically towards mathematics, and is extremely clever at producing printed hard-copy of a professional standard just from what you tell it. On the other hand, general purpose word-processors are not particularly geared towards scientific applications, and are not very adept at guessing what you want. For this reason, most mathematicians seem to end up preferring TeX, although departmental secretaries may well prefer a WYSIWIG environment.

The Euromath editor is trying to combine the advantages of both worlds, which certainly seems like a good idea. It is based on a structured editor known as Grif, which had previously been developed in France. The documents are stored as text files in the format of the markup language SGML. It is possible to edit them directly, but they are really designed to be read by machine, and edited using a WYSIWYG interface. The first thing to learn is that documents are highly structured, and strictly divided into sections, subsections, paragraphs, displayed formulae, and so on. The underlying structure is defined by a DTD (Document Type Definition), which is also written in SGML. Currently, three of these are provided by Euromath (article, slide and sheet), but more (such as letter) are planned, and designing your own is not too difficult, particularly if you start by making modifications to an existing DTD. So here we have the advantages of both types of media - the WYSIWIG interface, and the system that knows about how mathematical material, like theorems, references, displayed and inline formulae, ought to be typeset.

It is possible to convert a Euromath document to LaTeX, and conversely, a

separate translating program has been provided to convert a LaTeX file to a Euromath document. I tried the LaTeX to Euromath facility, and compared the printouts of a mathematical paper written in LaTeX, using first the LaTeX version itself, and then the converted Euromath version. The latter was surprisingly good in many respects. There were a few imperfections, such as spaces that were too large or too small, but I hope that these will be improved in later versions.

So, the big question is, do I recommend that LMS members should as from now start using Euromath as their principal means of writing mathematics (assuming that they have access to an X-Windows server). The answer, for the time being is unfortunately no, but I hope that I will be able to give a more positive recommendation within a year or two, because the underlying ideas and philosophy are good. In any case, I would need to make separate recommendations to those who prefer TeX, and those who prefer WYSIWYG editors. For the completely contented TeX user, who likes to type continuously, and does not enjoy stopping frequently to select menu items and click on mouse buttons, this system is not likely to have much charm. Although, like TeX, Euromath is intelligent, and knows about the structure of mathematical formulae, tables and diagrams, it does not print them as successfully as TeX does yet (this is something which will hopefully improve). For example, if the entries in a matrix are too wide, they are inclined to bump into each other and into the bracket on the right, and if you give a symbol a subscripted superscript and superscripted subscript simultaneously, then they will land right on top of each other! On the other hand, I found drawing complicated commutative diagrams with arrows rather easier than with TeX, and for paragraphs with a lot of inline formulae, it is possible to type the mathematical bits in TeX notation as you go along, which avoids a lot of mouse clicking to change modes.

Euromath is likely to be most popular with those who positively prefer working in a WYSIWYG environment. It has the advantage over straightforward word-processors, that it knows about mathematics, that symbols in formulae should be italicised, that the size of subscripts and superscripts should be reduced, and so on. And, like TeX, it can number your theorems, equations, tables, and bibliographical references, and has good referencing facilities, with which you refer to the items themselves rather than their numbers (which often change) - you can even refer to references in external documents, or databases. On the other hand, the relatively complicated structuring of the document can be offputting and frustrating, particularly for newcomers, because you often have to go up and down the structure levels in order to edit the thing that you want to. For example, I had difficulty at first in resuming with a normal text paragraph after entering a complicated formula, because I first had to ascend levels (by repeatedly hitting the ESC key), in order to get out of the formula itself. A number of keyboard accelerators (like Control-C for Copy) are available, and it is possible to define your own, but I couldn't easily find out how to define a keystroke to mean simply start a new plain text paragraph - I hope that the design will eventually be modified to allow more straightforward methods for doing what I think of as natural things like this.

I must stress that I have only spent a few hours in total in playing with the Euromath editor, and I attempted to learn to do quite complicated things fairly quickly. I hope that the rather negative impression that I seem to be conveying will not offend more experienced users; if it does, then I hope that they send me an e-mail; their views will then be reported on in this column. My current opinion remains that the system is based on good ideas, but it needs to improve before it can be positively recommended. It has to be accepted that it is inevitably going to find itself in competition with TeX, and that TeX is a quite outstandingly good system, which sets formidably high standards to its competitors.

Derek Holt, dfh@maths.warwick.ac.uk

THE AUSTRALIAN MATHEMATICAL SOCIETY

The Australian Mathematical Society was formally founded on August 15, 1956. A decision, "that steps be taken to form an Australian Mathematical Society", was taken a year earlier during a meeting of ANZAAS (The Australian and New Zealand Association for the Advancement of Science). From the start it was envisaged that a journal be published and that the new Society would "hold meetings of Australian mathematicians ... in conjunction with ANZAAS conferences and perhaps at other times". The Society's first Conference was held at the University of Melbourne from 15th to 18th August, 1956 and 107 registrations were recorded "more than half being from outside Victoria". At the Society's Inaugural General Meeting which was attended by 79 mathematicians, Professor T.M. Cherry was unanimously elected as its first President.

So the Society began. Today, nearly 40 years on, the Society has about 1100 members. Each year, two large Conferences are held together with mini-Conferences from time to time, and the Society publishes four journals.

The first part of volume 1 of the Journal of the Australian Mathematical Society was published in 1959. Initially the journal published papers in all branches of mathematics. But through the 1970s there was a feeling among the Applied Mathematicians that their needs were not being properly catered for within the Society's framework. There were discussions as to whether there should be a separate Society for Applied Mathematicians but it seemed generally agreed that the Australian population was too small for such a development. The needs of the Applied Mathematicians were taken care of by the establishment, in 1975, of a Division of Applied Mathematics within the Society, and the splitting of the Journal into two parts. Series A is now devoted to Pure Mathematics and Statistics, and Series B, which was first published in 1976, is devoted to Applied Mathematics. These publications continue to the present day, Series A now being into its 57th volume and Series B into its 36th.

With the establishment of the Division of Applied Mathematics, the informal Conferences in Applied Mathematics, which were initially started for the benefit of students and staff at Adelaide and Flinders Universities, became regularised and the Division now organises the Society's Annual Summer Conference with its main emphasis on Applied Mathematics. A tradition has grown up that these annual Conferences are always held outside of the State and Federal capital cities. They have proved to be extremely popular over the years. The most recent Applied Mathematics Conference (the 31st) was held at Busselton in West Australia, a small town about 250 km from Perth. In spite of Busselton's relative geographic isolation, 140 delegates attended including 35 research students who competed for the T.M. Cherry prize. This is awarded annually for the best student paper presented. Recently the Division of Applied Mathematics changed its name to ANZIAM (Australian and New Zealand Industrial and Applied Mathematics) and decided to award the ANZIAM medal for "outstanding service to the profession of applied mathematics in Australasia through research achievements and activities embracing applied or industrial mathematics or both". At the Busselton Conference the first ANZIAM medal was awarded to Professor R.B. Potts of the University of Adelaide.

But to return to the Society's publication activities. In the late 1960s a need was felt for a Journal which would publish papers quickly. The initiative for this came from Professor Bernhard Neumann, and the Bulletin commenced publication in 1969 with Professor Neumann as its principal Editor. The Bulletin continues to the present day and is currently into its 51st volume. The

Editorial Policy continues to be "quick publication of original research in all branches of mathematics". With the emphasis on quick publication, many meritorious papers are not published.

The last of the Society's Journals to be established was the Gazette, in May 1974. This is essentially the Society's "house journal" and contains news of members together with Mathematical articles of general interest. Five issues are published each year and it is sent free to all members of the Society.

Finally as far as publications are concerned, the Society has an agreement with Cambridge University Press for the publication of books in the "Australian Mathematical Society Lecture Series". To date seven volumes have been published ranging through undergraduate texts, graduate texts and research monographs. The foundation Editor-in-Chief, Professor S.A. Morris, who served in this capacity since 1984, has just retired and has been replaced by Professor J.E. Loxton.

The Society's Annual General Meeting is held as part of each year's Winter Conference. Unlike the Summer Conference, the Winter Conference is always held at a University. The 39th such Conference is being held in early July this year at the University of Tasmania in Hobart. This will be the third such Conference held in Hobart, but Conferences have been held in places as far north as Townsville in North Queensland and, on five occasions, as far west as Perth. From time to time the Conference is held in conjunction with the New Zealand Mathematical Society. It is hoped that the next joint Conference will be held in 1997.

At each Winter Conference the Australian Mathematical Society Medal is awarded "to a Member of the Society under the age of 40, for distinguished research in mathematical sciences". To date, thirteen such medals have been awarded. At each Winter Conference, students compete for the B.H. Neumann prize for the most outstanding talk presented by a student member of the Society.

The Society is about to introduce Optional Accreditation for its members. There has been a long discussion over the years as to whether this step should be taken, but in 1994 members approved changes to the Constitution to enable this to be done. There are three grades of membership, a Graduate Member, an Accredited Member, and a Fellow.

The Australian Mathematical Society has reciprocity agreements with 24 Mathematical Societies including the London Mathematical Society and the American Mathematical Society. This is of great benefit to members living in Australia but, in addition, at a recent count of the Society's 1100 Members, there were over 100 Reciprocal members. Obviously the benefits of reciprocity flow in both directions.

Further information on the activities of the Society can be obtained from its Secretary, Professor D. Elliott, Department of Mathematics, University of Tasmania, GPO Box 252C, Hobart, Tasmania 7001, Australia.

DEPARTMENTAL NEWS

Nottingham University Research visitors to the Mathematics Department: Dr Oleg V. Borodin from Novosibirsk, EPSRC Visiting Fellow from 1 May 1995 for one year, area of research: Graph Theory; Professor K.R. Parthasarathy from ISI New Delhi (LMS Hardy Lecturer) from 18 June to 19 July 1995, area of research: Quantum Probability; Dr Victor Maslov from Moscow State University and Institute of Electronics and Mathematics, from 1 June to 1 September 1995, area of research: Mathematical Physics, Pure and Applied Mathematics.

Editors' Note Heads of Departments are strongly encouraged to let us know about new appointments, honours or prizes awarded to members of their department, long-term visitors to their department and any other information they would like to have included in ***Departmental News.***

The latest textbooks from CHAPMAN & HALL

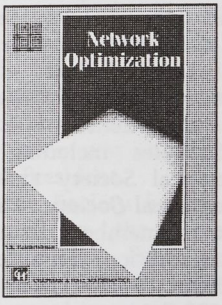
Chapman & Hall are pleased to announce four additions to our Mathematics Series, edited by Derek Goldrei, James Montaldi and Keith Devlin

Control and Optimization

B D Craven, Mathematics Department, University of Melbourne, Victoria, Australia

This book presents a systematic account of optimal control theory with emphasis on its connections with other optimization questions. It includes some new and previously unpublished results as well as worked examples and exercises. *Control and Optimization* is aimed at mathematics students especially those concerned with operational research or optimization questions.

July 1995: c.224pp, 38 line illus: Hb: 0-412-55890-4: c. £24.95



Network Optimization

V K Balakrishnan, University of Maine, USA

Network optimization has become an increasingly important topic for study particularly in computer science applications. The mathematics of the subject are clearly introduced and developed in this accessible book aimed at senior level graduates or beginning postgraduate students in mathematics, operations research and computer science.

April 1995: 256pp, 151 line illus: Hb: 0-412-55670-7: £24.99

Dynamic Cosmos

Exploring the physical evolution of the universe

M Madsen, Department of Mathematics and Computer Science, University of Leicester, UK

This book covers the successes of physical models of the universe. It avoids heavy mathematical theory and is set at an easily accessible level for senior undergraduates and MSc students studying cosmology either as a separate course or as part of any mathematics or physics courses.

July 1995: c.160pp, 7 line illus: Pb: 0-412-62300-5: c. £19.95

Functions of Two Variables

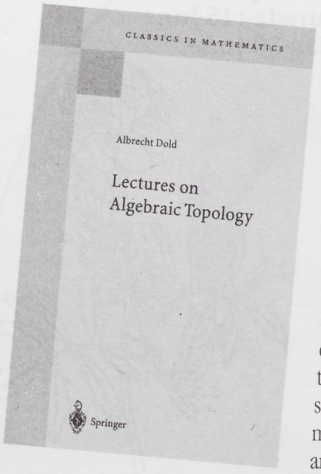
S Dineen, University College of Dublin, Ireland

Advanced calculus is introduced here in a user-friendly, concise and efficient manner. The fundamentals of the subject are clearly identified and presented in a two variable context. Care is taken to motivate concepts prior to their introduction, to justify them afterwards and to explain the scope of the techniques developed.

October 1995: c.192pp, 90 line illus, 1 halftone illus: Pb: 0-412-70760-8: c. £12.99

CHAPMAN & HALL, 2-6 Boundary Row
London, SE1 8HN. Tel: 0171 865 0066

Classics in Mathematics



Springer-Verlag began publishing books in higher mathematics in 1930, when the series GRUNDLEHREN DER MATHEMATISCHEN WISSENSCHAFTEN, initially conceived as a series of advanced textbooks, was founded by Richard Courant. A few years later, a new series ERGEBNISSE DER MATHEMATIK UND IHRER GRENZGEBIETE, survey reports of recent mathematical research, was added.

Of over 400 books published in these series, many have become recognized classics and remain standard references for their subject. Springer is reissuing a selected few of these highly successful books in a new, inexpensive softcover edition to make them easily accessible to younger generations of students and researchers.

A. Dold
Lectures on Algebraic Topology
1995. XIV, 378 pages.
10 figures. Softcover £ 25.00
ISBN 3-540-58660-1

F. Hirzebruch
Topological Methods in Algebraic Geometry
1995. XIV, 234 pages.
Softcover £ 25.00
ISBN 3-540-58663-6

T. Kato
Perturbation Theory for Linear Operators
1995. XXIV, 624 pages.
Softcover £ 25.00
ISBN 3-540-58661-X

S. MacLane
Homology
1995. XII, 424 pages. 7 figures.
Softcover £ 25.00
ISBN 3-540-58662-8

S. Kobayashi
Transformation Groups in Differential Geometry
1995. X, 182 pages.
Softcover £ 25.00
ISBN 3-540-58659-8

D. Mumford
Algebraic Geometry I
Complex Projective Varieties
1995. XII, 188 pages.
Softcover £ 25.00
ISBN 3-540-58657-1

C.-L. Siegel, J. K. Moser
Lectures on Celestial Mechanics
1995. XIV, 290 pages.
Softcover £ 25.00
ISBN 3-540-58656-3

A. Weil
Basic Number Theory
1995. XX, 316 pages.
Softcover £ 25.00
ISBN 3-540-58655-5

K. Yosida
Functional Analysis
1995. XIV, 506 pages.
Softcover £ 25.00
ISBN 3-540-58654-7

O. Zariski
Algebraic Surfaces
With the assistance of
J. Lipman, D. Mumford
Concluding remarks by
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LONDON MATHEMATICAL SOCIETY

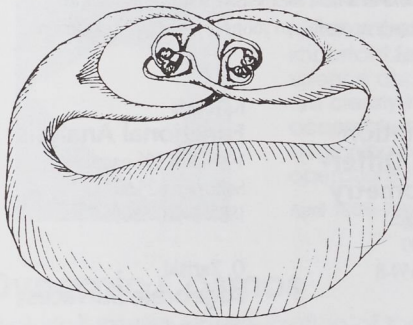
1995 POPULAR LECTURES

Manchester University - Friday 2 June
Edinburgh University- Thursday 15 June
Imperial College - Friday 30 June

Professor Peter Saunders

MEASURING THE MARIGOLD

"What mathematics can tell us about flowers ... and fruit flies ... and Friesians ... "



Professor Nigel Ray

WILD GEOMETRY

"Tame geometry is epitomised by familiar shapes of everyday life. Wild geometry is much more mysterious, and in this talk we introduce some of its objects, and discuss their growing importance."

MANCHESTER Commences at 7.00 pm, 8.00 pm refreshments, ends at 9.30 pm. Lecture Theatre B, Roscoe Building, University of Manchester. Admission free, with ticket in advance. Apply by Friday 26 May to Dr M. Prest, Department of Mathematics, University of Manchester, Manchester M13 9PL. A stamped addressed envelope would be appreciated.

EDINBURGH UNIVERSITY Commences at 2.00 pm, 3.00 pm refreshments, ends at 4.30 pm. Lecture Theatre A, David Hume Tower, George Square, Edinburgh. Admission is free. Enquiries to Dr P. Heywood, Department of Mathematics & Statistics, Edinburgh University, James Clerk Maxwell Building, The King's Buildings, Edinburgh EH9 3JZ.

LONDON Commences at 7.30 pm, 8.30 pm refreshments, ends at 10.00 pm. The Great Hall, Sherfield Building, Imperial College, South Kensington, London SW7. Admission free, with ticket in advance. Apply by Monday 26 June to Miss S.M. Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL. A stamped addressed envelope would be appreciated.

H. POINCARÉ
Honorary Member 1892

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.

JUNE 1995

2 Edinburgh Mathematical Society Meeting, St Andrews University, Dr M.A. Berger (219)

2 LMS Popular Lectures, Manchester University (227)

4-8 50th Anniversary Summer Meeting, Canadian Mathematical Society, Toronto (224)

9-13 Canadian Operator Symposium 1995, Fields Institute, Canada (212)

10 Biomathematics, Spitalfields Day, Royal Society of Edinburgh (227)

10-21 Visiting Adams Lecturer, Professor V. Buhstaber, Manchester University (227)

12-14 Topology Seminar, Manchester University (227)

12-15 European Mathematical Society Lectures, Professor H.W. Lenstra, Jr., Université de Franche-Comté, Beasançon, France (227)

15 LMS Popular Lectures, Edinburgh University (227)

15 Statistical Mechanics Conference, King's College London (227)

16 London Mathematical Society Meeting, Burlington House, London

25-29 European Consortium for Mathematics in Industry Conference, Technical University of Denmark, Lyngby (222)

28-30 Conference on the Legacy of George Boole, University College, Cork (219)

30 LMS Popular Lectures, Imperial College London (227)

JULY 1995

3-7 Fifteenth British Combinatorial Conference, University of Stirling (210)(223)

3-7 International Congress on Industrial and Applied Mathematics, Hamburg (213)

3-7 Mathematics of Neural Networks and Applications, Lady Margaret Hall, Oxford (221)(223)

3-14 Gauge Theory and Symplectic Geometry Seminar, Montreal University, Canada (222)

9-16 European/Gregynog Stochastic Analysis Symposium, Gregynog, Wales (222)

10-12 Linear Algebra and Its Applications Conference, Manchester University (220)

10-13 The ATLAS 10 Years On, Birmingham University (223)

10-20 Mathematical Models of Liquid Crystals and Related Polymeric Systems, LMS Durham Symposium, Durham University (223)

10-21 Workshop on Ergodic Theory on Riemannian Manifolds, Warwick (222)

11-14 Finite Fields & Applications International Conference, University of Glasgow (219)(223)

13-16 British Congress of Mathematics Education, Manchester Metropolitan University (220)

17-21 Symposium on Sieve Methods, Exponential Sums and their Applications in Number Theory, University of Wales College of Cardiff (221)

17-28 Banach Algebras '95, Newcastle University (217) (221)

22 Meeting in Honour of Richard V. Kadison, Newcastle University (227)

24-5 Aug Workshop on Differential Geometry & Stochastic Analysis, Warwick (222)

AUGUST 1995

17-4 Completely Bounded Maps and Cohomology in Operator Algebras EPSRC Workshop, Newcastle University (223)

SEPTEMBER 1995

4-7 Technology in Mathematics Teaching Conference, Napier University, Edinburgh (225)

4-9 European Women in Mathematics Conference, Universidad Complutense de Madrid, Spain (219) (223)

6-8 Information Processing in Cells and Tissues Workshop, Liverpool University (225)

12-13 10th British Topology Meeting, Glasgow University (223)

13-21 Mathematics and Philosophy Conference "Truth in Mathematics", Mussomeli, Sicily (223)

18-26 Pan-African Congress of Mathematicians, Ifram, Maroc (224)

25 One-day Function Theory Meeting, Nottingham University (224)

OCTOBER 1995

20-21 Stochastic Analysis, London Mathematical Society Meeting, Scientific Societies Lecture Theatre, London

NOVEMBER 1995

17 London Mathematical Society Meeting, Burlington House, London

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 WIV 0NL, to arrive before the first day of the month prior to publication. Telephone 0171-437 5377, fax 0171-439 4629, e-mail lms@bay.cc.kcl.ac.uk. The London Mathematical Society is registered with the Charity Commissioners.

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