

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 249

May 1997

FORTHCOMING SOCIETY MEETINGS

Friday-Saturday 23-24 May 1997 - Liverpool University

Applications of Singularity Theory

Friday 20 June 1997 - Linnean Society, London

J.P. May (Hardy Lecture), D. Quillen

Friday-Saturday 17-18 October 1997 - Scientific Societies Lecture

Theatre, London

Numerical Analysis

LMS COUNCIL DIARY

The Council meeting on Friday 21 March was remarkable for its brevity. This did not mean that important issues were not discussed. Perhaps it meant that a number of key issues have recently been resolved and that others are not quite at the stage for lengthy debate. One issue which we touched on, while in detail parochial, raised the wider issues of importance to many of our members - the relationship between funding bodies and the mathematical community at large. The example concerned a decision by the mathematics section of the "Engineering and Physical Sciences Research Council" to award postdoctoral fellowships to individuals. This plan has apparently been vetoed by the full Council. They believe that such awards should go to 'projects' and not to individuals. Whilst one can understand this view when applied to subjects with large capital programmes and the need to work in large teams, this is not the way that mathematics is necessarily done. The imposition of inappropriate methods of funding by well-meaning experts from other fields is a worrying trend encouraged by centralisation.

A more exciting prospect has been created by the gift from the estate of the late Professor Verblunsky of £40,000 to

the Society. There are no constraints on how to use the gift but Council would like to ensure that some suitable way of remembering him is found. It would be sad if the money was merely to infiltrate the funds and be forgotten. Perhaps members who knew him or remember his work would like to make suggestions to Council.

The Publications Secretary reported that the various journals published by the LMS are appearing on time and that most (though not all) of them have reduced their backlogs to a reasonable level. However, in all such commercial activities there are contracts to be renegotiated and the odd problem to sort out. Clearly such matters are often quite delicate but members should be aware that these things are brought to full Council. The new periodical *LMS Journal of Computation and Mathematics* is now under way and has accepted papers for publication. As a new journal, it would welcome more submissions of papers of quality.

We agreed that the By-Laws should be changed in order to enable postal votes to be received up until 3 hours before the AGM. This item has caused us a certain amount of frustration partly caused by the difficulties of reconciling the right to

vote in person with the postal vote. This could lead to a member posting a ballot paper, its not arriving in time but the member being at the AGM and then not being able to vote. However, if there was no time delay, it would not be practical to check that a vote had not been received by the time the meeting had begun and so on. Hence we arrived at what we hope is a fair and pragmatic solution to our problems.

Alan Camina

SPITALFIELDS DAYS

The Isaac Newton Institute in Cambridge, the Mathematics Research Centre in Warwick, the International Centre for Mathematical Sciences in Edinburgh, and, from time to time, other Mathematics Departments, hold long-term meetings or symposia on specialist topics, which are attended by eminent mathematicians from overseas. The London Mathematical Society thinks that it is important for recent developments in these specialist topics to be made known to the general mathematical community, and, in particular, to research students. It therefore provides funds to the organisers of these meetings so that they can provide a day of survey lectures, accessible to a general mathematical audience.

These days are called Spitalfields Days, in honour of the Spitalfields Mathematical Society, a precursor of the London Mathematical Society which flourished from 1717 to 1845.

If you are interested in organising a Spitalfields Day, please contact the Meetings and Membership Secretary, Dr D. J. H. Garling, at the Department of Pure Mathematics and Mathematical Statistics, 16 Mill Lane, Cambridge CB2 1SB (e-mail: d.j.h.garling@dpmmms.cam.ac.uk, telephone: 01223 337978, fax: 01223 337920).

SPITALFIELDS DAY GEOMETRY

There will be a Spitalfields Day meeting at ICMS Edinburgh on 8th July on the occasion of the award of an honorary degree by The University of Edinburgh to

D. McDuff. There will be four one-hour lectures: D. McDuff will speak, and also P. Gauduchon and N.J. Hitchin. Further details will be available when the programme is finalised. This is part of the ICMS programme "Complex methods in differential geometry", July-August 1997. Enquiries to ICMS, 14 India Street, Edinburgh EH3 6EZ.

PROGRAMME AND CONFERENCE FUND

Members are reminded that the Society's Programme and Conference Fund is used to provide conference grants, grants to visitors to the UK (Scheme 2), grants to support joint research groups (Scheme 3), collaborative small grants (Scheme 4) and grants for visits from or to the former Soviet Union (fSU Scheme). The fund is administered by the Society's Programme Committee. Information about the various schemes was given in the January 1997 Newsletter (No. 245), and is also given in the Society's electronic archive at <http://www.lms.ac.uk/lms.html>. The Meetings and Membership Secretary, Dr D.J.H. Garling, will be pleased to discuss proposals informally with potential applicants and to give advice on submission of an application to the Society. He can be reached at: Department of Pure Mathematics and Mathematical Statistics, 16 Mill Lane, Cambridge CB2 1SB; e-mail: d.j.h.garling@pmmms.cam.ac.uk; tel: 01223 337978.

There is a deadline of 31st May 1997 for conference grant applications, and for Scheme 3 and Scheme 4 grant applications; these applications will be considered in June. There are no deadlines for Scheme 2 and fSU Scheme grant applications, but these should be made two to three months before the proposed visits, to allow for consideration by Programme Committee and subsequent publicity in the Newsletter. Please bear in mind, however, that applications for Scheme 2 and fSU Scheme grants which are received after 31st May 1997 will not be considered until September.

LONDON MATHEMATICAL SOCIETY

TWO-DAY MEETING
Friday-Saturday 23-24 May 1997
University of Liverpool

APPLICATIONS OF SINGULARITY THEORY

Friday

- 2.00-3.00 D.M.Q. Mond (University of Warwick)
Gauss-Manin systems associated to free divisors
- 3.15-4.15 A. Parusinski (University of Angers)
The topology of real algebraic varieties
- 4.15-5.00 Tea/Coffee
- 5.00-6.00 D.T. Lê (Université de Provence, Marseille)
Rational singularities and combinatorics

Saturday

- 9.00-10.00 B. Teissier (Ecole Normale Supérieure, Paris)
The role of monomial maps in resolution of singularities
- 10.00-10.30 Tea/Coffee
- 10.30-11.30 A.N. Varchenko (University of North Carolina,
Chapel Hill)
*Verlinde algebras and the intersection form on vanishing
cycles*
- 12.00-1.00 V.V. Goryunov (University of Liverpool)
Vassiliev type invariants of Legendrian knots

Lectures will be held in the Mathematics and Oceanography Building

There will be a Chinese buffet in the Far East Restaurant, Berry Street (about 10 minutes walk from Lime Street Station) on the evening of Friday 23 May at 7.00 pm. The price will be £11 (not including drinks). If you wish to attend please let Professor C.T.C Wall know by e-mail (ctcw@liv.ac.uk) or phone (0151 794 4043) by Tuesday 20 May.

There are limited funds available to help research students attend the meeting. Request for support and any other enquiries may be addressed to Professor C.T.C. Wall, Department of Mathematical Sciences, University of Liverpool, Liverpool L69 3BX (e-mail: ctcw@liv.ac.uk, tel: 0151 794 4043).

INTERNATIONAL CONGRESS OF MATHEMATICIANS

The ICM98 Organising Committee has agreed that there should be a number of satellite conferences before or after the ICM 1998 meeting in Berlin, which takes place from 18 to 28 August 1998. If you are interested in organising such a meeting would you please contact the Meetings & Membership Secretary, Dr D.J.H. Garling by e-mail (d.j.h.garling@pmms.cam.ac.uk). The time scale is tight, so please do not delay.

LONDON-SUSSEX- SOUTHAMPTON TOPOLOGY SEMINAR AND GEOMETRIC GROUP THEORY WORKSHOP

The London-Sussex-Southampton Topology Seminar is a biannual 2-day meeting. This summer's meeting will take place at the University of Southampton from 18 - 19 July. Main speakers include M. Bestvina, N. Brady, R. Canary, P. Kropholler, P. Papasoglu, E. Taylor, and D. Wise.

Following the conference, there will be a 5-day workshop in geometric group theory from 20 - 25 July. The frequency and topics of workshop seminars will be dictated by the wishes and interests of the workshop participants. Those wishing to participate and/or speak at the workshop are encouraged to contact the organizers (Brian Bowditch, Ian Leary and Michah Sageev) at three@maths.soton.ac.uk.

The conference is supported by the London Mathematical Society. Limited financial support is available for local expenses of participants. Priority will be given to graduate students and early respondents.

VISIT OF DR LYUDMILA TUROWSKA

Lyudmila Turowska is currently visiting the United Kingdom. Dr Turowska's work is in the area of quantum groups, mostly treated from a C^* -algebra viewpoint. She recently obtained her PhD from the Institute of Mathematics of the

National Academy of Sciences of Ukraine, Kiev, Ukraine under the supervision of Professor Yu. S. Samoilenko. She is currently at the Mittag-Leffler Institute. Her visit is supported by the London Mathematical Society under the fSU scheme.

In addition to her lecture to the Applied Mathematics Seminar of King's College London, scheduled for Wednesday 30 April, Dr Turowska will give seminars at the Mathematics Departments of the Universities of Leeds, York and Swansea. At Leeds she will give a talk with the title "On representations of $*$ -algebras by unbounded operators" on Tuesday 6 May at 3.30 pm. Her title at both York and Swansea will be "Representations of commutation relations and their applications to $*$ -representations of some quantum algebras". She will speak at York on Wednesday 7 May. Her talk at Swansea will be on the University of Wales video network and will take place on Thursday 15 May at 4.00 pm.

Anyone interested is very welcome at any of these talks but those intending to attend are advised to verify the above details with the Departments concerned. Further information may be obtained from John Erdos, Department of Mathematics, King's College, Strand, London WC2R 2LS, e-mail: j.erdos@kcl.ac.uk.

1997 LMS HANDBOOK AND LIST OF MEMBERS

The Society is preparing a new Handbook and List of Members which will appear in September 1997. A letter showing the information for your entry has been sent to every member. You will note that you are asked for your date of birth. This will **not** appear in the list of members, but will be useful to the Society for planning purposes. The list of members will also include e-mail addresses. Would you please complete and return the form enclosed with the letter by Friday **30 May 1997**. If you have not received the letter please let Susan Oakes, the LMS Administrator, know by e-mail (lms@lms.ac.uk), telephone (0171 437 5377) or fax (0171 439 4629).

PROCEEDINGS OF THE LONDON MATHEMATICAL SOCIETY

Abstracts of most of the papers which have appeared in the Proceedings since the beginning of 1996 can now be seen on the Society's web site. Abstracts are added as papers are accepted for publication and lists of contents of forthcoming issues are visible about three months before publication. These lists, with links to the abstracts, can be found at <http://www.qmw.ac.uk/~lms/proceedings/abstractlist.html>.

The *Proceedings* is now able to set some papers from the author's LaTeX source file, and has already published several such papers. The style file is not available to authors but the Executive Editor can usually attach it to a LaTeX source file which uses article style. (The CUP style file which is available for the *Journal* and *Bulletin* **should not** be used for *Proceedings* articles, which are generally those with an estimated printed length greater than 16

pages.) Electronic files should not be included with the initial submission, but the accompanying letter should state that a file is available if required. Once a paper is accepted for publication, the Editors may ask the author for a copy of the file. Files should be LaTeX (not plain TeX) and use article style. Authors' macros are acceptable but direct formatting should be avoided. Before they are sent to the printer, source files will be edited to ensure the Society's usual standards of presentation. Thus although the incidence of printers' errors will be reduced by the use of electronic files, the need for careful proof reading by authors will not be eliminated. However the use of a carefully prepared source file will reduce significantly the amount of work required of both the *Proceedings* team and the author.

UNIVERSITY OF NEWCASTLE UPON TYNE

TEMPORARY LECTURER IN PURE MATHEMATICS

This post is available from 22 September 1997 to 30 June 1998 to replace a member of staff on leave. It is suitable for someone who is completing their PhD or who has recently done so. The appointee will be required to teach established courses, to take tutorials and to conduct research.

No forms of application are issued, but applications (three complete copies), giving full details of age, qualifications, experience and present salary, and the names and addresses of three persons to whom reference may be made, should be lodged with the Director of Personnel, Registrar's Office, 1 Park Terrace, University of Newcastle upon Tyne NE1 7RU, not later than **Friday 30 May 1997**.

Further particulars are available from the Director of Personnel. Informal enquiries may be addressed to Professor B.E. Johnson, e-mail: B.E.Johnson@ncl.ac.uk, tel: 0191222 7314.

VISIT OF PROFESSOR V.M. BUCHSTABER

The algebraic topologist Victor Buchstaber (Moscow State University) will visit the UK from 29 May until 11 June 1997, under the auspices of the LMS fSU scheme. He will speak at the Sheffield Homotopy Meeting (also LMS supported, and taking place between 30 May and 1 June), before spending the last week of his stay in Manchester. The latter period will include the 1997 Hardy Lecture by Peter May, of Chicago (LMS supported), and the 1997 Adams Lectures by Douglas Ravel, of Rochester (KPMG sponsored). Amongst Professor Buchstaber's current interests are many-valued groups, and quantum structures in cobordism theory. For further details concerning activities in Sheffield, contact John Greenlees (j.greenlees@sheffield.ac.uk) and in Manchester contact Nigel Ray (nige@ma.man.ac.uk).

VISIT OF PROFESSOR N. VAVILOV

Professor Nikolai Vavilov (St. Petersburg) has been awarded an LMS grant (fSU scheme) to visit the UK. He will be at the University of East Anglia for one month from 20 April 1997. For further information contact Professor A. Zalesski, School of Mathematics, UEA, Norwich NR4 7TJ or by e-mail (a.zalesskii@uea.ac.uk).

VISIT OF PROFESSOR V.V. VERSHININ

The algebraic topologist Vladimir Vershinin (University of Novosibirsk) will visit the UK from 29 May until 8 June 1997, under the auspices of the LMS fSU scheme. He will speak at the Sheffield Homotopy Meeting (also LMS supported, and taking place between 30 May and 1 June), and will spend the last 5 days of his stay in Manchester. The latter period will include the 1997 Hardy Lecture by Peter May, of Chicago (LMS supported), and the 1997 Adams Lectures by Douglas Ravel, of Rochester (KPMG sponsored). Amongst Professor Vershinin's current interests are braid groups and cobordism

theory. For further details concerning activities in Sheffield, contact John Greenlees (j.greenlees@sheffield.ac.uk) and in Manchester contact Nigel Ray (nige@ma.man.ac.uk).

VISIT OF PROFESSOR V.A. SOLONNIKOV

Professor V.A. Solonnikov (St. Petersburg) will visit Bath and Oxford between 6 and 13 May, supported by an LMS fSU grant. He will lecture "On a steady motion of a drop in an infinite liquid medium" at Bath at 2.15 pm in 6 East 2.2 on Friday 9th, and at the Mathematical Institute Oxford at 5 pm on "Viscous flow through an aperture" on Monday 13th. He will be in Bath from 6th until 9th May and in the Mathematical Institute Oxford on 13th and 14th. For further information contact Professor J.F. Toland (jft@maths.bath.ac.uk) or Professor J.M. Ball (ball@maths.ox.ac.uk).

VISIT OF DR E-M. OUHABAZ

Dr E-M. Ouhabaz (Université de Marne-La-Vallée) will give a seminar on 20th June at 2 pm in Oxford entitled "Absence of the L^2 -contractivity of semi-groups associated with complex elliptic operators"; on 24th June at 4 pm in Bristol and on 26th June at 3 pm in Imperial College, he will speak about "Complex multiplicative perturbations of elliptic operators: heat kernel bounds and holomorphic functional calculus". Support from the LMS under a Scheme 2 grant is gratefully acknowledged. For further information contact: I. McGillivray, Department of Mathematics, University of Bristol, Bristol BS8 1TW; e-mail: i.mcgillivray@bris.ac.uk; tel: 0117 9287997; fax: 0117 9287999.

DEPARTMENTAL NEWS

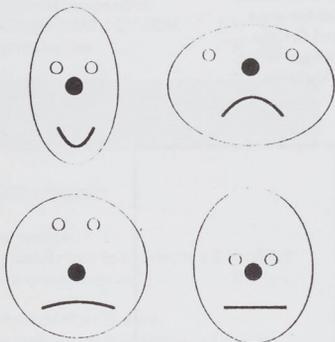
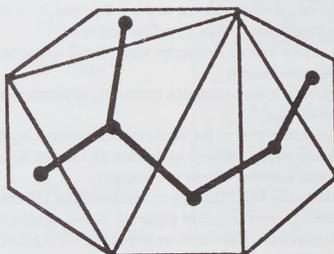
University of Wales, Bangor Professor L.A. Lambe (Rutgers and Stockholm) has been appointed for five years from 1 April 1997, as Honorary Professor in the School of Mathematics.

LONDON MATHEMATICAL SOCIETY

1997 POPULAR LECTURES

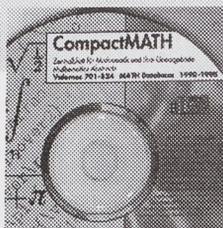
Edinburgh University - Tuesday 17 June
Birmingham University - Monday 23 June
Imperial College - Friday 4 July

Professor Mike Atkinson
Staying ahead of the Opposition
"Counting votes, partitioning a polygon into triangles, walking in a city whose roads only run North-South or East-West are all activities linked by the ubiquitous Catalan numbers"



Professor John Kent
How to Study Random Shapes
"Developed during the past 10-15 years, the new subject of shape analysis provides us with methods of comparing and averaging geometric objects, without regard for their location size and orientation."

For further information contact
Miss S.M. Oakes, London Mathematical Society, Burlington House,
Piccadilly, London W1V 0NL (e-mail: lms@lms.ac.uk).
Admission is free.



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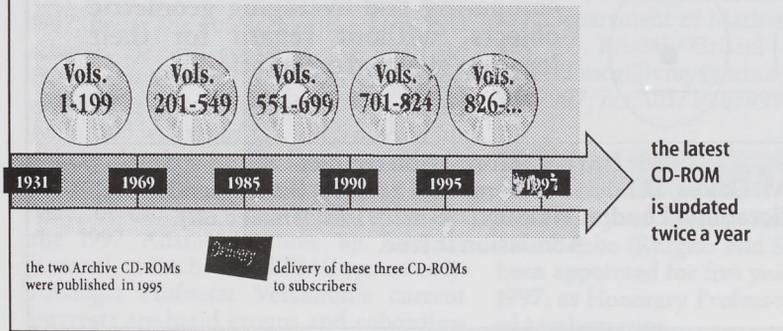
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edited by Fachinformationszentrum (FIZ) Karlsruhe and the Heidelberger Akademie der Wissenschaften.

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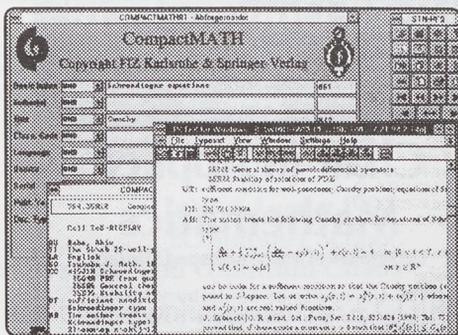
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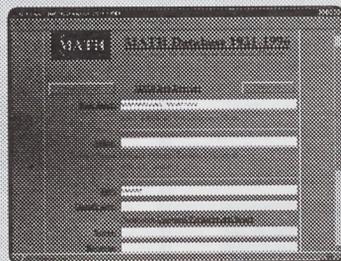
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Conditions of Appointment and Information for Candidates may be obtained from Appointments (45661), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF, UK (tel. 0171 387 8572 ext. 206; fax 0171 813 3055; email: appts@acu.ac.uk). Applications, quoting Position No. MT37, close on **30 June 1997**, and must be airmailed to:

The Registrar, Attention:
Staffing Section, University
of Canterbury, Private Bag
4800, Christchurch,
New Zealand.

**The University has a policy of equality
of opportunity in employment.**

STATMECH-13

A one-day conference in Statistical Mechanics, STATMECH-13, will be held on 19 June 1997 at King's College London, Strand, London WC2R 2LS. It will be followed by a Satellite Conference on Stochastics, Dynamics and Complexity on 20 June 1997. These conferences are organized in conjunction with the conference "Analysis and Statistical Mechanics" to be held at Imperial College London on 18 June 1997.

STATMECH-13 will begin at 10.30 am on Thursday 19 June. There will be three invited lectures: P. Collet (Paris) "New Applications of the Renormalisation Group"; H. Horner (Heidelberg) "Non-equilibrium Dynamics and Ageing"; D. Rand (Warwick) "Fluctuations and Correlations Evolution, Sex, Infection and Altruism". There will also be short contributed talks of about 20 minutes duration. The Satellite Conference on Friday 20 June will begin at 9.00 am and will consist of talks of a more mathematical nature. For further information updates, see the homepages of the KCL Mathematics Department (<http://www.mth.kcl.ac.uk>).

To register for participation or to give a talk at STATMECH-13 or the Satellite Conference use the internet (<http://www.mth.kcl.ac.uk/~tcoolen/sm13.html>) or contact the organizers. There is a registration fee of £15 for STATMECH-13 (reduced to £5 for students); cheques should be made payable to "King's College London". There is no fee for the Satellite Conference. The deadline for offers of talks is Friday 9 May. The organizers of STATMECH-13 are A.C.C. Coolen (0171-8732235, tcoolen@mth.kcl.ac.uk) and D.S. Gaunt (0171-8362153, udap090@bay.cc.kcl.ac.uk), the organizer of the Satellite Conference is R.F. Streater (0171-8732220, ray.streater@kcl.ac.uk) and the Conference Secretary is Miss R. George (0171-8732217, maths@kcl.ac.uk). The organizers gratefully acknowledge financial support from the London Mathematical Society.



ISAAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES

FORTHCOMING WORKSHOP

28 July - 1 August 1997
EC Summer School

Disordered Systems and Quantum Chaos

Aims This meeting comprises an advanced school that presents an account of the quantum properties of chaotic and disordered systems. The courses will include lectures on semiclassical and field-theoretic methods, fluctuation statistics of spectra and eigenfunctions, localization, and quantum ergodicity. The school is directed towards advanced graduate students, postdoctoral fellows and researchers.

Organising Committee J.P. Keating (Bristol), D.E. Khmel'nitskii (Cambridge), I.V. Lerner (Birmingham).

Lecturers A. Altland (Cambridge), M.V. Berry (Bristol), E.B. Bogomolny (Orsay), V. Falko (Lancaster), S. Fishman (Technion, Haifa), I. Goldsheid (QMW, London), E.J. Heller (Harvard), D.E. Khmel'nitskii (Cambridge), I.V. Lerner (Birmingham), U. Smilansky (Weizmann Institute), B.V. Spivak (Washington, Seattle), M. Wilkinson (Strathclyde), S. Zelditch (Johns Hopkins, Baltimore), M.R. Zirnbauer (Köln).

Grants The conference is supported by a grant from the European Union which will provide funding towards the registration, travel and subsistence costs of selected young (under 35 years) participants. Applications from women and anyone living in Greece, Ireland and Portugal and other less favoured regions of the European Community are particularly encouraged. Self-supporting applicants of any age or nationality are welcome.

Location and cost The workshop will take place at the Isaac Newton Institute and accommodation for participants will be provided adjacent to the Institute. The conference package costs £270 which includes registration fees, accommodation, breakfast and evening meals plus lunch and refreshments during the days that lectures take place.

Further information and application forms The above workshop takes place as part of the programme Disordered Systems and Quantum Chaos. Further information and application forms are available via WWW at: <http://www.newton.cam.ac.uk/programs/dqc.html> or from Heather Dawson at the Institute (e-mail: h.dawson@newton.cam.ac.uk), to whom completed applications should be sent.

Closing date for the receipt of applications is **23 May 1997**.

LONDON MATHEMATICAL SOCIETY 1997 HARDY LECTURE

The 1997 Hardy Lecturer, Professor Peter M. ...

Day	Topic/Time/Location	Contact Person
Monday 26 May	<i>Topological Hochschild and cyclic homology and algebraic K-theory</i> 5.00 pm The Higman Room, Mathematical Institute, Oxford	Dr J. Roe
Wednesday May 28	<i>Operads in algebra, topology, and physics</i> 2.00 pm Room GLT3, Mathematics Institute, University of Warwick	Professor J.D.S. Jones
Thursday 29 May	<i>Derived categories in algebra and topology</i> 3.00 pm Room G3, Mathematics Building, University of Leicester	Dr J.R. Hunton
Monday 2 June	<i>Some equivariant algebraic topology and nonequivariant applications</i> 2.30 pm The Hicks Building, University of Sheffield	Professor J.P.C. Greenlees
Tuesday 3 June	<i>Operads in algebra, topology, and physics</i> 4.30 pm University of Leeds	Dr H.D. Macpherson
Wednesday 4 June	<i>Brave new algebra in stable homotopy theory</i> 2.30 pm Room 2.10, Mathematics Department, University of Manchester	Professor N. Ray
Thursday 5 June	<i>Some equivariant algebraic topology and non-equivariant applications</i> 4.00 pm Room S5, School of Mathematics, University of Wales, Bangor	Professor R. Brown

All interested are welcome to attend any of the lectures but it is advisable to check the time and venue in advance.
General enquiries about Professor M. ...
LMS Administrator, Susan Oakes (e-mail: ...)

MATHEMATICAL SOCIETY LECTURE TOUR

May (Chicago) will give the following lectures:

Day	Topic/Time/Location	Contact Person
Friday 6 June	<i>Operads in algebra, topology and physics</i> 2.30 pm Video Network University of Wales	Professor R. Brown
Monday 9 June	<i>Operads in algebra, topology, and physics</i> 12 noon Salmon Theatre, Hamilton Building, Trinity College, Dublin	Professor D.J. Simms
Tuesday 10 June	<i>Brave new algebra in stable homotopy theory</i> 4.00 pm Room 3b Department of Mathematics, University of Glasgow	Dr A.J. Baker
Thursday 12 June	<i>Derived categories in algebra and topology</i> 4.00 pm New King's 1 (Old Aberdeen Campus), University of Aberdeen	Dr E.B. Nasatyr
Friday 13 June	<i>Operads in algebra, topology, and physics</i> 4.30 pm Room 6, Appleton Tower, University of Edinburgh	Professor A.A. Ranicki
Monday 16 June	<i>Operads in algebra, topology, and physics</i> 4 pm Room 521, Strand Building, King's College, London	Dr W.J. Harvey
Wednesday 18 June	<i>Topological Hochschild and cyclic homology and algebraic K-theory</i> 4.30 pm Winstanley Room, Trinity College, Cambridge	Dr C.B. Thomas
Friday 20 June	<i>Stable algebraic topology and stable topological algebra</i> LMS Hardy Lecture 5pm Burlington House, Linnean Society, London	Dr D.J.H. Garling

For the meetings addressed by the Hardy Lecturer,
contact the department concerned.
For May's visit may be directed to the
Hardy Lecturer (e-mail: lms@lms.ac.uk, tel: 0171 437 5377).

BOOK REVIEW

The Life of Stefan Banach: through a reporter's eyes by Roman Kaluza. Translated and edited by Ann Kostant and Wojbor Woyczynski, Birkhäuser, Boston, Mass., 1996, 176 pp.

Stefan Banach is a hero to functional analysts, to mathematicians, and to all scientists. His mathematics is truly seminal in our century: his contributions in functional analysis, measure theory, and set theory have shaped the mathematics of the last 50 years, and are the foundations of our 'modern movement'. His results are individually of great significance, but it is the style and language of his work that have been so influential to the analysts of my generation: for example, the course on functional analysis that I took at Cambridge in the late 1960s was a clear descendant from Banach's 'Théorie des opérations linéaires' from 1935; the results of the Polish school of the 1930s are the foundations on which our subject is built; the problems that were raised have resonated to our day. Banach's doctoral dissertation, 'On operations on abstract sets and their applications to integral equations' was written in Polish in 1920 and its French version was published in 1922. It contains the axiomatic definition of what is now called a Banach space; his axiomatization was amazingly complete and definitive, and his dissertation brought functional analysis to life in a single sweep.

In Poland, Banach is a national hero: he is known there as a great scientist and a major figure of the great flowering of Polish scientific life in the independent Polish republic of the inter-war years. Banach and the other great Polish mathematicians of his era are icons in the culture of his country. So one expects an outpouring of work on the life and times and mathematics of Stefan Banach. Perhaps even a movie. But we do not have this; almost nothing has been written on this great man.

The present book is a rather short memoir on the life of Banach. It was prepared in the 1980s, and was published in 1992 in Polish; the author is not

a mathematician, but his comments on mathematics and the mathematical work of Banach are accurate and give a real feeling for the subject. The English version is an extensive revision of the Polish version, but it is still quite short - just an interesting evening's read - and has no sustained analysis of Banach's mathematics.

We are poor at writing the history of our subject and its great figures; poor at presenting ourselves with panache to a wider public (with some notable exceptions), and the lack of a serious biography of Banach is very disappointing. Of course there are formidable difficulties: the Polish archives have substantial gaps; most eye-witnesses of events have died; the combinations of expertise required are rarely conjoined. But I would like to take the liberty of urging our Polish colleagues to strive to produce a major work on the glorious era of Banach before all living contacts fade away.

The present book tells us something of Banach's origins before the first world war (he was born in 1892), of his historic chance encounter with Steinhaus in 1916, of his life in Lvov between the wars, of the Scottish Café and the Scottish Book - one marvels in our bureaucratically hassled times that it was possible to conduct serious and very creative scientific activity in the chaotic daily gatherings at the Scottish Café - of the foundation of *Studia Mathematica* and the great days of Polish mathematics - we meet Hugo Steinhaus, Stanislaw Mazur, Zygmunt Janiszewski, Kazimierz Kuratowski, Józef Marcinkiewicz, Otto Nikodým, Stanislaw Saks, and Waclaw Sierpinski. Finally we read of the tragic events of 1939-45: Soviet invasion of Lvov in 1939, Nazi invasion in 1941 and Himmler's elimination of the Lvov intelligentsia (which Banach survived), the great sufferings, the Soviet recapture of the city in 1945, and Banach's death from cancer on 31 August 1945.

The book is strongly recommended as an appetizer, but we are eager for a sustained treatise.

H.G. Dales
University of Leeds



■ Techniques in Fractal Geometry

K.J. Falconer, University of St. Andrews, Scotland

Following on from *Fractal Geometry: Mathematical Foundations and Applications*, the aim of this book is to present an intuitive approach to a variety of techniques in

fractal geometry, emphasising the underlying concepts. Much of the material presented in the book has come to the fore in recent years. This includes a variety of methods for studying dimensions and other parameters of fractal sets and measures. Also included are more sophisticated techniques such as the thermodynamic formalism and tangent measures which are now used routinely in fractal geometry and have many applications.

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approx £24.95

New In Paperback

■ Fractal Geometry Mathematical Foundations and Applications

K.J. Falconer, University of St. Andrews, Scotland

This new paperback edition of the best-selling *Fractal Geometry* provides an accessible treatment of the mathematics of fractals and their dimensions. The book is aimed at those wanting to use fractals in their own areas of mathematics and science. The first part of the book covers the general theory of fractals and their geometry. Results are stated precisely, but technical measure theoretic ideas are avoided and difficult proofs are sketched or omitted. The second part contains a variety of problems and applications in mathematics and physics.

0471 92287 0 312pp (cl) 1990 £40.00
0471 96777 7 312pp (pr) due March 1997
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■ Local Search in Combinatorial Optimization

Emile H. Aarts, Phillips Research Laboratories, Eindhoven, The Netherlands, and Jan Karel Lenstra, Eindhoven University of Technology, The Netherlands

The contributions to this book cover local search and its variants from both a theoretical and practical point of view. The first half of the book deals with the theory of local search and describes the principal search strategies such as simulated annealing, tabu search, genetic algorithms and neural networks. The remaining chapters present a wealth of applications of local search algorithms to a variety of problems, including the travelling salesman problem, vehicle routing, machine scheduling, VLSI design and code design.

0471 94822 5 approx 480pp (cl) due March 1997
approx £50.00

■ Theory and Algorithms for Linear Optimization

An Interior Point Approach

Kees Roos, Delft University of Technology, The Netherlands, T. Terlaky, University of Geneva, Switzerland and J.-Ph Vial, Delft University of Technology, The Netherlands

This book provides a unified presentation of linear optimization by way of both theory and algorithms (for design, convergence, complexity and asymptotic behaviour). Numerous exercises and illustrations are provided, together with a self-contained introductory chapter for readers who are unfamiliar with linear optimization methods.

0471 95676 7 300pp (cl) January 1997 £50.00

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VISIT OF PROFESSOR W. BROWDER

Professor W. Browder (Princeton and Aarhus) will be touring the UK in May on a visit under Scheme 2 of the London Mathematical Society. He will talk on "Lie algebra groups and their cohomology" at the following places and times. The names in brackets are those of the local organizers, who should be consulted for further details.

- Edinburgh Monday, 19th May, 2.00 pm, Room 4312, James Clerk Maxwell Building, University of Edinburgh (Professor A.A. Ranicki)
- Cambridge Tuesday, 20th May, 3.30 pm, Seminar Room 1, DPMMS, University of Cambridge (Dr C.B. Thomas)
- Oxford Thursday, 22nd May, 10 am, Mathematical Institute, University of Oxford (Dr J. Roe)

ROLLO DAVIDSON TRUST

The Trustees of the Rollo Davidson Trust give notice that they have awarded Rollo Davidson Prizes for 1997 to James R. Norris (University of Cambridge) for his work on stochastic analysis on the borderline of differential geometry, and to Martin G. Schweizer (Technical University, Berlin) for his work on hedging in incomplete financial markets.

NEW PARADIGMS FOR COMPUTATION

A Summer School on "New Paradigms for Computation on Classical Spaces", supported by the Engineering and Physical Sciences Research Council and the London Mathematical Society, will be held at the School of Computer Science, University of Birmingham, 8-10 September 1997. The Summer School is centred around recent developments in the theory of continuous domains as applied to classical

problems in Mathematics and Semantics. It will consist of 12 lectures and 6 problem classes. The emphasis will be on providing a firm basis in the mathematical theories underlying the new approach to computation on classical spaces. It will be particularly well suited for graduate students from Mathematics or Computer Science.

There will be a fee of £20 to cover the cost of teaching materials and refreshments. Accommodation has been reserved at University House, a college next to the University, at a cost of £23.55 per night including breakfast. Grants are available for ten EPSRC students and ten non-EPSRC students covering registration fee, accommodation and subsistence. There are no funds available for travel expenses. For further information contact Sammy Snow, School of Computer Science, The University of Birmingham, Birmingham B15 2TT (tel: 0121 414 4774; fax: 0121 414 4281). To be considered for a grant, an application must arrive before **30 June 1997**.

MATHEMATICAL STATISTICAL MECHANICS AND RELATED FIELDS CONFERENCE

The conference, being held from 8 - 11 July 1997 at University College of Swansea, will concentrate mainly on the probabilistic and analytic aspects of Statistical Mechanics and Disordered Systems. Registration will take place during the morning of Tuesday 8 July, with the first session taking place in the afternoon. The conference will finish with lunch on Friday 11. The accommodation will cost £18.80 per night. There will be registration fee of £45.00. This includes lunch. Most of the talks will be of 30 minutes duration, there will be few of 40 minutes duration. Among the main speakers will be A. Verbeure, S.R.S. Varadhan and S. Schlossman. For more information please contact: Dr T. C. Dorlas, Department of Mathematics, University College Swansea, Singleton Park, Swansea SA2 8PP; e-mail: T.C.Dorlas@swansea.ac.uk. This conference is being supported by the London Mathematical Society.

ALGEBRAIC NUMBER THEORY AND DIOPHANTINE ANALYSIS

A satellite conference of ICM-98, "Algebraic Number Theory and Diophantine Analysis", will be held from 30 August to 5 September 1998 in Graz, Austria. This international conference is organized by Franz Halter-Koch (University of Graz) and Robert F. Tichy (Graz Technical University). The topics of the conference include algebraic number theory, diophantine equations, transcendence, uniform distribution as well as computational and analytic aspects. There will be one hour survey lectures as well as 20 minutes contributed talks (open for everybody) and a special session on diophantine equations.

The following mathematicians have already agreed to attend the conference: Jozsef Beck (Rutgers); Joerg Bruedern (Stuttgart); Jan-Hendrik Evertse (Leiden); Ernst-Ulrich Gekeler (Saarbruecken);

Kalman Györy (Debrecen); Stephane Louboutin (Caen); Wladislaw Narkiewicz (Wroclaw); Attila Pethö (Debrecen); Florian Pop (Bonn); Rene Schoof (Rome); Martin Taylor (UMIST, Manchester) Robert Tijdeman (Leiden); Michel Waldschmidt (Institut des Mathématiques de Jussieu, Paris).

There will be the possibility of moderately priced housing in a dormitory. Of course, it is possible to choose any hotel in Graz via the tourist office. The conference fee is approximately ATS1000 (DM150, US\$90, FF450). In special cases a reduction of the conference fee may be possible. For more details refer to the second announcement in approximately one year. Everybody interested in the second announcement should contact the following e-mail address: nt98@weyl.math.tu-graz.ac.at.

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INSTRUCTIONAL CONFERENCE ON ALGEBRAIC INDEPENDENCE

An instructional conference on Algebraic Independence will be held from 27 September - 3 October 1997 at CIRM, Luminy, France. The organisers are: Yu.V. Nesterenko, R. Tijdeman and M. Waldschmidt. The aim of the conference is to enable primarily graduate students and post-docs to get acquainted with new methods and results. The lectures will compose a full course together. Speakers: F. Amoroso (Pisa), M. Laurent (Marseille), Yu.V. Nesterenko (Moskva), P. Philippon (Paris), D. Roy (Ottawa), M. Waldschmidt (Paris) and others. Further information is available from R. Tijdeman (tijdeman@wi.leidenuniv.nl) and the web site (<http://www.math.jussieu.fr/~miw>).

ANNUAL FUNCTION THEORY MEETING

Professor Noel Baker retires this year, and to mark his contribution to mathematics and to these meetings, the 1997 meeting will be held in his honour. The meeting will be held in Cambridge, and will depart from tradition by taking place over two days. The programme will start at 2.00 pm Monday 22nd September and end at lunchtime on Tuesday 23rd September. There will be a dinner in honour of Professor Baker on Monday evening in King's College, and accommodation will be available in King's College. The Society has provided some financial support for this meeting. For further details, e-mail or write to Dr T.K. Carne (t.k.carne@dpmms.cam.ac.uk), DPMMS, 16 Mill Lane, Cambridge CB2 1SB.

EUROPEAN SCIENCE FOUNDATION

The Programme of European Research Conferences is run by the European Science Foundation with funding from the Euroconferences Activity of the European Union. The programme is open

to all researchers, both from industry and academia, and covers all fields, from natural and technical sciences to social sciences and humanities. Grants are available to encourage the attendance of young researchers, in particular those from less favoured regions in Europe. Details on the individual conferences, as well as an on-line application form and general information are available on the World Wide Web (<http://www.esf.org/euresco>).

THE ROYAL SOCIETY OF EDINBURGH

Amongst those recently elected as Ordinary Fellows of the Royal Society of Edinburgh were: Professor George Gettinby, Department of Statistics and Modelling Science, Strathclyde University; Professor Timothy Nicholas Trewin Goodman, Department of Mathematics, Dundee University; Professor Bernard Roberts, Mathematical Institute, St Andrews University; Professor Edmund Frederick Robertson, Mathematical Institute, St Andrews University.

MATHEMATICS EDUCATION MAILING LIST

David Epstein of Warwick University has started an electronic mailing list in mathematics education at the undergraduate or graduate level. Messages to the list consist of opinions and reports from subscribers. All subscribers are free to contribute to the discussions. To subscribe, send e-mail to majordomo@warwick.ac.uk with message

subscribe mathedu <type your e-mail address here >.

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- T.W. Körner (*London Mathematical Society Newsletter*, March 1997),
praising the new A K Peters title **The World According to Wavelets** for
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CONFERENCE ON DYNAMICS OF MIXED PHASE REGIONS

This ICMS conference will be devoted to a study of the novel phenomena associated with dynamic, partially solidified systems. It will be concerned with both the theoretical modelling and the physical occurrences of mushes, slushes and slurries. In addition to the talks given by the main lecturers listed below, short communications, limited to 20 minutes with 5 minutes discussion, will be organised. Abstracts of these communications will be published in the conference programme and should be limited in length to less than 200 words. Invited speakers include: S.H. Davis (Northwestern); L. Ratke (Cologne); P.H. Roberts (UCLA); H.M. Tensi (Munich); J. Wettlaufer (Washington); M.G. Worster (Cambridge). Partial list of participants: C. Beckermann (Iowa); C.F. Chen (Arizona); P.C. Fife (Utah); A.C. Fowler (Oxford); D.T.J. Hurlle (Bristol); A.A. Lacey (Heriot-Watt, Edinburgh); D. McKenzie (Cambridge); O. Penrose (Heriot-Watt, Edinburgh); R. Sekerka (Carnegie-Mellon); S. R. Tait (IPG, Paris); P.W. Voorhees (Northwestern); W. Woods (Bristol).

The venue for the conference to be held from 18-20 June 1997 will be the Royal Society of Edinburgh, George Street, which is situated in the centre of Edinburgh close to the main railway station. ICMS will be happy to provide lists of suitable guest houses and hotels to participants and will, on request, make the necessary reservations. ICMS cannot be responsible for accommodation bills. Information on accommodation can also be obtained from: The Edinburgh & Lothians Tourist Board, 3 Princes Street, Edinburgh EH2 2QP, tel: 0131 557 1700.

There will be a non-refundable fee of £30 to cover administrative costs, lunches, teas and coffee. Payment of the registration fee should be by Eurocheque, or a cheque drawn on a British Bank only, made payable to 'Heriot-Watt University - ICMS'. For further information or

registration contact: R.N. Hills, Department of Mathematics, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS; tel: 0131 451 3226; fax: 0131 451 3249; e-mail: R.N.Hills@bonaly.hw.ac.uk.

SURREY SUMMER MEETINGS 1997

Symmetry Methods for Differential and Difference Equations 27-28 May. This meeting is organised by Professor C.J. Budd (Bath) and Dr P.E. Hydon (Surrey). Local organiser: Dr Peter E. Hydon (P.Hydon@mcs.surrey.ac.uk). The list of speakers will include:

- Professor P. Clarkson (Kent)
- Dr V. Dorodnitsyn (Moscow)
- Dr V. Galaktionov (Bath)
- Dr A. Iserles (Cambridge)
- Dr E. Mansfield (Kent)

Using Functional Analysis to Extract Physical Properties of Nonlinear PDEs 6-7 June. Local organiser: Dr Michele V. Bartuccelli (M.Bartuccelli@mcs.surrey.ac.uk). The list of speakers will include:

- Professor J. Gibbon (Imperial)
- Professor J. King (Nottingham)
- Professor A. Mielke (Hannover, Germany)
- Professor A. Newell (Warwick)
- Professor B. Straughan (Glasgow)

Symmetric Chaos in Dynamical Systems 16 June. Local organiser: Dr Peter Ashwin (P.Ashwin@mcs.surrey.ac.uk). The list of speakers will include:

- Professor M. Field (Houston)
- Dr P.J. Aston (Surrey)
- Dr D.R.J. Chillingworth (Southampton)
- Dr P.C. Matthews (Nottingham)
- Dr M. Nicol (UMIST)

These meetings are supported by grants from the London Mathematical Society. Further details and updated information about the meetings can be found at the website: <http://www.mcs.surrey.ac.uk/Research/Maths/centre.html>.

DO THIRD-YEAR MATHEMATICS UNDERGRADUATES KNOW WHAT THEY ARE SUPPOSED TO KNOW?

In 1992, the Teaching Committee of the Mathematical Association set up a sub-committee called "Teaching and Learning Undergraduate Mathematics" (TaLUM). A subset of this has been considering the content of undergraduate mathematics courses, and an earlier LMS Newsletter reported on aspects of the teaching of Analysis. More recently, the group has been investigating the extent to which the core material taught in the first year of most mathematics degrees ["What every mathematics graduate should know"] is remembered and understood by students who have progressed into their third year. Third-year undergraduates were given a one-hour written test, consisting of questions on each of the following topics: differentiability, elementary group theory, real numbers, vector spaces, angular momentum, mathematical induction and systems of linear equations. These were deemed to be common to most university mathematics degree syllabuses and it was felt that every mathematics graduate should know and understand the fundamental ideas involved in these questions. The primary aim was to check for understanding of the concepts rather than whether the student could recall a particular technique or algorithm. A total of 155 students, from fifteen institutions throughout the country, participated in the exercise.

To give a flavour of the questions asked, that on the real numbers was:

Is there a smallest real number which is strictly greater than $\frac{1}{2}$? If you think that there is, what do you think it is? If you think there is not, explain why there is not.

Just over 8% of the non-blank returns actually asserted that there was a smallest real number strictly greater than $\frac{1}{2}$. Four students offered the number 0.501 as the smallest number, while several others gave $\frac{1}{2} + \frac{1}{10^n}$. Overall, less than 40% were able to give a reasonably acceptable explanation.

Taking all of the test results as a whole, the most striking aspect of this investigation was that only about 20% of all responses were substantially correct and almost 50% did not contain anything that could be deemed to be minimally credit-worthy. In many instances, there was very little that the students could actually recall, even in cases where they had gone on to do further modules in the same topic later. Moreover, the spreads of Year 1 results and actual degree classes achieved show that the findings applied not only to "weak" undergraduates but also to those who were regarded as the best mathematics students in their institutions.

Preprints of an article based on this investigation are available from Dr J.A. Anderson, Department of Mathematics, University of Nottingham, Nottingham NG7 2RD (e-mail: jaa@maths.nott.ac.uk).

EuMS LECTURES 1997

The EuMS Lecturer of 1997 is Professor Nigel Cutland (University of Hull). He will give his EuMS Lectures at the University of Helsinki on 27 May - 2 June 1997, with the title "Loeb Measures in Practice: Recent Advances". He will outline the Loeb measure construction of nonstandard analysis, and discuss recent applications in stochastic fluid mechanics, finance theory and stochastic calculus of

variations (Malliavin calculus and related topics). As part of this programme he gives, on his way to Helsinki, some lectures at the University of Gothenburg on 23 and 26 May 1997. For more information please contact: EuMS Secretariat, Department of Mathematics, PO Box 4, FIN-00014 University of Helsinki, Finland; fax: +358-9-1912 3213; e-mail: tuulikki.makelainen@helsinki.fi.

BRITISH SOCIETY FOR THE HISTORY OF MATHEMATICS MEETINGS

Joint Meeting of the B.S.H.M. and C.S.H.P.M.

The first joint meeting of the British Society for the History of Mathematics and the Canadian Society for the History and Philosophy of Mathematics will take place from 18-20 July at Oriel College, Oxford. In addition to a varied programme of talks, there will also be a trip to the Museum of the History of Science and a walking tour of mathematical Oxford. Speakers at the meeting will include: Rebecca Adams (The beginnings of general topology), Florence Fasanelli (Art and mathematics), Jeremy Gray (Mathematicians as philosophers of mathematics), Shawnee McMurran (P.A.M. Dirac: the mathematician), Gregory H. Moore (From Anaximander to St Augustine: early mathematical, theological and physical conceptions of the infinite) and Robin Wilson (Sylvester and graph theory). For further information, please contact: John Earle, The Maynard School, Denmark Road, Exeter, Devon EX1 1SJ; e-mail: c.j.earle@exeter.ac.uk; tel: 01392-420219; fax: 01392-496199.

Mathematics in the Ancient World

A two-day residential conference will be held at Kellogg College, Oxford, from Saturday 20 to Sunday 21 September. During this weekend, via talks, discussions and a visit to the Ashmolean Museum, we will bring together texts and artefacts to explain how they can shed light on the mathematical activity in various civilizations including Ancient Egypt, Mesopotamia, India and the Classical world. The weekend will be an accessible, lively and exciting opportunity to explore this topic with experts in the field. Speakers will include: J.V. Field (Sundials and conic sections), Sarah Symons (Astronomy and time-keeping in ancient Egypt), David Fowler (Greek Schoolbooks), Serafina Cuomo (Pappus and platonic solids), George Joseph (Indian architecture) and Eleanor Robson

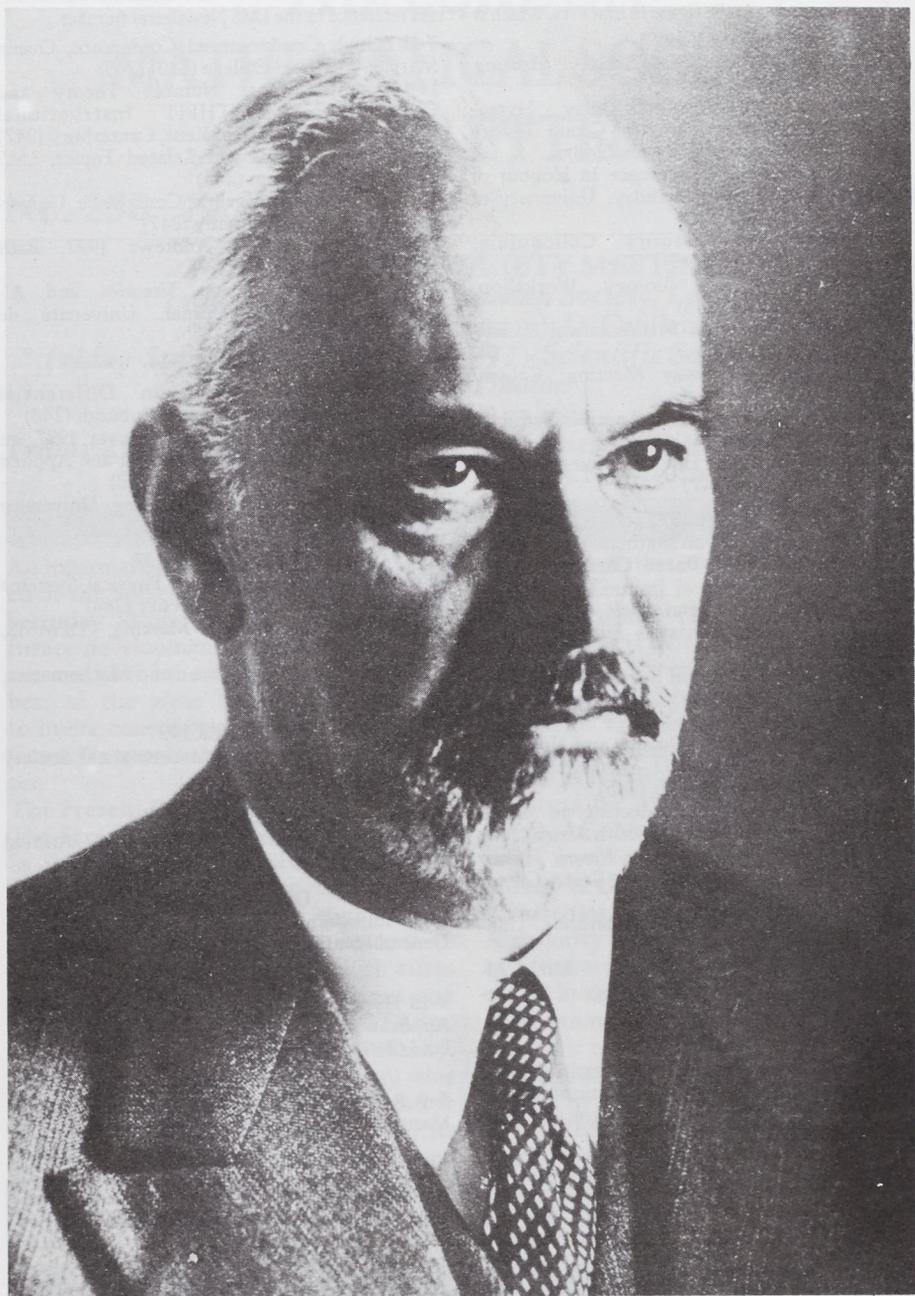
(Accounting in the 21st century BC). For further information, please contact: Dr. Raymond Flood, OUDCE, 1 Wellington Square, Oxford OX1 2JA; e-mail: rgf@vax.ox.ac.uk; tel: 01865-270372.

EXCHANGES WITH AUSTRALIA, NEW ZEALAND AND CANADA

Study Visits Short term research visits generally between two weeks and three months, for British postdoctoral scientists to exchange ideas and information, learn new techniques, develop international collaborative links and enable participation in international programmes. The award covers an APEX or equivalent rate international return air fare and a contribution towards subsistence costs for visits of up to three months. For longer visits the grant covers international travel costs only. Applications are assessed on a rolling basis throughout the year but must be made at least three months before the start of the proposed visit. Results are normally available two to three months after receipt of application.

Fellowships For young British postdoctoral scientists to enable them to spend between six and twelve months based at a research laboratory in Australia or New Zealand. The award covers the cost of an APEX or equivalent rate international return air fare and a monthly stipend payable at a standard rate. There is no provision for bench fees, research costs, insurance or costs associated with dependents. Applications must be submitted to the annual closing date of 17 May. Results are normally available approximately three months after the closing date.

The awards cover research in fields including mathematics. Applicants must be of postdoctoral or equivalent status at the time the award is taken up. For application forms for both Study Visits and Fellowships contact: Lynn Staff at The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG; tel: (0171) 839 5561 ext 2565; fax: (0171) 930 2170; e-mail: ezmb016@mailbox.ulcc.ac.uk.



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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.

MAY 1997

- 2 Edinburgh Mathematical Society Meeting, Aberdeen (241)
13-17 David Epstein's 60th Birthday - Hyperbolic Geometry and Geometric Group Theory Meeting, University of Warwick (248)
16-17 Graph Theory Conference in Honour of Professor Tutte's 80th Birthday, University of Waterloo, Canada (247)
21 One-Day Combinatorics Colloquium, University of Reading (248)
22-23 Computational Biology Workshop, University of Zurich (248)
23-24 Two-day London Mathematical Society Meeting, Liverpool
23-24 Groups in Galway Meeting, Galway (245)
26 North British Functional Analysis Seminar, University of Edinburgh (248)
30-1 June Homotopy Theory Miniconference, Sheffield University (247)

JUNE 1997

- 2-20 Advanced School on Mathematical Models of Systems Involving Phase Changes, ICMS, Edinburgh (246)
2-28 Dirichlet Forms and their Applications in Geometry and Stochastics Euroconference, Crete, Greece (246)
6 Edinburgh Mathematical Society Meeting, St Andrews (241)
20 LMS Meeting, London
23-4 July Confinement, Duality and Non-Perturbative Aspects of QCD Workshop, Isaac Newton Institute, Cambridge (245)
26-28 Joint International Meeting in South Africa, University of Pretoria, South Africa (244)
29-5 July Nonlinear Dispersive Waves: Theory and Applications Euroconference, Crete, Greece (246)
30-1 July Boundary Integral Methods Conference, Leeds University (242)
30-4 July Analysis in Ambleside - Limit Algebras Workshop, University College of St Martins, Ambleside (248)

JULY 1997

- 6-13 Logic Colloquium, Leeds University (244)
7-11 Harmonic Morphisms, Harmonic Maps and Related Topics, Université de Bretagne Occidentale, Brest, France (244)

- 7-11 British Combinatorial Conference, Queen Mary & Westfield College (230) (245)
14-16 Computational Number Theory and Cryptography MATHFIT Instructional Workshop, University of Kent, Canterbury (247)
14-24 Pro-p Groups and Related Topics, LMS Durham Symposium (245)
20-3 Aug Banach Algebras Conference, University of Tübingen, Germany (247)
26-9 Aug Groups St Andrews 1997, Bath University (244)
28-8 Aug Representation Theories and Algebraic Geometry Seminar, Université de Montréal, Canada (245)

AUGUST 1997

- 18-19 Complex Methods in Differential Geometry Conference, ICMS Edinburgh (248)
24-29 15th IMACS World Congress 1997 on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany (243)
25-29 Analysis and Logic Meeting, University of Mons-Hainaut, Belgium (247)

SEPTEMBER 1997

- 8-12 Stochastic Modelling of Physical Systems Workshop, Cambridge University (244)
22-23 Function Theory Meeting, DPMMS, Cambridge (248)
22-26 Austrian Congress of Mathematics, Salzburg (248)

OCTOBER 1997

- 17-18 Two-Day London Mathematical Society Meeting, London

NOVEMBER 1997

- 21 London Mathematical Society, Annual General Meeting, London

DECEMBER 1997

- 13-17 European Women in Mathematics 8th General Meeting, ICTP, Trieste, Italy (244)

FEBRUARY 1998

- 9-13 Hyperbolic Problems Theory, Numerics, Application Conference, ETH Zurich, Switzerland (246)

APRIL 1998

- 6-9 British Mathematical Colloquium, Manchester University

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