THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 313

Finance Committee reported on its meeting in early January. First quarter accounts supported the Society's recent decision to move its UK equities, following the advice of its investment managers (members of Council have a legal responsibility towards the Society's assets, and are obliged to take professional advice). But Council continues to keep a careful watch on the success of its investment strategy. It has now formed an Investment Subcommittee of the Finance Committee, whose members were carefully chosen for their range of practical experience and relevant academic expertise, together with their understanding of the Society and the community it serves, and have agreed to help us evaluate the professional advice the Society receives from its investment managers.

In the current investment climate, money is tighter than it has been in recent years. The recent financial difficulties of subscription agents RoweCom put further pressure on the Society's finances. So the Society must be cautious over-committing expenditure, and the Programme Committee, for example, may need to review its practices in order to be more selective in its funding of mathematical activities than it has needed to be in recent years. But the Society is certainly prepared to spend money where it feels there is a very strong need.

EPSRC/LMS SHORT INSTRUCTIONAL COURSES
Professor Alan Camina

The Society has appointed Alan Camina, Honorary Professor in the School of Mathematics at the University of East Anglia, to be the Short-Course Facilitator, in succession to Alan Pears. The appointment reflects a new contract with the EPSRC for the provision of short courses for postgraduate students for a further three-year period.

The programme of short courses is overseen by the Research Meetings Committee, and the Committee would like to express its thanks to the previous Facilitator, Alan Pears, who worked extremely hard to deliver an excellent series of high-quality short courses.

Alan Camina would be glad to TD(n)Tj 25 0 TD(t)Tj 46 0 20 0 1 600 1595 Tm( )Tj 0 -115 TD(A) 39 0 TD(

SMITH INQUIRY INTO POST-14 MATHEMATICS EDUCATION

The Government announced in July last year that it intended to set up a review of mathematics education, as one of its responses to Sir Gareth Roberts report SET for Success on the supply of scientists, mathematicians and engineers. After some delay the Department for Education and Skills (DfES) in October appointed Professor Adrian Smith, (Principal of Queen Mary, University of London), to chair the Inquiry. The Inquiry is expected to report by the end of June 2003. It was given the terms of reference:

To make recommendations on changes to the curriculum, qualifications and pedagogy for those aged 14 and over in schools, colleges and higher education institutions to enable those students to acquire the mathematical knowledge and skills necessary to meet the requirements of employers and of further and higher education.

Adrian Smith attended a meeting of the Council for the Mathematical Sciences in early January, and outlined the issues he expected his Inquiry to address. He welcomed input from the mathematical community and from those subjects that depend on mathematical education in schools. He was working closely with the Advisory Committee on Mathematical Education (ACME).

The Society s Education Committee, under the Education Secretary Brian Stewart, is working hard to feed ideas and views into the Smith Inquiry. It has drawn up its own set of key issues that it considers the Inquiry must address copies are available from Frances Spoor (spoor@lms.ac.uk) and is working on a more substantial submission to the Inquiry in time for the current consultation deadline of 14 March. Copies of that submission will be made available. Further details of the Smith Inquiry can be found on the web (www.mathsinquiry.org.uk).

CRYPTOGRAPHIC NUMBER THEORY

There will be a one day workshop on Cryptographic Number Theory at Royal Holloway, University of London on Friday 4 April 2003. Confirmed speakers include Igor Shparlinski (Sydney) and Pierrick Gaudry (Paris). Registration information is available from the website (http://www.isg.rhul.ac.uk/~sdg/workshop.html). For further information contact Steven Galbraith (steven.galbraith@rhul.ac.uk). This workshop is funded by the LMS/EPSRC MathFIT initiative.

SCIENTIFIC COMMITTEE OF THE BMC

At the AGM of the British Mathematical Colloquium (BMC) held in Warwick on 8 April 2002, it was agreed that a reconstituted Scientific Committee be formed.

GROUPS AND SEMIGROUPS IN ANALYSIS

A conference on Groups and Semigroups in Analysis, in honour of J.S. Pym on the occasion of his retirement, will take place at the University of Sheffield from 30 May 1 June 2003. The (tentative) list of invited speakers is:

G.R. Allan (Cambridge, England)
J.W. Baker (Sheffield, England)
H.G. Dales (Leeds, England)
M. Filali (Oulu, Finland)
F. Ghahramani (Manitoba, Canada)
N. Hindman (Howard Univ., USA)
K.-H. Hofmann (Darmstadt, Germany)
A.T. Lau (Alberta, Canada)
J.D. Lawson (Baton Rouge, USA)
P. Milnes (Western Ontario, Canada)
M. Mislove (Tulane Univ., USA)
W. Moran (Flinders University, Australia)
I. Namioka (Univ

COMBINATORIAL AND COMPUTATIONAL GROUP THEORY CONFERENCE

A conference on Combinatorial and Computational Group Theory on the occasion of Edmund F. Robertson's 60th birthd

HOLGATE LECTURES 2002/03

In 1997 the London Mathematical Society extended its provision of lectures at a popular level. The Holgate lectures (called Holgate Lectures in memory of Philip Holgate, who helped ensure the success of the Popular Lecture series) provide help for locally based groups to invite high quality lecturers to give a talk on a mathematical subject, at a level suitable for those in the 15 to 18 age group who may be considering mathematics for future study. The lectures are designed with the aim of enhancing the students' interest and awareness of mathematics and of encouraging them to appreciate the importance, excitement and beauty of mathematics. Although the lectures are usually pitched at mathematical level of the 15-18 year old they are by no means the only audience that has been encountered and good publicity can result in the involvement of many interested adults as well. Such was the success of this scheme that it has been enlarged and extended with five Holgate lecturers. The current list of lecturers with the titles of their talks is:

Dr H.M. Byrne: Modelling early tumour growth; Making more of experiments; Mathematics and macrophages: weapons for fighting cancer?; Using mathematics to explain experimental results.

Dr H.E. Mason: Beyond the Rainbow: UV and X-ray Observations of the Sun; SOHO: The Solar and Heliospheric Observatory; Total Solar Eclipse; Waves and the Sun; The Solar Spectrum: Atoms and Ions.

Dr A.B. Slomson: How to Play Games with Trees; How to Count, Probably: an introduction to combinatorics; What computers cannot do; Polynomials - both simple and quadratic.

Dr N.D. Gilbert: The Turing Test; Only connect; Numbers and codes.

Professor D.S. Broomhead: The Mite's Tale - from randomness to chaos; The Gambler's Tale - randomness, chaos and order; The Mathematician's Tale - taking the rough with the smooth.

The lecturers will not charge fees for the lectures themselves, an honorarium being provided to them by the London Mathematical Society, but the Education Committee expects local

VISIT OF PROFESSOR T.A. SLAMAN

Professor Theodore Slaman (University of California at Berkeley) will visit the UK from 1 - 10 April, supported by an LMS Scheme 2 grant. He will give lectures at the University of Leeds, Oxford University and at BMC 2003 at Birmingham University. For further information contact Professor Barry Cooper, School of Mathematics, University of Leeds, Leeds LS2 9JT (s.b.cooper@leeds.ac.uk).

LMS DURHAM SYMPOSIA

The LMS Research Meetings Committee is responsible for the planning of the LMS Durham Symposia, which have been running successfully each July/August since 1974, with over 70 symposia to date, in a wide range of mathematical disciplines. In 2003 there will be three Durham Symposia:

4 14 July: Geometry and Cohomology in Group Theory
organisers: M.R. Bridson, P.H. Kropholler (p.h.kropholler@qmul.ac.uk)*, I.J. Leary
14 18 July: New Developments and Applications in Rapid Fluid Flows
organisers: J.S.B. Gajjar (gajjar@maths.man.ac.uk)*, P. Hall, F.T. Smith
25 July 4 August: Markov Chains Algorithms, Applications and Theory
organisers: L.A. Goldberg, W.S. Kendall, A. Stuart (stuart@maths.warwick.ac.uk)* .

Further information may be obtained from the organisers marked * at the email addresses shown.

The most recent symposia have been:

2002 Representations of Finite Groups and Related Algebras (K. Erdmann, J.C. Rickard, G.R. Robinson)
2002 Computational Methods for Wave Propagation in Direct Scattering (M. Ainsworth, P.J. Davies, D.B. Duncan, P.A. Martin, B.P. Rynne)
2002 Astrophysical Fluid Mechanics (D.W. Hughes, C.A. Jones, A.M. Soward, N.O. Weiss)
2001 Combustion Theory (J. Brindley, J.W. Dold, V. Galaktionov, A.C. McIntosh)
2001 Groups, Geometry and Combinatorics (A. Ivanov, M. Liebeck, J. Saxl)
2001 Special Structures in Differential Geometry (N.J. Hitchin, S.M. Salamon, A.F. Swann)

Detailed proposals for symposia are made at least two years ahead. For each symposium an application is made to EPSRC for a su

CHAOTIC DYNAMICS AND TRANSPORT IN CLASSICAL AND QUANTUM SYSTEMS

A NATO Advanced Study Institute Summer School on Chaotic Dynamics and Transport in Classical and Quantum Systems will be held at Cargese from 18-30 August 2003. The organisers are: P. Collet (Ecole Polytechnique, Paris), M. Courbage (Université Paris 7), S. Métens (Université Paris 7), A. Neishtadt (Space Research Institute, Moscow), G. Zaslavsky (Courant Institute and Physics Department, New York University).

The main goal of the school is to develop the mutual interaction between Physics and Mathematics concerning the statistical properties of classical and quantum dynamical systems. Various experimental and numerical observations have shown new phenomena of chaotic and anomalous transport, fractal structures, chaos in physics accelerators and in cooled atoms inside atom-optics billiards, space-time chaos, fluctuations far from equilibrium, quantum decoherence, etc. New theoretical methods have been developed in order to model and to understand these phenomena (volume preserving and ergodic dynamical systems, non-equilibrium statistical dynamics, fractional kinetics, coupled maps, space-time entropy, quantum dissipative processes etc). The goal of the school is to gather a team of specialists from several horizons lecturing and discussing on the achievements, perspectives and open problems (both fundamental and applied). The school, aimed at postdoctoral level scientists, not excluding PhD students and senior scientists, will provide lectures and lecture series devoted to the following topics:

Statistical properties of dynamics and ergodic theory
Chaos in smooth and Hamiltonian dynamical systems
Anomalous transport, fluctuations and strange kinetics
Quantum chaos and quantum decoherence
Lagrangian turbulence and fluid flows
Particle accelerators and solar systems.

The goals of the school are: presentation of new achievements in the above subjects, favouring contacts between young and senior scientists. Lecturers and participants are expected to stay for the entire duration of the school.

For further information contact: M. Courbage, Laboratoire de Physique Théorique de la Matière Condensée, Université de Paris 7, Denis Diderot, Case Postale 7020, 2 Place Jussieu, 75231 Paris Cedex 05, France (fax: 33 1 46 33 94 01) or visit the website (www.ccr.jussieu.fr /lptmc/Cargese/CargeseMainPage.htm).

THE LONGEST-SERVING MEMBER

The Society s longest-serving member is Sir Edward Wright having been elected on 12 December 1929. He is a Senior Berwick Prize winner and the author of some 140 papers. Apart from a gap during the war, he published steadily from 1930 until 1981. His doctoral supervisor at Oxford was G.H. Hardy with whom he later wrote Introduction to the Theory of Numbers . He worked initially in Analytic Number Theory, in particular, generalisations of Waring s Problem. He is interested in many different strands of analysis, being one of the first to work on Difference-Differential Equations. His work on the Lambert W function (which had also intrigued Euler) seems of current interest. He later applied analytic methods to Graph Theory, obtaining some powerful asymptotic results.

In a forthcoming article, Professor George Andrews (*Partitions: at the interface of q-series and modular forms,* Ramanujan Journal, Rankin memorial issue) discusses a sequence of three papers by E.M. Wright. He comments The point I wish to make is that Wright s third paper on partitions into powers IS UNIQUE in the history of the subject. Its starting point and fundamental philosophy are different from anything that has come before or since. (See

E.M. Wright, *Asymptotic partition formulae, III. Partitions into k^{th} powers.* Acta Math. **63** (1934) 143-191.)

His working life was full and long. He supported himself from the age of 14 and finally retired as Vice-Chancellor of the University of Aberdeen at the age of 70. He had been elected to the Chair of Mathematics at that university at the early age of 29.

He was born on 13 February 1906 in a village just outside Leeds. Initially the family was highly prosperous. His father owned a soap factory making Wright s Washall Soap . Unfortunately, when he was three years old, his father s business collapsed. His parents separated and he and his mother moved south. She was a skilled musician and music teacher who obtained jobs at boarding schools where she could, for a reduction in salary, have her young son living with her. At the age of 14 he became independent by working as a pupil teacher at a small preparatory school in Woking. His duties included playing football with the pupils and teaching them French! He was well educated in classics and modern languages but, until the age of 14 had not come across any mathematics except arithmetic. He was introduced to algebra and became hooked on mathematics from then onward.

When he was 16 he was working as a teacher of French at a school in London, taking evening classes in physics at Woolwich and teaching himself mathematics. A school inspection took place. The inspector reported that Edward Wright was far too young for the post he was occupying. He was immediately sacked. He then got a teaching job at Chard Grammar School in Somerset. Since he had no access to laboratory facilities he gave up on experimental physics but re-doubled his efforts in teaching himself mathematics. At that time it was possible to take a University of London Degree as an external candidate, that is, without any requirements to attend courses. Working on his own in Chard he taught himself for a BSc in Mathematics, achieving First Class Honours. One of the other teachers was a graduate from Cambridge who said: Oh, a London degree is only equivalent to entrance scholarship stand

BOOK REVIEW

Flatterland: like Flatland, only more so by Ian Stewart, Perseus Publishing, Cambridge, MA (2002), US$14.00, xi + 301 pp.

This well-written and amusing monograph is a super-sequel of Edwin A. Abbott s classical popularization of mathematics and science, Flatland, originally published in 1884, and in my opinion the best and most comprehensive up-date yet. Note that reprints of the classical literary gem have survived several major wars as well as the rise and/or fall of several empires! Surprisingly, Abbott (1838-1926) was Headmaster of the City of London School and not even a mathematician or physicist! Indeed, his brilliant entrance into the science-fiction world of many dimensions was by the vigorous use of analogy. In other words, if Mathematics is the Queen of the Sciences then Virtual Mathematics is the Queen of Science Fiction.

As with the classic, the book under review is replete with numerous very human characters, leading the reader into ever deeper geometry, topology, cosmology and quantum theory of space, time, and matter. For example, one transitions from the classical A. Square (a very conservative lawyer) to include a far more modern and complex Space Hopper . The main protagonist is the charming young feminist Victoria Line (great-great-granddaughter of A. Square), whose name is familiar to every Londoner. While Vikki was in her home cellar, she found, by accident, the original manuscript of Flatland and began reading it with great enlightenment. When her parents find this out, they undertake to burn it, but not before she scans it into her computer. Still, her parents are disgusted that she would want to read about a Romance of Many Dimensions . She thinks, Oh, Mum, if only you knew some of the books I ve read ... . Soon after, Vikki has a visitation by the Space Hopper (a tamed horned sphere homeomorphic to A. Square s guide, the Sphere), who whisks her away on a wild, mind-stretching voyage of the Mathiverse (Mathematical Universe) without so much as a goodbye to her family. There follows a hectic trip to many exotic places of the Wonderland genre: Spaceland (Euclidean space of various dimensions), Fractal Forest, Quadratic City, Topologica (meeting Moobius the Cow) and the Projective Plain(!). About one-third of the book is devoted to helping Vikki better understand abstract geometry and the structure of matter in the Universe.

In the process of going from 2-space toward infinite dimensional spaces and their applications to physics, one is introduced to basic ideas of Newton, Maxwell, Cayley, Sylvester, Penrose and Hawking, among many others. Even the four basic forces of nature are discussed well in a simple, but intelligent way. In places, the visionary story reads like a cross between Finnegans Wake and Alice in Wonderland. On page 190, one must ask: How many coolarms are in the charge of the Light Brigade?

Much effort is spent in the book on penetrating questions. Such as (1) What are geometry and topology and how are they related? (2) What ideas unite the strange worlds of abstraction we call space and time ? Obviously a far more sophisticated reader is needed than was required for the classical Flatland in spite of the sequel s wry humour, puns and novel word-play.

Perhaps the geometry of Cyberspace must wait for its [illegible] Flatterland! On the other hand, we may find

MEETING OF UK-IRISH SECTION OF SIAM

The yearly meeting of the UKIE Section of SIAM was held at the University of Bath on 10 January, Professors D. Parker (President) and I. Graham (Vice-President) acting as Chairmen. There were five speakers on a variety of subjects:

Dr Helen Byrne (Nottingham) had as her subject Multiphase models of solid tumour growth , and described the way in which both normal and cancerous cells respond to mechanical effects. Thus, multiphase models can provide a mathematical framework, not least for tumour encapsulation and for tumour invasion. Numerical examples were provided.

Professor Doug Arnold (Minnesota) spoke on the subject of Differential complexes in numerical analysis , emphasising the design and analysis of numerical methods for partial differential equations. The design of stable discretization hinges on capturing subtle aspects of the structure of the differential system in the discretization. Thus a unifying understanding was presented for a variety of numerical methods, including applications to electromagnetism. A current unsolved problem concerns gravitational wave emission from colliding black holes.

Professor John Toland (Bath) had the topic of Global real-analytic bifurcation theory and its use in Stokes -wave theory . In the case of bifurcation from a simple eigenvalue when the operators involved are real-analytic, there are important generic properties that can be inferred. Applications to bifurcations of water waves was in the background of the analysis.

Professor John Billingham (Birmingham) discussed the Mathematical modelling of solid oxide fuel cells , giving mathematical descriptions of a variety of systems in plane and tubular fuel cells. Such systems generate electricity directly from the fuel and thus have a high potential for a power generation that is relatively pollution free. Attention was given also to combustion and travelling waves in tubular fuel cells.

Professor P. Toint (Namur) spoke on The filter idea and its application to nonlinear equations and nonlinear least squares ativelgsocello leedstre mi re

The member countries are Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Luxembourg, the Netherlands, Portugal, the Republic of Ireland, Spain, Sweden, Switzerland, the United Kingdom and the USA. However, scientists from all countries may participate in the Research Grant and Fellowship programs.

The HFSP supports novel, innovative and interdisciplinary basic research focused on the complex mechanisms of living organisms; topics range from molecular and cellular approaches to systems and cognitive neuroscience. A clear emphasis is placed on novel collaborations that bring biologists together with scientists from fields such as physics, mathematics, chemistry, nanoscience, computer science and engineering to focus on problems at the frontier of the life sciences.

The Program has recently announced a call for applications for research grants in support of international collaborative projects with a strong emphasis on involving scientists from biology with colleagues from other disciplines. The next deadline for submitting letters of intent for the research grants is **2 April 2003**. Further information can be obtained at http://www.hfsp.org.

MAGDALEN COLLEGE
OXFORD

Tutorial Fellowship in Pure Mathematics

Magdalen College proposes to elect with effect from 1 October 2003 a Fellow and Tutor in Pure Mathematics. The salary will be according to age on a scale up to £42,900 per annum. Additional college allowances are available. The Fellowship is tenable with a titular University Lectureship (CUF) held in the Mathematical Institute which will be converted into a Stipendiary University post in October 2004. Application forms and further information can be obtained from the President s Secretary, Magdalen College, Oxford OX1 4AU (telephone: 01865 276101; email: carolyn.tucker@magd.ox.ac.uk.). The further particulars are also located on the College web site: http://www.magd.ox.ac.uk. Candidates should send eight copies of completed applications, including full c.v.s, and must ask three referees to send references to the President by the closing date of Friday 4 April 2003.

The College and the University are Equal Opportunities Employers.

RECORDS OF PROCEEDINGS AT MEETINGS

SOUTH WEST AND SOUTH WALES REGIONAL ORDINARY MEETING

held on *Monday 25 November 2002* at Gregynog Hall, Newtown, Powys, within a meeting on Contemporary Aspects of Mathematical Physics. About 65 members and visitors were present for all or part of the Ordinary Meeting.

The meeting began at 2:00 pm, with Professor P. GODDARD, FRS, in the Chair.

period (Monday to Friday) during a University vacation. The meetings are residential and open to all interested. It is intended that the texts of the lectures given in the series shall be published. In addition to full expenses, the lecturer is offered a fee of £1250 for giving the course and a further fee of £1500 on delivery of the text in a form suitable for publication. Recent lecturers in the series have been P.F. Baum (1995), F.J. Almgren (1996), J. Alperin (1997), D. Zagier (1998), A. Mielke (1999), B. Dubrovin (2000), T. Goodwillie (2001), P. van Moerbeke (2002).

The 2003 Invited Lectures Series will be given at the University of Wales, Swansea by M. Fukushima.

For the 2004 meeting, proposals are now invited from any member who, in addition to suggesting

The scientific organiser is Alexander Premet (University of Manchester, email: sashap@maths.man.ac.uk). The organising committee consists of the scientific organiser and the LMS regional organisers, Mike Prest (University of Manchester, email: mprest@maths.man.ac.uk) and Ted Voronov (UMIST, email: voronov@ma.umist.ac.uk). The conference secretary is Francesca Moss (tel: 0161 275 5899, email: francesca@maths.man.ac.uk).

Some funds available to contribute in part to the expenses of members of the Society or research students who wish to attend the Society Meeting on 11 March. Requests for support should be addressed to the Programme Secretary at the Society (web: www.lms.ac.uk, email: grants@lms.ac.uk). Requests should include an estimate of expenses and a very brief *curriculum vitae*; research students should include brief letters of endorsement from their supervisors.

The workshop is supported by the London Mathematical Society and EPSRC.

For further information visit the conference website
www.ma.man.ac.uk/lmsconf

LONDON MATHEMATICAL SOCIETY MIDLANDS REGIONAL MEETING AND WORKSHOP

Uncertainty Modelling

Meeting 14 May Workshop 15-17 May 2003

Room AS130, Armstrong-Siddeley Building,
Priory Street, University of I

M. French (Southampton)
E. Ryan (Bath)
S. Townley (Exeter)
A. Zinober (Sheffield)

For (n)Tj 34 0 TDp

Applications should be made in the form of a detailed curriculum vitae and a covering letter setting out how you meet the selection criteria. The application should include the names, addresses and contact details of three referees, of whom one is an existing or recent employer. Referees should be asked to send references direct to the department by the closing date. Candidates invited for interview will be asked to give a short presentation and prepare an accompanying hand-out .

Further details are available from Brenda Willoughby, Administrative Assistant, Mathematical Institute, 24-29 St. Giles , Oxford OX1 3LB, email: brenda@maths.ox.ac.uk. Applications should be sent to the Administrative Assistant at the above address quoting reference BK/03/04. The closing date for applications is **10 March 2003** and interviews will be held on 24 March 2003.

ISAAC NEWTON INSTITUTE FOR MATHEMATICAL SCIENCES

SPACES OF KLEINIAN GROUPS AND HYPERBOLIC 3-MANIFOLDS

(3-8 August 2003)

Supported by the European Commission, Research DG, Human Potential Programme,
High-Level Scientific Conferences HPCF-2001-00106, the NSF and the Leverhulme Trust

in association with the Newton Institute programme entitled
Spaces of Kleinian Groups and Hyperbolic 3-Manifolds (21 July - 15 August 2003)

Organisers: Caroline Series (u)Tj 46 0 TD(55 0 TD(e)Tj 41 0 TD(v)Tj 45 0 TD(e)Tj 41TD(i)Tj 26 0 (v)Tj 45 0 TDj 4

ANALYSIS AND PROBABILITY ON FRACTALS

LMS/EPSRC Short Course

University of St Andrews, 30 June - 5 July 2003

Organisers: K J Falconer, L Olsen and B Stratmann

There has been a tremendous interest in fractals since the early 1980s. Much has been done of a geometric measure theoretic nature, with fractals studied as geometric entities in their own right, or used as geometrical descriptions of phenomena in the sciences. In the last few years, there has been a change in direction, with an increasing emphasis on the interaction of fractals with mat

HYDRODYNAMIC STABILITY THEORY

LMS/EPSRC Short Course

Keele University, 22-27 June 2003

Organiser: J.J. Healey

When fluids flow, there is the possibility that instability may arise. The instability might lead to turbulence, or to a new nonlinear flow, which itself can become unstable. Hydrodynamic stability is therefore of fund

LMS COMMITTEES AND REPRESENTATIVES 2003

COUNCIL COMMITTEES

General Purposes Committee: President (Chair), General Secretary (Secretary), Treasurer, Programme Secretary, Publications Secretary, Education Secretary.

Finance Committee: Treasurer (Convenor), President, Publications Secretary, Programme Secretary, Chair of RMC, N.L. Biggs, Vacancy.

Investment Subcommittee: Members of Finance Committee, M. Davis, S. Howison, L. Hughston, M. Pennington, vacancy.

Programme Committee: President (Chair), Programme Secretary (Secretary), R.T. Curtis, K.J. Falconer, J. Howie, S.E. Rees, M. Mathieu.

Meetings Committee: Members of Programme Committee, R.T. Curtis, T.P. Keating, J. Marklof, M. Prest, T. Voronov.

Personnel and Office Management Committee: A.G. Chetwynd (Chair), M.R. Bridson, P.A.K. Covey-Crump, M.M. Dodson.

2003 Prizes Committee: President (Chair), A. Iserles, K.M. Buzzard, R.T. Curtis, E.G. Rees, S.M. Rees, M. Reid.

Publications Committee: Publications Secretary (Convenor), A.J. Scholl (Vice-President), R.J. Archbold, M. Bridson, K. Erdmann, J. Howie, Publisher.

Editorial Committee: Publications Secretary (Convenor), Joint Editors of the *Bulletin, Journal, Proceedings* and *JCM*, Book Reviews Editor, Publisher.

Research Meetings Committee: A.J. Scholl (Chair), M. Ainsworth, J. Bolton (Durham representative), I.D. Abrahams, M.R. Bridson, E. Corrigan, A.M. Etheridge, D.J. Needham, G.R. Robinson, C. McAnally (EPSRC observer).

Education Committee: Education Secretary (Chair), P.T. Saunders (Chair of SEC), C.J. Budd, T. Porter, P.J. Rippon, J.C. Robson, E. Winstanley.

Schools Education Committee: P.T. Saunders (Chair), W.B. Stewart (Chair of EC), A.D. Barnard, J. Dangerfield, A.D. Gardiner, J.C. Robson, G.C. Smith.

Computer Science Committee: U. Martin (Chair), R.J. Gibbens, R. Leese, R. Martin (IMA), M. Patterson, N. Smart, R.M. Thomas, J.R. Whiteman (IMA).

Computer Systems Committee: M.A.H. MacCallum (Chair), Executive Secretary, Publications Secretary, F.E. Burstall, P. Kemp, S.A. Linton, Vacancy.

Women in Mathematics Committee: F.A. Rogers (Chair), R.D. Camina, C.A. Hobbs, M.A.H. MacCallum, E.L. Mansfield, U. Martin, G. Stallard, K. Wendland.

Library Committee: Librarian (Chair), J. Barrow-Green, N.H. Bingham, M. Reid.

Nominating Committee: M.J. Taylor (Chair), C.A. Hobbs, N.J. Hitchin, M.A.H. MacCallum, U. Martin, E.G. Rees, D.M. Sloan, J.F. Toland.

IMU Advisory Committee: President (Chair), S.J. Hogan (IMA), S.A. Huggett, President of the Edin. Math. Soc., C.M. Series, B.W. Silverman (RSS), M.J. Taylor (Royal Society), D. Woodrow (ICME).

Ad hoc COUNCIL COMMITTEES

CICIAM: R.J. Knops (Convenor), J. Carr, A.B. Olde Daalhuis, L. Thomas.

Joint Working Group with the IMA: President, General Secretary, Executive Secretary, *ad hoc* member.

Newsletter Editorial Board: D.R.J. Chillingworth (General Editor), S.A. Huggett, M. du Sautoy, The Administrator, four Vacancies.

Diarist: S.E. Rees.

Scrutineers: A.R. Pears, D.J. Collins.

Applied Probability Trust (Trustee): Sir John Kingman.

British Mathematical Colloquium Scientific Committee: K.A. Brown, J.P.C. Greenlees, H.D. Robinson.

British Association for the Advancement of Science, Mathematics Section Committee: T.W. Körner.

CICIAM: J. Carr.

Collingwood Prize Committee: R.S. Ward.

Committee of Heads of Departments of Math. Sciences: J. Howie.

Council for the Mathematical Sciences: President, General Secretary, Executive Secretary.

Edinburgh International Centre for Math. Sciences (Board): A.J. Scholl.

Edinburgh International Centre for Math. Sciences (Programme Committee): J. Cardy, A.M. Stuart.

European Mathematical Society (Council): W.S. Kendall, J.T. Stuart, E.C. Lance.

International Commission on Mathematical Instruction: D. Woodrow.

Isaac Newton Institute (Advisory Board): K.A. Brown.

Isaac Newton Institute (Management Committee): J. Howie.

Isaac Newton Institute (Scientific Committee): A.J. MacIntyre, J.M. Ball.

Joint Mathematical Council: Chair, Schools Education Committee.

LMS Publishing Ltd (Board): President (Chair), Publications Secretary, Treasurer, N.M.J. Woodhouse.

LMS/UCL Library Committee: Librarian, S.E. Rees.

Parliamentary and Scientific Committee: President, P.T. Saunders.

Royal Society Scientific Unions Committee: J.M. Ball.

Science Council (Board): President, Executive Secretary.

Science Council (Education Policy Group): Education Secretary.

Science Council (Education Network Group): Executive Secretary.

Science Council (Science and Society Group): Executive Secretary.

Undergraduate Mathematics Teaching Committee: W.B. Stewart.

RAYLEIGH PHOTOGRAPH

LORD RAYLEIGH
DE MORGAN MEDALLIST 1890

In his address on 13 November 1890, the President surveyed Lord Rayleigh s work, both theoretical and experimental, on electromagnetism, sound, optics and gas and fluid dynamics and concluded: These abstracts may serve to convey some idea of the great variety of subjects in Mixed Mathematics discussed and advanced by Lord Rayleigh, and on which that distinguished reputation in these domains is founded, their recognition of which the Council of the London Mathematical Society desire to mark by the present award of the De Morgan Medal.

DIARY

MARCH 2003

19	Open Day, Loughborough University (313)

MAY 2003

30-31	Combinatorial and Computational Group Theory Conference, St Andrews University (313)
30 – 1 Jun	Groups and Semigroups in Analysis Conference, Sheffield University (313)

JUNE 2003

16-17	Complex Fluids Meeting, West of England University (313)
22-27	Hydrodynamic Stability Theory LMS/EPSRC Short Course, Keele University (313)
30 – 5 July	Analysis and Probability on Fractals LMS/EPSRC Short Course, St Andrews University (313)

JULY 2003

4-14	Geometry and Cohomology in Group Theory LMS Durham Symposia, Durham University (313)
14-18	New Developments and Applications in Rapid Fluid Flows LMS Durham Symposia, Durham University (313)
25-4 Aug	Markov Chains Algorithms, Applications and Theory LMS Durham Symposia, Durham University (313)

AUGUST 2003

3-8	Spaces of Kleinian Groups and Hyperbolic 3-Manifolds Workshop, INI, Cambridge (313)
18-30	Chaotic Dynamics and Transport in Classical and Quantum Systems NATO ASI Summer School, Cargese, France (313)
24-30	Dirichlet Forms and Related Stochastic Analysis, M. Fukushima: LMS Invited Lectures, University of Wales, Swansea (313)

APRIL 2005

4-7	BAMC/BMC, Liverpool University