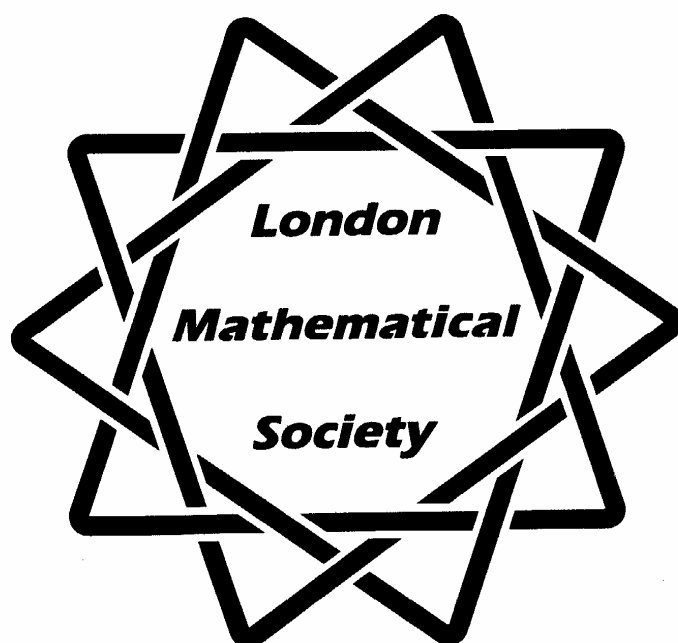


**THE LONDON  
MATHEMATICAL SOCIETY**



**ANNUAL REPORT 2005**

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**TRUSTEES AND ADVISERS**  
**Year ended 31 August 2005**

The charity trustees of the Society are the members of its Council. The members of the Council for the year 19 November 2004 to 18 November 2005 were:

<b>President:</b>	Professor F.C. Kirwan FRS
<b>Vice-Presidents:</b>	Professor M.R. Bridson Professor A.G. Chetwynd
<b>Treasurer:</b>	Dr N.M.J. Woodhouse
<b>General Secretary:</b>	Professor N.L. Biggs
<b>Programme Secretary:</b>	Dr S.A. Huggett
<b>Publications Secretary:</b>	Professor J. Howie FRSE
<b>Education Secretary:</b>	Dr W.B. Stewart
<b>Members-at-Large of Council:</b>	Professor I.D. Abrahams Professor C.J. Budd Dr R.D. Camina Professor R.T. Curtis (Librarian) Professor H.G. Dales Dr P.J. Davies Professor A.M. Etheridge Professor K.J. Falconer FRSE Professor F.P. Kelly FRS Sir John Kingman FRS Dr F.A. Rogers Dr N.C. Snaith

# LONDON MATHEMATICAL SOCIETY

## ANNUAL REPORT 2005

The Trustees have pleasure in presenting their Annual Report (pages 1 to 40) together with the Accounts (pages I to XX) for the year ended 31 August 2005. This is prepared to accord with SORP 2000.

### 1. CONSTITUTION OF THE SOCIETY

The Society is governed by a Royal Charter. It is a Registered Charity, no. 252660, for the purposes of “promoting and extending mathematical knowledge”. Copies of the Society’s Charter and Statutes, and its current By-Laws, can be obtained on request from the Administrator at the Registered Office of the Society.

The Society’s governing body is its Council, and its Trustees are precisely the members of the Council.

### 2. MAIN OBJECTS

The main objects of the Society are listed in Article 3 of the Charter (3 August 1965):

- (i) To acquire and take over the property, trusts and liabilities of the Old Institution\* or of any person held or incurred for the purposes of the Old Institution;
- (ii) To promote and extend mathematical knowledge by periodical meetings of the Members and visitors introduced by them at the rooms of the Society in London or elsewhere for the purpose of hearing and discussing lectures and communications from Members and others on mathematical subjects;
- (iii) To print, publish and distribute gratuitously or otherwise the Proceedings and Journals of the Society containing such communications as in the opinion of the Council are worthy of publication and if thought fit to translate any papers, treatises or communications as shall be in a foreign language;
- (iv) To establish, maintain and extend a library of books, works or manuscripts on mathematics, the applications thereof, and other subjects allied thereto;
- (v) To award medals and other marks of distinction in recognition of contributions to mathematical science;
- (vi) To make grants of money or donations in aid of mathematical investigations or the publication of mathematical works or other matters or things for the purpose of promoting invention and research in mathematical science, or its applications, or in subjects connected therewith;
- (vii) To arrange, provide for, or join in arranging and providing for the holding of conferences, national or international meetings, lectures, classes and discussions on subjects of general and special interest to mathematicians;
- (viii) To invite and collect subscriptions and donations to the funds of the Society by any lawful means;
- (ix) To act as trustee of any charitable trusts established solely or principally for purposes associated with the objects of the Society;
- (x) To co-operate with other charitable organisations with a view to the promotion of the objects of the Society or any of them;
- (xi) To do all such acts and things as are incidental to the attainment of any of the purposes of the Society or the exercise of any of its said powers.

\*The “Old Institution” refers to the London Mathematical Society as operating under its previous Charter.

### **3. COUNCIL**

#### **A. Organisation**

The Council consists of 20 Members of the Society of whom eight are Officers (including the President) and twelve are Members-at-Large. Officers are elected annually and Members-at-Large for a period of two years, at the Annual General Meeting, by single transferable vote.

The Council has established several Standing Committees, which advise the Council, and to which the Council has delegated some decision making. The Council also established a Prizes Committee to recommend recipients for the 2005 Prizes. A list of all committees and their membership is given at Appendix A.

#### **B. Policies**

Officers and Members-at-Large of Council are elected annually at the Annual General Meeting. There is a Nominating Committee, which makes at least one nomination of an eligible candidate (a Member of the Society resident in the United Kingdom) for each vacancy at the Annual General meeting. Members of the Society may also nominate eligible Members of the Society for election. Nominating Committee informs the Council more than a year in advance of the nomination that it expects to make for the Presidency: Council may accord the nominee the title of President-Designate.

#### **C. Review of Development and Activities**

Council met six times in 2004/05 on 15 October, 19 November, 21 January, 18 March, 6 May and 17 June.

In the annual elections at the AGM on 19 November:

M. Bridson was elected a Vice-President in place of A.J. Scholl;

H.G. Dales, F.P. Kelly and N.C. Snaith were elected as new members of Council;

I.D. Abrahams, K.J. Falconer and F.A. Rogers were re-elected to Council;

**Diarist:** K.J. Falconer

**Scrutineers (2004):** D.J. Collins, R. Sharp (Assistant Scrutineer).

### **4. MEMBERSHIP AND SUBSCRIPTIONS**

#### **A. Organisation**

New members are elected by the Council, and these elections are subsequently confirmed at a Society meeting. The Treasurer is responsible for keeping the Society's membership records and for the procedures for the collection of subscriptions, and reports regularly to the Council.

The Society depends heavily on the unpaid voluntary work of very many of its members, such as those who referee papers submitted to the Society's publications, those who edit those publications or serve on the Society's Editorial Advisory Boards, those who serve on the Society's Committees and those who represent the Society on other bodies, together with the members of the Council themselves, many of whom undertake heavy burdens for the Society.

The Officers communicate with the Society's membership by means of the *Newsletter*, which is published monthly (except August). The Society's 'Handbook and List of Members' is published biennially; members receive a copy free of charge. In the intervening years, the Society publishes the 'Mathematical Who's Where United Kingdom' directory and distributes a free copy to members with an address in the area covered by the directory.

The Society has also established a home page and archive on the World Wide Web, and uses this as an additional means of providing information to the membership and the wider mathematical community.

## B. Policies

The Council's aim is that the subscription should more or less cover the actual cost of provision of the Society's services for such a member based in the UK, and is conscious that the current level of subscription probably does not quite do this. The level of subscription for Members of major overseas Mathematical Societies in other countries with which the Society has reciprocity agreements certainly does not cover the cost of provision of the services offered to such members; however, the Council is prepared to countenance such losses up to a point because it is very aware of the value to LMS members of the reciprocity agreements.

As a learned society, the Society requires candidates for membership to be proposed and seconded by members. If a candidate is attached to a university in the United Kingdom, however, it is sufficient for the candidate to be proposed by the head of a mathematics or mathematical science department (if a member) or local Society representative; the proposal can then be seconded by an Officer of the Society. An applicant who has difficulty in finding a proposer or seconder should contact the Executive Secretary at De Morgan House.

Applicants are expected to fall into at least one of the following categories:

- (a) Academic staff of a university or similar institution in the United Kingdom who are substantially engaged in teaching and research in mathematics (including all its diverse applications).
- (b) Mathematicians in other occupations, whether or not they are currently employed, who have a higher degree in mathematics or who use mathematics in their work at a comparable level or whose work would benefit substantially from the Society's activities in promoting and extending mathematical knowledge.
- (c) Others whom Council considers to have contributed substantially to the objects of the Society.
- (d) (For associate membership.) Students studying for a higher degree with a substantial mathematical component. Candidates for associate membership normally must be under the age of 28.

Candidates for reciprocity membership do not need to be proposed or seconded. The fourth year of an MMath course is regarded as 'studying for higher degree'. The Society participates in a scheme whereby EPSRC-funded students who join the Society as Associate Members have their subscription (but not journal) costs met by the EPSRC for a period of five years.

Each annual subscription paid by an Institutional Member entitles the institution to receive one volume of the *Bulletin* and two volumes of the *Journal* and of the *Proceedings* and to have access to the *Journal of Computation and Mathematics*. Most of the Society's Institutional Members are UK universities, and the Council fixes the level of the institutional subscription so that it represents a substantial discount on the normal library prices of these periodicals; in addition, Institutional Members are able to purchase other periodicals, including *Nonlinearity*, at discounts.

## C. Review of Development and Activities

At 31 August 2005, the Society had 2339 Ordinary Members (2344 at 31 August 2004), 157 Associate Members (153), 29 Honorary Members (29), 47 Institutional Members (51) and no Corporation Members (0).

Professor J.-P. Bourguignon was elected to Honorary Membership.

The annual subscription to the Society for the 2004/05 session was: Ordinary Members £36.00; Reciprocity Members £18.00, Associate Members £9.00.

## **5. DE MORGAN HOUSE**

### **A. Organisation**

The Society holds a long lease (to 2118) from Bedford Estates on 57/58 Russell Square, London, WC1. It uses these premises (a) to house its administrative headquarters, (b) to hold its meetings and conferences in the promotion of Mathematics, (c) to let out the upper floors to other organisations on a commercial basis, and (d) for function rooms which it lets to other organisations for their own purposes.

### **B. Policies**

When the Society first moved to De Morgan House it let the upper floor to a commercial organisation, MLS Business Services. When MLS terminated its tenancy in 2003, Council considered the options and concluded that, rather than seeking equivalent tenants from the commercial sector, it would seek not-for-profit bodies preferably involved in promoting or using mathematics. In this way it would both be using the property directly in support of its charitable purposes while continuing to receive income which could be used for the Society schemes and activities in support of mathematics.

The following bodies are in accommodation: the Institute of Highway Incorporated Engineers and the Lighthill Institute of Mathematical Sciences (of the Department of Mathematics, UCL). In addition the Institute of Mathematics and its Applications, based in Southend-on-Sea, took a room to provide itself with a London base. The Society was particularly glad to welcome the IMA; their new proximity helping to ease continued collaboration between the two societies and to further the aim of presenting a unified front for mathematics.

### **C. Review of Development and Activities**

In 2004 Council reviewed the way the Society used the remainder of the space in De Morgan House. It concluded that the lower ground floor could be made into a more extensive and flexible set of function rooms, which it could use for meetings and conferences and also let out to other bodies. A plan was instituted during the year, involving the move of publishing staff and IT equipment from the lower ground floor, and the appointment of a company, FCM, to oversee the design and manage the building of these new facilities. A business plan for the on-going management of the facilities was considered by the Finance and General Purposes Committee and Council during the year, which showed that, allowing for the Society's own use of the rooms and subsidised use for promoting mathematics, the income from hiring rooms and services would deliver a substantial net return to the Society.

Council approved a programme of work, expected to cost of the order of £300–350k, which was in progress at the time of this report.

## **6. SOCIETY MEETINGS**

### **A. Organisation**

Responsibility for the organisation of the Society's programme of ordinary meetings is delegated by the Council to the Programme Committee. This has a subcommittee, the Meetings Committee, which advises Programme Committee on meetings, and particularly on Regional Meetings.

### **B. Policies**

There are at least five Society meetings each year. Of these, two, the Annual General Meeting in November and the June Meeting, are held in London, and three, Regional Meetings, are held in the Regions and organised by Regional organisers. Occasionally, a meeting is a joint meeting with another society. The Mary Cartwright lecture takes place at a Society meeting. Council has agreed that a Scientific Organiser shall be appointed for each meeting.

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.

### **C. Review of Development and Activities**

A list of the Society meetings held during the year is given at Appendix F.

## **7. PUBLICATIONS**

### **A. Organisation**

The Council is advised on matters concerning publications by the Publications Committee, which is convened by the Publications Secretary. Editors of the Society's periodicals and book series are appointed by the Council, usually on the basis of recommendations from the Publication Committee; these Editors are assisted by appropriately appointed Advisers.

Publications Committee is required to monitor the performance of the various Society publications, joint publications and book series; to monitor and review the Society's position in mathematical publishing; to monitor new forms of publication of possible relevance to the Society's objectives; to monitor legal questions arising or potentially arising from the Society's publications programme; and to provide advice to the Council, the Finance Committee and the Publications Secretary on such matters. The Committee considers both the financial and academic performance of the publications and forms strategies for the long term policy of publishing within the Society.

An Editorial Committee monitors the progress of the four main periodicals (the *Bulletin*, *Journal*, *Proceedings of the London Mathematical Society* and the *LMS JCM*) and advises on appointments to the editorial advisory boards of the periodicals. The Membership of the Publications Committee and Editorial Committee is given at Appendix A.

The publications staff employed by the Society are as follows:

- the Publisher, who oversees the day-to-day management of the Society's publications and its publications staff. She is responsible for ensuring the smooth flow of income to the Society and for initiating, planning and commissioning new publishing developments and collaborative ventures of benefit to the Society, subject to the approval of Council and Publications Committee.
- the Publishing Editor, who is responsible for developing and implementing improved systems of communication at the production stage of the papers, from final acceptance to publication and for managing the papers through the production process.
- the Assistant Editor, who is mostly responsible for monitoring and moving papers for the *Bulletin*, *Journal* and *Proceedings*, from initial submission to final acceptance or rejection by the Honorary Editors.
- the Production Assistant, who is employed on a part-time basis to cover clerical duties on *Compositio Mathematica* and help out on the other periodicals, particularly to process the increasing number of papers submitted for review.
- two Executive Editors, responsible for the editing of three of the Society's four main journals, employed on an approximately half-time basis.

In addition, there are three part-time freelance secretaries helping the Editors of the *Bulletin*, *Journal* and *Proceedings*, and one or two freelance workers who provide occasional help at the editorial and clerical level.

The Society's publications portfolio consists of ten periodicals and four book series (some produced jointly with other bodies), listed at Appendix H.

## **B. Policies**

The Society's publications represent both a prime way in which the aims of promoting and extending mathematics are achieved and a way in which income is generated. The Council's policies concerning publications, including pricing and expenditure on new publishing ventures, are therefore central to its work. By means of a five year forward planning budget, the Society aims to ensure a steady income from publications to support its charitable activities. In recent years, the success of the Society's publication programme has enabled Council to increase the level of financial support for mathematics provided by the Society and, at the same time, to maintain a prudent level of financial reserves.

The Council normally rejects requests for donations of subscriptions to the Society's periodicals. However, it has a substantial programme of exchanges with societies and organisations overseas, managed by the Library Committee.

## **C. Review of Development and Activities**

This year the LMS held a major review of the publishing of the core journals, looking into the prospects for independent publishing and inviting tenders from major mathematics publishers to take on publication of the journals from January 2007. A small 'Scrutiny Group' looked in detail at the tender documents and held meetings with the major publishers who reached the later stages of the tender process. With the invaluable help of a freelancer, Clive Hemingway, who prepared a report on the Society becoming more independent in its publishing activities, the group reached the conclusion that the journals would be best placed with OUP from January 2007, and this recommendation was passed by Council, subject to final agreement of contract. Thanks are also due to Robert Welham, former Publishing Director at the Royal Society of Chemistry, who provided valuable insight and experience of large-scale not-for-profit publishing as a member of the scrutiny group.

In general, the sales of the journals have held up this year although the general slow decline in the traditional subscription market continues and have not been completely replaced by consortial deals that are becoming increasingly popular amongst librarians. One problem that the LMS encountered when investigating more independent publishing was that the large conglomerates of libraries who make consortial deals do not have time to deal with small independent publishers.

The increase in papers submitted to the core journals continues, with no comparable increase in the number of pages published, and a slight backlog has built up on the *Bulletin*. As a result, the *Bulletin* will increase in size again next year to 176 pp per issue. The experiment to allow the 'front end' of the journals to be freely accessible for the first four months of publication has proved very successful, with no link from the increased downloads to declining subscriptions being evident. In comparison with other journals, there has been a small but significant increase in readership, including papers that are 'behind the wire'. Therefore Council agreed that the experiment could continue and be extended to six months of open access for newly published papers.

*Compositio Mathematica* has done well in its first full year of publication by the LMS and the Foundation that own the journal seem pleased with the return and the prospect of feeding the surplus back in to Dutch mathematics. The archive of the journal has been purchased from Kluwer and there are plans underway for NUMDAM, a French organisation, to retrodigitize the more recent paper-only volumes that date up to 1997. All later volumes are now available from the CUP website that hosts the current electronic version.

*Nonlinearity* continues to thrive and a larger than average price rise was agreed for 2006 to help in the increased costs as the journal doubles from 6 to 12 issues next year. Anatoly Neishtadt of the Moscow Space Research Institute took over from Peter Constantin as the LMS Editor for the journal.

Over the year, agreements have been put in place with the AMS, British Library and Turpion to permit the retrodigitization of the back archive for *Sbornik Mathematics*, *Izvestiya Mathematics* and *Russian Mathematical Surveys*. These will be available from January 2006.

Finally, 2005 saw the publication of the first of what will hopefully be many future LMS monographs to be published by Princeton University Press.

## **8. MEDALS, PRIZES & FELLOWSHIPS**

### **A. Organisation**

The Society awards several Prizes each year for achievements in and contributions to Mathematics. There are seven Prizes and one Medal awarded regularly by Council: the De Morgan Medal (triennial), the Polya Prize (two years out of three), the Senior Berwick Prize, the Senior Whitehead Prize, the Naylor Prize and Lectureship, the Berwick Prize and the Fröhlich (biennial) and the Whitehead Prizes (annual). Copies of the regulations and procedures can be obtained from the Administrator at the Society's Office.

The Society also awards the David Crighton Medal (triennial), in association with the Institute of Mathematics and its Applications. This award is given in honour of Professor David Crighton, a former President of the IMA and President-Designate of the Society when he died in January 1999.

The Society annually awards a Cecil King Travel Scholarship in Mathematics to a young mathematician of outstanding promise, to support a period of study or research abroad for a typical period of three months, to enhance his or her studies and further his or her career development. The Scholarship was established in 2001 by the Cecil King Memorial Fund.

The Hardy Fellowship is awarded to a distinguished overseas mathematician who will make a significant contribution to the UK mathematical scene – the word 'distinguished' is not intended to exclude those at an early stage of their careers. However, from 2006, Council has decided to institute a Hardy Lecturer, in place of the Fellowship. He or she will visit the UK for a period of about two weeks, and give the Hardy Lecture at a Society meeting, normally held in London in June. The Lecturer will also give at least two other lectures, on different topics, at other venues in the UK. The schedule is designed to allow as many UK mathematicians as possible to benefit from the Lecturer's presence in the UK.

In 2002 Dr R. Fröhlich generously gave a donation to the Society to establish, in alternate years, a Fröhlich Prize and a Fröhlich Lecture; the recipients of the two may not be the same. The first Fröhlich Lecture was given in 2003.

The Forder Lectureship is awarded biennially, in consultation with the New Zealand Mathematical Society, to a Member of the Society normally resident in the UK, who visits New Zealand for about four weeks and lectures in most of the Universities in that country.

The Invited Lectures scheme brings a distinguished overseas mathematician to the UK to present a small course of about ten lectures spread over a week.

### **B. Policies**

The Council believes that the monetary values of the Society's prizes should be sufficiently large that most recipients will feel that the prize was worth winning. The Council wishes it to be widely known in the UK mathematical community that two of the Society's prizes, the Senior Berwick and Berwick Prizes, can be awarded only to members of the Society and only in respect of mathematical research work actually published by the Society.

The Hardy Fellow visits one (or possibly two) institutions in the UK for an extended period, but during that time also visits several other places to explain ideas and to make wide mathematical contacts in the UK community, The Council has in mind a stay of about four months with around 8 to 10 lectures being given at a variety of locations, but it is prepared to be flexible and to consider other suggestions.

Medals, prizes and the Hardy Fellowship are awarded by Council on the recommendation of the Prizes Committee. Nominations for the Hardy Fellowship are made through Heads of Departments.

Each course of Invited Lectures is on a major field of current mathematical research, and is instructional in nature, being directed both at graduate students beginning research and at established mathematicians who wish to learn about a field outside their own research specialism.

### **C. Review of Development and Activities**

After receiving advice from its 2005 Prizes Committee, the Council awarded the following prizes:

Senior Whitehead	Professor Keith Moffat FRS FRSE
Polya	Sir Michael Victor Berry FRS
Berwick	Dr Iain Gordon
Whitehead	Professor Ben Green, Dr Bernd Kirchheim, Professor Neil Strickland, Dr Peter Topping

## **9. LIBRARY**

### **A. Organisation**

The Society's Library consists of a substantial collection of periodicals obtained in exchange for the Society's publications, copies of books and journals published by the Society and items acquired by the Society by purchase, as review copies or as gifts.

The Society's Library is housed by University College Library, currently under the terms of an agreement between the College and the Society signed in 1990. Under the agreement, all members of the Society have access to the combined resources of University College Library and the Society's Library, and may use all material available in the reading rooms of the Library of University College. Facilities available to LMS members now include photo-copying and access to computer terminals.

The management of the Society's Library is the responsibility of the Librarian, who reports regularly to the Council, and the Library Committee (membership at Appendix A). Consultation is usually carried out by email, but when it is felt necessary meetings are held in DMH. A joint meeting with library and academic staff from UCL follows the annual meeting of the Society's Library Committee.

### **B. Policies**

One of the provisions of the agreement between University College and the Society concerning the Society's Library states that both parties intend to develop and maintain the combined holdings of the Society's Library and the College's Library as a principal national resource in the field of mathematics and related subjects for the use and benefit of the members of the Society, of the members of the College and of the mathematical community in the UK and elsewhere.

The Council is keen to increase use by members of the Society of facilities provided by the Society's Library.

The Council is willing to enter into exchange agreements with other organisations which are able to offer, in exchange for one or more of the Society's periodicals, a publication that will be of interest to some members of the Society. The Council believes that such arrangements contribute to the dissemination of mathematical work and foster good relations within the international mathematical community.

The Council acknowledges its responsibility to maintain on its own premises an Archive of historical material. The purposes of the Archive are: (a) to provide a permanent historical record of the activities of the London Mathematical Society; and (b) to provide a secure home for important material relating to mathematics in the UK that might otherwise be lost or destroyed. An item will be accepted for either category only if the Society is, or thereby becomes, the legal owner of it and (where possible) the copyright. Items in category (a) will be retained in perpetuity. Items in category (b) may be transferred to a more appropriate location at any time, subject to the approval of the Council in every case. The Society may also agree to store material owned by other organisations. Such material will not form part of the LMS Archive, and the terms of the agreement must be ratified by Council in every case.

### **C. Review of Development and Activities**

A fresh Agreement was negotiated between the Society and University College London. Following consultation with interested parties and discussion at Council a small number of minor amendments were made to a draft document, mainly concerned with expenses which would be incurred should the present arrangement be terminated. These were agreed and we now have an Agreement that is acceptable to both sides.

In March 2001 the Council adopted a policy that acknowledges its responsibility to maintain an archive of historical material relating to the activities of the Society. There is also provision for looking after items of general mathematical interest that might otherwise be lost or destroyed. The new Archive Room is now fully operational and equipped with appropriate temperature and humidity controls, installed on the advice of our part-time archivist, Janet Foster. The Library Committee has a modest budget for the purchase of interesting items, especially those which have particular connections to the Society such as books from G.H. Hardy's library. In addition, a small number of gifts have been gratefully received and placed either in the UCL library or in DMH. A facsimile of the Domesday Book donated to the Society by V.D. Naylor some years ago is on long-term loan to the UCL library, but is not on display.

The highlight of the year was undoubtedly the publication of *The Book of Presidents 1865-1965*, which was launched at a reception in De Morgan House on 17 June 2005. The book concentrates on the presidents and De Morgan medallists during the first 100 years of the Society's existence, although shorter entries are included for each of the more recent presidents and medallists. The authors are Susan Oakes, the Administrator, Alan Pears, who has been the Society's Obituaries Editor since 1996, and Adrian Rice, a mathematical historian who has become an expert on the evolution of the LMS from college club to national learned society.

The aims of the book were

- (a) to honour those distinguished and accomplished mathematicians who played vital roles in the Society during its first 100 years;
- (b) to heighten awareness of the proud history of the Society among the general public;
- (c) to make information about the early years of the Society readily available to its current membership;
- (d) to produce an attractive volume suitable for presentation to prize-winners, distinguished foreign visitors and others.

At the year end, sales were reaching 100, with expectations of renewed sales once the academic year started. Purchase details are being included with membership renewal forms, and vigorous efforts will be made to sell the book in the United States through our close relationship with the American Mathematical Society.

The five-year review cycle of exchange agreements continues and the data-base which stores all information on exchanges is being modernised and made more user-friendly. The decision to cancel an outgoing exchange that has been identified as apparently defunct is made on behalf of the Council by a

small representative body, following deliberations of the Joint LMS/UCL Library Committee. A number of agreements have been clarified.

The Library Committee has agreed to release copies of the Russian Mathematical Surveys so that they can be sent to Moscow for scanning for retrodigitisation. However, it stipulated that this should be done in a non-destructive manner as it is keen that a complete set of hard copies should remain in the LMS library.

## **10. PERSONNEL**

### **A. Organisation**

The Society's Personnel and Office Management Committee (POMC) deals with staffing-relating issues; its membership is listed in Appendix A.

The established posts at 31 August 2005 are listed at Appendix C:

The posts of Executive Secretary, Administrator, Publisher and Publishing Editor are eligible for USS pensions membership. The Society has set up a group pension scheme (operating under Stakeholder Pension Scheme principles) with Scottish Widows which staff in other posts are eligible to join.

A list of staff in post during the year is at Appendix C.

### **B. Policies**

Council has approved an Employment Policy Statement, which is issued to all employees. It has also approved an Equal Opportunities Policy Statement, and a Harassment and Discrimination Policy, and has established a Discipline and Grievance Procedure.

### **C. Review of Developments and Activities**

During the year the POMC considered its role and responsibilities in the light of the Five Principles (introduced in 2003) and the appointment of a full-time Executive Secretary. Proposals for modifying its remit were in discussion at Council at the year end.

Revised guidelines on Compassionate Leave were approved by Council.

Two members of staff left during the year. One was replaced, but proved to be unsatisfactory. The Executive Secretary put forward proposals for revised job specifications, which were agreed and approval was given for the appointment of two full-time and one part-time posts. These had not been filled at the year-end.

## **11. GRANTS ADMINISTERED BY THE PROGRAMME COMMITTEE**

### **A. Organisation**

The Society has several grant schemes for the support of visits by mathematicians, and also awards grants for the support of mathematical meetings, normally to be held within the UK. These grants are made from the Society's own funds and from Trust Funds held by the Society. The administration of these schemes, within budgets approved in advance by the Council, is delegated by the Council to the Programme Committee, which reports its decisions regularly to Council.

**(i) Conference Grants.** These are for the support of small conferences held within the UK. The basic grant shall not normally exceed £3000, with additional support available for research students studying at UK universities (up to £1000) and participants from countries that would qualify under Scheme 5 (up to £1000).

**(ii) Scheme 2.** This scheme covers travel, accommodation, and subsistence costs, up to a maximum of £1200, for a foreign visitor who gives lectures at three institutions in the UK.

**(iii) Scheme 3.** Grants are awarded for the support of incidental costs for regular collaborative work by a joint research group from at least three different institutions. Applications are made by a nominated ‘grant-holder’, who is responsible for the use of the grant, and countersigned by a ‘supporter’ from each of at least two further institutions. The grant covers a twelve month period. The maximum grant is £1200.

**(iv) Scheme 4.** The aim of the scheme is to provide small grants to mathematicians who work within the UK to enable either the recipient to visit another institution within the UK or abroad, or a named mathematician from within the UK or abroad to visit the home base of the recipient, for collaborative research. The current maximum sum available is £500, or £250 if both collaborators work within the UK. Awards are restricted to one per person in any given academic year.

**(v) Scheme 5.** This scheme funds short visits either by mathematicians from a less developed country to the UK or by mathematicians from the UK to that country. A principal purpose of the scheme is to benefit mathematics in the less developed country. Applications for grants under this scheme may be made by mathematicians working at UK institutions. For visits to Britain the maximum award is currently £1400 for subsistence, plus £500 for travel. For visits from Britain, the maximum grant is £1200.

**(vi) Scheme 6.** Under this scheme up to £500 may be awarded towards the cost of exploring potential new collaborations between mathematicians and non-mathematicians on new applications of mathematics. The use of the grants is not restricted but might include the costs of a small-scale meeting to identify problems or travel costs to bring in external experts. The intention is to help the applicants do the preparatory work prior to a larger scale application to EPSRC.

## **B. Policies**

The Council tries to tailor these schemes to provide support for activities which complement those for which support is available from other sources. The Council is very conscious of the changes in the funding arrangements for the support of mathematics by the EPSRC, with the increased attention to ‘wealth-creation potential’, and wishes the Society to provide, within its resources, support for basic mathematical research which complements provision by EPSRC.

In addition, Council has other mechanisms, administered by Programme Committee, to support mathematical activity. These currently include a scheme for visits from young mathematicians from the former Soviet Union, a scheme for series of invited lectures given by a distinguished mathematician from abroad, and a scheme providing travel bursaries to postgraduate students in Africa and supporting conferences held within the African Mathematics Millennium Science Initiative network.

## **C. Review of Development and Activities**

The decisions to award grants which were made by the Programme Committee during the Financial Year which ended on 31 August 2005 are summarised below (full details are given in Appendix D to this Report). It should be noted that in some cases grants will only be taken up after the end of the Financial Year, and in other cases, recipients have been able to provide partial refunds after the event; occasionally, awarded grants are not taken up or are returned unspent. For these reasons, the totals of the grants recorded below, which represent a commitment by the Society, are different from the corresponding figures in the Accounts, which represent the actual amounts paid out, less any sums refunded to the Society.

<b>Scheme</b>	<b>Number of grants</b>	<b>Amount (£)</b>
Conference grants	35	97,450
Scheme 2	45	44,872
Scheme 3	24	25,600
Scheme 4	35	15,407
Scheme 5	8	14,175
Scheme 6	1	405
<b>Totals</b>	<b>148</b>	<b>£197,909</b>

The scheme which supports visits from young Russian mathematicians is in the process of being changed, so that from 2005/6 it will support outgoing visits as well. Finally, Programme Committee agreed that at its September meeting it would review the operation and effectiveness of all its schemes, as usual.

## **12. RESEARCH MEETINGS**

### **A. Organisation**

The Council delegates to the Research Meetings Committee the tasks of receiving and initiating proposals for symposia to be held at Durham, and for other research conferences and workshops to be held in the UK. The Committee is allocated an annual budget by the Council, and reports regularly to the Council on the use of its budget.

The LMS Durham Research Symposia began in 1974, and have now become an established series of international research meetings, with 77 symposia to date. They provide an excellent opportunity to explore an area of research in depth, to learn of new developments, and to instigate links between different branches. The format is designed to allow substantial time for interaction and research. The meetings are held in July, usually lasting for 10 days, with up to 70 participants, at least half of whom will come from the UK. Lectures and seminars take place in the Department of Mathematical Sciences, University of Durham, and participants are housed in en-suite accommodation at nearby Grey College.

The Society funds a number of workshops and small symposia. The format is very flexible and they can be held anywhere in the UK. The topic can vary from being quite specialised and suitable for an intensive period of work to one that needs to be exposed to the UK community. When assessing a proposal the LMS Research Meetings Committee will seek expert advice, make suggestions and before offering support it will need to be convinced that the benefits to UK mathematics are likely to be significant.

The Research Meetings Committee also manages the programme of EPSRC/LMS Short Instructional Courses. It includes the employment of a part-time Facilitator (currently Professor Alan Camina) to assist in all aspects of the running of the Courses.

The main purpose of the Short Courses is to provide courses of lectures for postgraduate students. The courses are normally a week long and consist of three intensive series of lectures each at the rate of one hour per day. The material should be accessible to first year PhD students and should be broad enough to attract at least 15 UK students. Numbers are limited to 60, with up to a quarter of the participants coming from overseas. Problem sheets and tutorial classes should be provided by the lecturers (with assistance, usually from post-docs), to help the students understand the material in depth. A few special lectures on related (possibly more advanced) material can also be included. The lecturers, tutors and organisers of Short Courses receive honoraria for their work.

## **B. Policies**

The Research Meetings Committee is allocated a substantial budget by Council to support activities which will stimulate or enhance mathematical science in the UK. It receives and solicits proposals for symposia, workshops, instructional courses and other research-oriented events. Substantial effort is made to identify areas where a meeting would especially benefit the UK mathematical community. The Committee takes advice from within the community about the quality of the proposals and works in close conjunction with the Mathematics Programme of EPSRC.

## **C. Review of Development and Activities**

The LMS-DPSRC Short Course contract was reviewed by the Committee. A report on 2004 was delivered to EPSRC, including a bid for a renewal of the contract when it finishes in 2006. Discussions were ongoing at the year end.

Two Durham Symposia were held in July/August 2005, supported by research grants from EPSRC: “Geometry, Conformal Field Theory and String Theory”, and “Operator Theory and Spectral Analysis”.

Under the programme of Instructional Short Courses, courses delivered during the current year were:

- Algebraic Groups, Birmingham, September 2004
- Mathematical Biology, Manchester, January 2005
- Euclidean Harmonic Analysis, Edinburgh, April 2005
- Topics on Stochastic Processes, Swansea, May-June 2005
- Nonlinear Wave Phenomena, Reading, July 2005
- Algebraic Topology, Swansea, July 2005

A list of the awards made by the Committee is at Appendix E.

## **13. EDUCATION**

### **A. Organisation**

Council is advised on all Educational matters by the Education Committee, to which it also delegates responsibility for the Holgate Lectures and Popular Lectures, and for other activities for which it has a budget. Individual members of the committee take responsibility for ensuring that the Committee is kept aware of current issues in particular areas.

The Holgate Lectures are popular lectures organised by locally based groups given by high quality lecturers at a level suitable for those aged between 15 and 18 who may be considering mathematics for future study.

Under the Popular Lecture scheme two UK based mathematicians give lectures on a mathematical topic suitable for a general audience in London and in other locations.

Education Committee is responsible for selecting the recipient of the Cecil King Travel Scholarship on behalf of the Cecil King Memorial Foundation. This scholarship is awarded to a young mathematician of outstanding promise to support a period of study or research abroad to further his or her career development.

## **B. Policies**

The Society attaches considerable importance to its educational role. In particular, the Society seeks: to ensure that the views of the Society on mathematical educational issues are made known to the decision makers and more generally to the public at large; to aid in the public understanding and popularisation of mathematics, encouraging participation in events that help present mathematics to a wider audience; to promote the public image of mathematics. The Education Committee of the Society has the task of putting this role into practice.

## **C. Review of Development and Activities**

The Society's 2005 Popular Lectures were *The Mathematics of Shrek* given by Dr Joan Lasenby (Cambridge) and *What Computers Cannot do* given by Dr Alan Slomson (Leeds). These were given at the Royal Institution on 15 July and at Manchester University on 28 September. The lectures were once again recorded for release on video, and now also DVD, and it is hoped that these will continue to be popular with both schools and interested individuals.

The Holgate Lecture series provides a potentially valuable resource for schools and colleges, but the uptake is still disappointing, although the Society is actively seeking to improve the publicity, and trying to find ways of encouraging participation by a wider range of schools.

The Society collaborates, where possible, on educational matters with the other bodies which constitute the Council of Mathematical Societies (CMS), namely the Institute of Mathematics and its Applications (IMA) and the Royal Statistical Society (RSS). The Education Committee of the Society exchanges minutes and agendas with the equivalent committees of the IMA and RSS; and also exchanges information on a more informal basis with the Heads of Mathematics Departments (HoDoMS) and with other mathematical societies. Educational activities undertaken as part of CMS are reported in Section 17 (External relations).

In the area of pre-university mathematical education the Society has continued to support the Advisory Committee for Mathematical Education (ACME), and continues to be committed to cooperate fully in the development, formulation and presentation of more coherent responses from the mathematics community.

On the publication last year of the Smith Report the Society expressed its strong support of the programme of reform set out. That remains the Society's position. During the year the RSS prepared and published an internal report on the place of statistics in the school curriculum. Some of their conclusions seemed to Education Committee likely to frustrate progress in revivifying the school curriculum, and the Society has asked ACME to ensure that the independent review proposed by Professor Smith is carried out.

The continued erosion of the mathematics base in UK universities is an ongoing major concern to the Society. This year there has been concern across the whole range of Science, Technology, Engineering, and Mathematics subjects about closures of university departments or courses. The President wrote to a number of universities whose mathematics departments were under threat.

In December the Secretary of State for Education wrote to the HEFCE asking it to give advice on ways to protect higher education courses of national strategic importance. The Society issued a media release welcoming the initiative and pointing to its concerns about the numbers of students entering mathematics courses and the decline in numbers of institutions offering courses. Shortly after the Secretary of State's letter the House of Commons Select Committee on Science and Technology announced an inquiry into strategic science provision in English universities. The Society prepared written evidence to the Inquiry and the Vice-President, Professor Chetwynd, gave oral evidence to the Committee along with representatives from physics, chemistry, biology and engineering.

The Society gave financial support to a small conference in Manchester organised by Professor Alexander Borovik and Dr Tony Gardiner which explored this erosion at all levels. The findings were very pessimistic: the UK mathematics system is just not reproducing itself, whether one looks at uptake of A-levels, (UK) enrolments on degree courses, recruitment of postdocs and tenured staff at universities.

The Society also made during the year submissions to various HEFCE consultations, as listed in Appendix G.

The Society continues to nominate a member of the advisory council of the Learning and Teaching Support Network for Mathematics, Statistics and OR; and a member of the organising committee of the Undergraduate Mathematics Teaching Conference.

The Cecil King Memorial Foundation generously continues to fund the annual £5000 Travel Scholarship for a promising young mathematician. The Society is responsible for selecting the recipient. This year, the award went to Alexander Paulin of Imperial College to enable him to visit Harvard University in early 2006 to study with leading experts in  $p$ -adic modular forms.

A list of grants awarded by the Committee is given at Appendix E.

## **14. COMPUTER SCIENCE**

### **A. Organisation**

The CS (Computer Science) Committee advises Council on all matters pertaining to the development of links between Mathematics and Computer Science; it also undertakes further tasks as required or approved by Council. At present these tasks are:

- (a) To inform the membership of the LMS on items of general interest involving both Mathematics and Computer Science.
- (b) To promote publications, meetings and initiatives which keep mathematicians and computer scientists informed of developments of mutual interest in research and in education.
- (c) To promote in industry, in commerce and in the scientific civil service, an appreciation of the inter-relations between Mathematics and Computer Science.

### **B. Policies**

As was mentioned in the Annual Report last year, it is obviously important that we are pro-active in developing the interface between Mathematics and Computer Science, particularly given the recommendations of the IRM (International Review of Mathematics). Our activities (such as the Scheme 7 grants and the support for the BCTCS) all have this in mind.

In general, the development of the interface between Mathematics and Computer Science will be one of the major challenges facing UK Mathematics in both the short and the medium term future. The LMS (through its CS Committee and other bodies) is well placed to make a major contribution to this, although there will be hard decisions to be made (such as how much of the Society's effort and finance can be devoted to this).

## C. Review of Development and Activities

### (i) *Membership of the Committee*

One change to the procedures of the CS Committee this year was the decision to have a representative of Council as a formal member of the Committee. This will be of great help, both in strengthening the links between the Committee and Council (the Chair of the CS Committee is not a member of Council although he does sometimes attend as an observer) and also by allowing ratification of certain of the Committee's decisions without having to wait for the next meeting of Council. We were delighted that Norman Biggs agreed to serve in this role.

### (ii) *International Review of Mathematics*

As was mentioned in last year's Annual Report, one of the main findings of the IRM was that the interface of Mathematics with Computer Science was not developed at an appropriate level in the UK, and it is clear that the CS Committee should be heavily involved in addressing this recommendation. One of the areas that was explicitly mentioned was that of Discrete Algorithms and Complexity Theory, and it was recommended by the CS Committee that the LMS might consider either a regular or regional meeting with this as the theme. This was taken forward and a Society Meeting devoted to this topic has been arranged with Mark Jerrum and Martin Dyer as the two invited speakers.

### (iii) *Scheme 7 grants*

The aim of this scheme is to provide small grants within the United Kingdom to help support a visit for collaborative research at the interface of Mathematics and Computer Science, either by the grantee to another institution within the UK or abroad, or by a named Computer Scientist or Mathematician from within the UK or abroad to the home base of the grantee. A visit to investigate the potential for a research grant proposal to an interdisciplinary initiative would also be a legitimate request. The time available for joint research arising from the grant is expected to be several working days. The maximum sum available is £500 and, where necessary, grantees will have to cover further costs from other sources such as departmental or personal funds.

This is clearly an important initiative by the LMS, particularly given the conclusions of the IRM referred to above. Two grants were awarded during the year (for details see Appendix E) and it was again gratifying to see high quality proposals coming forward in this area.

### (iv) *Collaboration between the LMS and BCS-FACS.*

As was reported last year, we now have a representative from BCS-FACS (the specialist group of the British Computer Society for practitioners in Formal Aspects of Computing Science) on the CS Committee and Rick Thomas attends the FACS Committee as a representative on the CS Committee. In particular, he attended the FACS 'away day' (22 – 24 October 2004) which formulated a five-year plan for FACS and updated its mission statement.

### (v) *Funding for the BCTCS*

The Committee normally funds a speaker (or speakers) at the BCTCS (British Colloquium for Theoretical Computer Science) each year. In 2005 the BCTCS was held at Nottingham with a significant increase in attendance over previous years. The LMS sponsored talk was "The Soft Machines: Computing with the Code of Life" which was delivered by Prof Alan Gibbons (King's College London) and Dr Martyn Amos (University of Exeter); it was an excellent talk which was well received by the participants. For the BCTCS in 2006 (which will be held in Swansea) we have agreed to sponsor two speakers (Hajo Broersma and Stephen Cook).

(vi) *MICSI Report*

During the year the Smith Institute published an influential report entitled *Mathematics at the Interface of Computer Science and Industry*. Robert Leese, the Director of the Smith Institute, is a member of the CS Committee, and drafts of the report had been discussed by the Committee prior to its official launch. The report explores opportunities where Computer Science and Mathematics can be brought into closer collaboration with a view to advancing business innovation and efficiency. There will also be scientific benefits through using a set of industrial challenges as a catalyst to correct the current disconnection that exists in the UK between Mathematics and Computer Science (as highlighted in the IRM). The report is a valuable contribution towards addressing these problems.

## **15. WOMEN IN MATHEMATICS**

### **A. Organisation**

The Women in Mathematics Committee promotes the objects of the Society in as far as this concerns women, and undertakes tasks as required or approved by Council. This includes provision of information to Members of the Society, organising (with Programme Committee) the Mary Cartwright lecture, promoting Daphne Jackson Fellowships, supporting British Women in Mathematics meetings, and liaising with other national and international organisations.

Council has agreed to fund a Special Daphne Jackson Fellowship in Mathematics for two years. Daphne Jackson Fellowships' purpose is to enable high-level scientists and engineers to return to their professions after a career break.

### **B. Policies**

The remit for the Women in Mathematics Committee is to promote the object of the Society in as far as this concerns women. Its tasks include:

- (a) Providing information to the membership of the LMS on items relating to Women in Mathematics.
- (b) Monitoring the Society's activities by collecting and publishing statistical data on women in mathematics.
- (c) Helping organise the Mary Cartwright Lecture.
- (d) Supporting and developing workshops such as the British Women in Mathematics meetings.
- (e) Investigating and implementing measures pertaining to the retention of women in the mathematical community.
- (f) Providing information on the provision of childcare at meetings and conferences.
- (g) National and international liaison with organisations with similar priorities.

### **C. Review of Development and Activities**

The Society has again supported a meeting of the British Women in Mathematics, held at De Morgan House in September 2004 and May 2005. These have followed the format adopted over a number of years, including, as well as talks by established female mathematicians, talks by postgraduate students, and made it possible for female mathematicians, often rather isolated in their individual institutions, to meet.

The 2005 Mary Cartwright Lecture was given by Elizabeth Thompson with the accompanying lecture by Steffen Lauritzen. It was held in London and the attendance was again extremely good.

The committee continues its two new schemes: Grace Chisholm Young fellowships give support when a mathematician is relocated or unable to move to an available post, typically for family reasons. The fellowships provide recognition of mathematical status, and a small sum to a host institution which is asked to provide email and library facilities, and some help and support with sustaining the career of the fellow. The fellow receives a small sum for books and so on, but the fellowship does not provide paid

employment. A second scheme, the Childcare Supplementary Grants Scheme, allows payment of some of the extra expenses which can be incurred by a mathematician with family responsibilities when attending a mathematical meeting or making a research visit.

The Daphne Jackson Fellowship sponsored by the LMS remains available to fund the return of a research mathematician after a career break.

A list of the grants awarded by the Committee is given at Appendix E.

## 16. INTERNATIONAL AFFAIRS

### A. Organisation

The Society is the UK Adhering Body for the International Mathematical Union (IMU) and its sub-Committees, including the International Committee on Mathematical Instruction (ICMI).

The Society is a Corporate Member of the European Mathematical Society.

The Society is a large Associate Member of the International Council for Industrial and Applied Mathematics (ICIAM).

Council has noted the increasing amount of international activity of the Society – its roles as adhering body to the IMU (and ICMI), its schemes with mathematicians abroad, its links with the European Mathematical Society, and so on. In 2004 it decided, therefore, to establish an International Affairs Committee, incorporating the former IMU Liaison Committee, to oversee these activities. In accordance with IMU statutes, the President of the IMU had been consulted, who was content with the proposal. The new committee also absorbs the Russian Liaison Committee.

Its membership is:

Programme Secretary (*ex officio*, chair).

Publications Secretary (*ex officio*).

The LMS representative on the Royal Society Scientific Unions Committee.

ICMI National Representative.

A person with links to the European Mathematical Society.

Nominees of the Edinburgh Mathematical Society, the Royal Statistical Society, and the Institute for Mathematics and its Applications.

Two members *ad hominem*.

### B. Policy

The remit of the International Affairs Committee is:

- (a) To advise Council on matters relating to the Society's adherence to the International Mathematical Union and its constituent committees, including ICMI.
- (b) To ensure that appropriate arrangements are made to assist UK delegates attending the ICM and the ICME.
- (c) To advise Council on its relationships with other international bodies, such as ICIAM, ICSU, and the European Mathematical Society.
- (d) To advise Council on any matters relating to international affairs which are not part of the remit of another committee.
- (e) To maintain links with mathematical societies and organisations overseas, and to advise Council on Reciprocity agreements.

## **C. Review of Development and Activities**

The Committee advised Council on nominations for the nominating committees of the IMU and ICMI, and on the Society's contribution to the ICIAM meeting in Zurich in 2007.

It prepared responses to the Royal Society (the UK adhering body to ICSU) in respect of the ICSU draft strategic plan, and on the ICSU report on capacity building.

Finally, the Committee will be advising Council on its delegation to the IMU General Assembly to be held in Spain in August 2006, and on the call for nominations for members of various IMU committees.

## **17. EXTERNAL RELATIONS**

### **A. Organisation**

The Council of the Mathematical Sciences, whose members are the Society, the Institute for Mathematics and its Applications and the Royal Statistical Society, provides a forum for the consideration of matters of joint interest, and responds and makes representations on such issues. The Council, together with representatives of the Operations Research Society, has an annual meeting with senior members of EPSRC and officers of its Mathematics Programme.

The Society is a member of the Science Council, the Parliamentary and Scientific Committee and the Foundation for Science and Technology.

### **B. Policies**

From time to time the Council takes opportunities to make carefully considered written representations on behalf of the Society, to agencies, government departments, funding bodies and other organisations on subjects relating to mathematics which are of concern to the Society and its members. Such representations are normally made by the President or a Vice-President, and only after a consensus has emerged during a discussion at a meeting of the Council. If the consultation is mainly concerned with mathematical education or aspects of information technology, the task of responding on behalf of the Council and the Society is usually delegated to the appropriate Committee. In addition the Society responds when it is approached by bodies such as the EPSRC who are seeking the views of the mathematical research community.

Sometimes, representations are made after consultation, or in conjunction, with sister societies, such as the Institute of Mathematics and its Applications (IMA), the Royal Statistical Society (RSS) and the Edinburgh Mathematical Society. The Council for the Mathematical Sciences meets three times a year to consider such matters.

The Society and the IMA have a joint committee, the LMS-IMA Working Group, to provide a channel of communication and seek ways of working together.

### **C. Review of Development and Activities**

#### **(a) Council for the Mathematical Sciences**

As a member of the CMS, the Society participated in meetings of the Council in November, February and May. It also attended a meeting of mathematical societies with the Chief Executive of EPSRC in December. The executive secretaries of the three CMS organisations met with the EPSRC Mathematics Programme team in August.

One of the recommendations of the Smith Report was that there should be an Advisory Committee on Mathematics Research and Industry (ACMRI), complementing ACME for mathematics education. The CMS Presidents agreed that the CMS should create that body, and gained the support of the DfES, RS and ACME. Planning, membership and fundraising were progressing at the end of the year under review.

A working party drawn mainly from the Education Committees of the three CMS societies reported to CMS in implications for UK university mathematics courses of the Bologna Process. The uneasy position of the MMath in the three-cycle structure, the need to defend 'professional' MSc's, and the all important matter of how funding is provided over the three cycles are all unresolved issues. The recent agreement at Bergen has implications the working party must now explore. Other science subjects are equally concerned. Universities UK is consulting prior to publishing a report; the CMS working group have been invited to comment.

The Subject Benchmark Statement for MSOR courses is due to be revised in 2007. There is some concern that the statement, which is well-suited to the range of courses in this area, may be undermined by the adoption of too simplistic a generic model for new statements. The CMS societies, together with HoDoMS and COPS have formed a small group to liaise with QAA.

The IMA, on behalf of the CMS, has been leading a project to develop and make available careers resources for young people, for age 11 upwards. A maths careers website [Mathscareers.org.uk](http://Mathscareers.org.uk) was launched in December 2004.

#### (b) Institute of Mathematics and its Applications

In 2003/04 the Councils of the LMS and IMA agreed to give further thought to the various forms future collaboration might take, the way in which the two societies' aims might be furthered by collaboration, and the possible threats to existing activities. The two Councils established a Framework Study Initiative, with the following terms of reference:

To investigate fundamental questions about the relationships between the two organisations. The initiative shall comprise two groups, each appointed by the respective Council and addressing matters from the perspectives of its own organisation. The groups will meet jointly and separately. The investigation shall include:

- gathering information about possible frameworks for the support of the mathematics community, particularly in respect of the activities of the two organisations;
- consulting regularly with the IMA-LMS Working Group and the two Councils;
- monitoring developments that may affect the two organisations' charitable status;
- preparing a discussion paper that describes a range of options for the two organisations futures, for circulation to the memberships as and when the two Councils may decide.

The Initiative provided a draft report to the Councils in November, and a final report in March. The report looked at three scenarios – to continue as at present, to remain separate but to merge some activities and managerial structures, to merge into one body. The Councils agreed to put the report to the Memberships for consultation; this was in train at the year end.

#### (c) Maths Promotion Unit

The Maths Promotion Unit, founded in May 2004, continued its work to promote mathematics and to bring it more prominently into the public eye. In the period to April 2005 it produced nine press releases, supported the British Association Mathematics Section, organised the media and schools publicity for the launch of the CMS [mathcareers.org.uk](http://mathcareers.org.uk) website and undertook data analysis for the Society's evidence (written and oral) to the Select Committee inquiry into Strategic Science Provision in English Universities. Regrettably the staff member supporting the left in April 2005 and had not been replaced at the year end.

The IMA demonstrated its support for the MPU in its work on behalf of mathematics by agreeing to contribute to its costs in future years.

(d) Submissions and reports

The Society, in its own name or as part of the CMS, responded to official Inquiries and reports, as listed in Appendix G.

## **18. STATEMENT OF TRUSTEES' RESPONSIBILITIES**

### **A. Organisation**

Charity law requires the trustees to prepare financial statements for each financial year, which give a true and fair view of the state of affairs of the Society and its financial activities for the period. In preparing those financial statements, the trustees have

- selected suitable accounting policies and then applied them consistently;
- made judgements and estimates that are reasonable and prudent;
- stated whether applicable accounting standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepared the financial statements on the going concern basis.

The trustees have overall responsibility for ensuring that the Society has an appropriate system of controls, financial and otherwise. They are also responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Society. They are also responsible for safeguarding the assets of the Society and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities and to provide reasonable assurance that

- the Society is operating efficiently and effectively;
- its assets are safeguarded against unauthorised use or disposition;
- proper records are maintained and financial information used within the Society or for publication is reliable;
- the Society complies with relevant laws and regulations.

### **B. Risk assessment**

The major risks to which the Society has been exposed, as identified by the Trustees, have been reviewed and systems established to mitigate those risks.

## **19. THE SOCIETY'S FINANCES**

### **A. Organisation**

Investments are governed by Statute 30 of the Society's Charter and Statutes. Morgan Stanley is the Society's investment adviser, the transfer of the Society's investments from Credit Suisse (UK) having been completed early in the year. Morgan Stanley manages the largest component of the Society's assets, a portfolio of equity, cash, and fixed-interest investments, with discretionary powers. The investment sub-committee helps Council to evaluate professional advice on its investments.

The Society's reserves are held in five funds, the first four of which are designated funds:

- Building and Development Reserve Fund
- Printing and Publication Reserve Fund
- Grant payable Fund
- Special activities
- General Fund

## **B. Policies**

Morgan Stanley manages the Society's portfolio with the aim of producing a real return of at least 4% pa. The management of the portfolio conforms with the Trustee Act.

A major review of reserves policy was carried out during the year, redefining the risks or commitments that were to be covered by each reserve fund, and estimating the appropriate levels accordingly. The revised definitions for each reserve fund have been incorporated into the Accounting Policy Statement. The fund levels will be reviewed annually.

The Council also reviewed the level and purpose of the General Fund. The Society considers the majority of the Fund to provide a reserve, the income from which is used to ensure the availability of resources for its grant schemes and other continuing charitable activities in future years. . It is invested on a 'total growth' mandate to maximise the return. The General Fund is deemed an expendable reserve and also provides a buffer for the normal fluctuations in income and expenditure.

## **C. Review of Development and Activities**

### **(a) Review of financial results and position**

In the Financial Year 1 September 2004 – 31 August 2005:

- The Total Assets of the Society increased from £10,240,557 to £11,358,696.
- At the end of the financial year on 31 August 2005 the total in the Investment Fund was £9,440,415 compared with the previous year's total of £8,161,162. A breakdown of these funds is given in the notes to the Accounts.
- The Printing and Publication Reserve Fund and the Building and Development Reserve Fund now stand at £1,200,000 and £441,852 respectively.
- Again this year, the Society's publishing activities have flourished both academically and financially, generating a very welcome surplus of £756,792. Much of this success is due to the energetic and forward-looking activities of the Publisher. The surplus on publishing, which is an international activity, is a critical component of the Society's income, and therefore an important source of support for mathematics in the UK.
- Total expenditure of the Programme Committee, Research Meetings Committee, Computer Science Committee, Women in Mathematics Committee and Education Committee has decreased to £223,270, partly attributed to a drop in net expenditure by the Research Meetings Committee. Expenditure on other activities in support of the main objects decreased slightly to £85,769: this included the cost of the UK subscriptions & grants, International relations, policy & public relations and Fellowship & prizes. It also includes expenditure from the ICIAM'99 Fund, which gave out grants of £14,786, using all its remaining resources; the Fund was wound up by Council.
- Total membership (including Institutional Members) decreased to 2572; the subscriptions received totalled £60,721. A total of £66,950 was expended on direct services to members. The significant cost of improvements to the Newsletter (up to £56,783 from £53,836 in 2004-5) also appears here.

- Management and administrative costs stand at £557,248, an increase of 2.1% on the previous year. Much of the increase, however, was due to VAT which could not be recovered following a reassessment of the Society's VAT status.

**(b) Review of investments**

Credit Suisse (UK) Limited was the Society's Investment Manager until December 2004. From Dec 2004, Morgan Stanley was the Society's Investment Manager with discretionary powers.

The mixed portfolio of investments was in the following proportions at 31 August 2005.

Fixed Interest Securities	35.6%
Equities and Collective Vehicles	42.5%
Hedge Funds	12.6%
Cash and cash equivalents	9.3%

The details of the holdings will be found in Note 2 (page VIII) of the Financial Statement. The distribution of the equities held in each sector is given and also the geographical distribution.

The Society holds a lease on De Morgan House, 57–58 Russell Square, until 24 December 2109; the freehold is owned by the Bedford Estate. The cost of the lease is being written off over 50 years (see Note 1(d) to the Accounts); as a result the real value of the lease is significantly in excess of the its value as shown in the Fixed Assets.

De Morgan Houses not only provides premises for the Society but also provides a useful source of income through letting surplus space, a feature further developed during the year (see Section 5C).

The Society's reserves are held in five funds, the first four of which are designated funds:

Building and Development Reserve Fund	£441,852
Printing and Publication Reserve Fund	£1,200,000
Grants Payable Reserve Fund	£93,815
Special Activities Reserve Fund	£23,222
General Fund	£9,415,675

By order of the Council

F.C. Kirwan, President  
18 November 2005

**MEMBERSHIP OF COMMITTEES AT 31 AUGUST 2005**

**Finance & General Purposes Committee:** President (Chair), Vice-Presidents, General Secretary, Treasurer, Programme Secretary, Publications Secretary, Education Secretary.

**Investment Subcommittee:** Treasurer (Chair), Members of Finance & General Purposes Committee, M. Davis, S. Howison, L. Hughston, M. Penington, 1 vacancy.

**Programme Committee:** Programme Secretary (Chair), President, H.G. Dales, P. Davies, A.M. Etheridge, K.J. Falconer, N.C. Snaith.

**Meetings Committee:** Members of Programme Committee, J.P. Keating, J. Marklof, C. Parker, M. Prest, T. Voronov

**Personnel and Office Management Committee:** I.D. Abrahams (Chair), Publications Secretary, P. Davies, J.F.C. Kingman.

**2005 Prizes Committee:** President (Chair), I.D. Abrahams, F.P. Kelly, M.A.H. MacCallum, A.J. Macintyre, D. Preiss, D.A. Rand, D.M. Sloan.

**Publications Committee:** Publications Secretary (Convenor), M.R. Bridson (Vice-President), F.E. Burstall, R.D. Camina, J. Greenlees, F.C. Kirwan, 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), Vice-President (M.R. Bridson) I.D. Abrahams, M. Ainsworth, J. Bolton (Durham representative), A.M. Etheridge, D.J. Needham, G.R. Robinson, A. Sudbery, R. Woolley (EPSRC observer).

**Education Committee:** Education Secretary (Chair), A.G. Chetwynd (Vice-President), C.J. Budd, J.F.C. Kingman, N. Mackay, P.J. Rippon, J.C. Robson, E. Winstanley.

**Computer Science Committee:** R.M. Thomas (Chair), N.L. Biggs (Council), R.J. Gibbens, L. Goldberg, R. Leese, T. Melham, N. Smart, M. Stannett (BACS, FACS), K. van Rijsbergen (IMA), J.R. Whiteman (IMA).

**Women in Mathematics Committee:** F.A. Rogers (Chair), H. Byrne (IMA), R.D. Camina, P.J. Davies, C. Goldie, C.A. Hobbs, M. Luczak, G. Stallard, K. Wendland.

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

**Nominating Committee:** E.G. Rees (Chair), R.A. Bailey, K.A. Brown, H.G. Dales (Council), C.A. Hobbs, D. Rand, D.M. Sloan, S.E. Rees.

**International Affairs Committee:** Programme Secretary (Chair), Publications Secretary, J. Ball (IMU), S.J. Hogan (IMA), J.F.C. Kingman, P.J. Green (RSS), S.E. Saunders (ICMI), M.J. Taylor, S.T Tsou, President of the Edinburgh Mathematical Society.

**Ad hoc COUNCIL COMMITTEES**

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

**Computer Systems** Executive Secretary, Publications Secretary, F.E. Burstall, P. Kemp, S.A. Linton, D.R. Moore.

**LMS-IMA Joint Working Group:** President (Chair), General Secretary, Executive Secretary, *ad hoc* member.

**Mathematics Promotion Unit Steering Group:** A.G. Chetwynd (Vice-President, Chair), General Secretary, Education Secretary, N. Steele (IMA), Executive Secretary.

**Newsletter Editorial Board:** D.R.J. Chillingworth (General Editor), M. du Sautoy, S.A. Huggett, The Administrator, 4 vacancies.

LMS REPRESENTATIVES ON OTHER COMMITTEES AT 31 AUGUST 2005

**Applied Probability Trust (Trustee):** C. Goldie.

**British Association for the Advancement of Science, Mathematics Section Committee:** N. MacKay.

**British Mathematical Colloquium Scientific Committee:** R. Camina, C.M. Series, H.D. Robinson.

**CICIAM:** Programme Secretary.

**Collingwood Prize Committee:** R.S. Ward.

**Committee of Heads of Departments of Mathematical Sciences:** F.A. Rogers.

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

**Council for the Mathematical Sciences (Careers Initiative):** C.J. Budd.

**Council for Mathematical Sciences (RAE Coordinating Group):** A.J. Scholl, I.D. Abrahams, G. Stallard, General Secretary (Secretary to the Group).

**European Mathematical Society (Council):** President, Programme Secretary, S.T. Tsou.

**International Centre for Mathematical Sciences (Board):** K.J. Falconer.

**International Centre for Mathematical Sciences (Programme Committee):** N. Manton, A.M. Stuart.

**International Commission on Mathematical Instruction:** S.E. Sanders.

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

**Isaac Newton Institute (Management Committee):** J.W. Bruce.

**Isaac Newton Institute (Scientific Committee):** J.M. Ball, C.M. Series.

**Joint Mathematical Council:** Education Secretary.

**LMS Publishing Ltd (Board):** FC. Kirwan, J. Howie, S. Huggett, N.M.J. Woodhouse.

**Parliamentary and Scientific Committee:** President, M.R. Bridson, P.T. Saunders.

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

**Science Council (Council):** President, Executive Secretary.

**Science Council (Education Policy Group):** Education Secretary.

**Science Council (Science in Health Group):** H. Byrne.

**Undergraduate Mathematics Teaching Committee:** N. MacKay.

**STAFF IN POST DURING THE YEAR**

Executive Secretary	Peter Cooper
Administrator	Susan Oakes
Facilitator* <sup>1</sup>	Professor Alan Camina
Administrative Officer	Isabelle Robinson
Accounts Officer	Ephrem Belay
Mathematical Promotion And Policy Assistant <sup>1</sup>	Jennifer Pollard (until 15 April 2005)
Administrative Assistant	Mark Perera (until 28 January 2005 and from 28 June – 9 September 2005)
	Dawn Cannon (14 February – 30 June 2005)
Secretarial Assistant <sup>1</sup>	Sylvia Daly
Secretary <sup>1</sup>	Alison Briggs (from 27 September 2004)
Receptionist	Lee-Anne Taylor
Data Analyst	Simon Wydall (from 4 August 2005 - 23 September 2005)
Archivist* <sup>1</sup>	Janet Foster
 <u>Publications Staff</u>	
Publisher	Dr Susan Hezlet
Publishing Editor	Dr Ola Törnkvist
Publications Assistant	Ben Holmes
Production Assistant <sup>1</sup>	Angela Waidson
Publications Project Executive <sup>1</sup>	Clive Hemingway (3 March – 30 June 2005)
Executive Editor of the <i>Proceedings</i> * <sup>1</sup>	Alice Sharp
Executive Editor of the <i>Bulletin</i> and the <i>JCM</i> * <sup>1</sup>	Sue Rodd

\* staff not based at De Morgan House

<sup>1</sup> staff working part-time

**GRANTS AWARDED BY THE PROGRAMME COMMITTEE**

The tables below give details of all grants that Programme Committee has awarded under its various schemes in the Financial Year, which ended on 31 August 2005. An asterisk (\*) indicates the grant recipient was a Trustee of the Society at the date of the award.

**Scheme 1 – Conference Grants**

<b>Conference</b>	<b>Recipient</b>	<b>Location</b>	<b>Dates</b>	<b>Grant</b>
20th British Combinatorial Conference	M.J. Grannell	Durham	10 - 15 July 2005	£1,000
4th Symposium on Levy Processes: Theory and Applications	R. Doney	Manchester	10 - 14 January 2005	£3,000
One-Day Meeting in Combinatorics	A.D. Scott	University College London	2 February 2005	£1,360
The algebraic K- and L-theory of infinite groups	A.A. Ranicki	ICMS, Edinburgh	27 June - 1 July 2005	£4,000
16th Postgraduate conference in combinatorics	D. Amato	Oxford	21 - 23 March 2005	£1,848
David Fowler - a memorial symposium	M. Reid	Warwick	9 November 2004	£1,500
Conference in honour of John Coates on the occasion of his 60th birthday	I. Fesenko	Isaac Newton Institute, Cambridge	13-14 January 2005	£4,000
Theoretical Aspects of Pattern Formation (INI Satellite Meeting)	A. Rucklidge	Surrey	19-23 September 2005	£4,000
Turbulence, Twist and Treacle: A meeting in celebration of the 70th birthday of H.K. Moffatt	M.R.E. Proctor	Isaac Newton Institute, Cambridge	21-22 April 2005	£4,000
20th British Topology Meeting	A.Y. Lazarev	Bristol	12 - 14 September 2005	£3,600
BMC 2006	N.J. Young, Z.A. Lykova	Newcastle	10-13 April 2006	£10,000
Reading One-Day Combinatorics Colloquium	A.J.W. Hilton	Reading	25 May 2005	£460
New directions in numerical relativity (INI Satellite Meeting)	C. Gundlach	Southampton	18-19 August 2005	£3,330
Belfast Functional Analysis Day 2005	M. Mathieu	QUB	19 November 2005	£815
Workshop on Applied Inverse Problems 2005	Y.V. Kurylev	Royal Agricultural College, Cirencester	26-30 June 2005	£1,940
5th UK Conference on Boundary Integral Methods	K. Chen	Liverpool	12-13 September 2005	£2,000
BICOM Workshop on Boundary Elements	N. Heuer	BICOM, Brunel	16-17 June 2005	£3,640
Scottish Algebra Day	I. Gordon	Edinburgh	6 May 2005	£1,460
Fourier Analysis and Hyperbolic PDEs	M. Ruzhansky	Imperial College	10-12 May 2005	£4,000
Workshop on Pure Model Theory	D.M. Evans	East Anglia	4-8 July 2005	£2,000
Algorithms and Complexity in Durham	S. Dantchev	Durham	8-10 July 2005	£1,860

Conference	Recipient	Location	Dates	Grant
Mathematical Software in Applied Mathematics	M. Marletta	Cardiff	5 January 2006	£1,585
The University of Wales Gregynog Mathematics Colloquium	G.W. Roberts	Gregynog Hall, Powys	23-25 May 2005	£1,835
Model Reduction and Coarse-Graining Approaches for Multiscale Phenomena	A. Gorban	Leicester	24-26 August 2005	£2,000
British Logic Colloquium 2005	P. Welch	Bristol	1-3 September 2005	£2,800
7th Annual Postgraduate Group Theory Conference	K. Goda	Newcastle	30 March - 1 April 2005	£2,507
Groups St Andrews 2005	C.M. Campbell, E.F. Robertson	St Andrews	30 July - 6 August 2005	£3,000
9th Annual UK Meeting on Integrable Models, Conformal Field Theory and Related Topics	A. Fring	City University, London	22-23 April 2005	£2,310
Developments in pattern recognition and data mining	J. Levesley	University College Chester	21 July 2005	£2,600
British Applied Mathematics Colloquium 2006 (BAMC)	G. Wilks, Y. Fu	Keele	24-27 April 2006	£3,000
Magma Workshop on Group Theory and Algebraic Geometry	D.F. Holt	Warwick	22 - 26 August 2005	£2,500
Workshop on Mathematical Finance and Stochastic Analysis	H. Zheng	Imperial College	22-24 August 2005	£3,000
Sheffield Homotopy Mini-Conference	S. Whitehouse	Sheffield	11-14 January 2006	£3,000
Triangulated categories in modern mathematics	T. Holm	Leeds	June 2006	£3,500
Quadratic Forms, Linear Algebraic Groups and Related Topics	D.W. Hoffmann	Nottingham	9 - 16 September 2005	£4,000

## Scheme 2 - Visitors

Visitor	Applicant	Places to visit	Grant
C. Laing	S. Coombes	Nottingham, Bristol, Manchester	£1,200
M. Ben-Artzi	V. Liskevich	Bristol, Cardiff, Cambridge	£1,200
S.P. Tsarev	R.G. Halburd	Loughborough, Nottingham, Leeds	£1,200
A.G. Ramm	D.H. Armitage	Bath, QUB, Edinburgh	£1,200
D.P. Groves	M.R. Bridson*	Imperial College, Oxford, Glasgow and/or Heriot-Watt	£1,200
L. Friedlander	M. Levitin	Heriot-Watt, University College London, Sussex	£1,000
B. Tsirelson	I. Goldsheid	Cambridge, Warwick, QMUL	£700
A. Ilyin	M. Bartuccelli	Surrey, Imperial College, Cardiff	£1,200
D. Zhang	V.B. Kuznetsov	Leeds, York, Loughborough	£1,200
Y. Makhnovskii	L. Bogachev	Leeds and two other institutions	£1,200
V. Mastropietro	S.B. Kuksin	Heriot-Watt, Edinburgh, Durham	£880
Y. Bahturin	A. Premet	Manchester, Leicester, Oxford	£1,200
T. Gramchev	M. Ruzhansky	Imperial College, Edinburgh, Bristol	£1,100

Visitor	Applicant	Places to visit	Grant
P. Zaleskii	A.W. Mason	Glasgow, Manchester, QMUL	£1,200
E.A. Feinberg	A.B. Piunovskiy	Bristol, Cambridge, Liverpool	£1,150
M. Pavlov	E.V. Ferapontov	Loughborough, Leeds, Imperial College	£1,100
A. M. Samsonov	K.R. Khusnutdinova	Leeds, Keele, Loughborough	£1,050
R. Kellerhals	C. Series	Durham, Warwick, Southampton	£850
J.H. Conway	J. Saxl	Cambridge, Birmingham, Warwick, Oxford	£545
E.N. Pelinovsky, T. Talipova	R.H.J. Grimshaw	Loughborough, Sheffield, Hull	£1,200
E. Cohen	C.A. Beck	QMUL, Bristol, Manchester	£740
M. Ledoux	Z. Qian	Imperial College, Warwick, Oxford, Cambridge	£1,000
J. Xiao	J. Schröer	Leeds, York, Manchester	£700
B. Simon	E.B. Davies	Cambridge, Swansea, London	£1,124
V. Adler	A.P. Veselov	Loughborough, Leeds, Imperial College	£1,100
A.Y. Helemskii	H.G. Dales*	Leeds, University College London, Southampton	£850
M. Paranjape	P.M. Sutcliffe	Kent, Cambridge, Durham	£1,170
I.V. Komarov	V.B. Kuznetsov	York, Leeds, Loughborough	£1,000
M.R. Fellows	S. Szeider	Royal Holloway, Oxford, Durham	£1,200
A. Martino	S.E. Rees	Newcastle, Heriot-Watt, Glasgow	£847
G. Shabat	A. Mikhailov	Leeds, Loughborough, Southampton	£1,150
J-A. Yan	J-L. Wu	Manchester, Swansea, Oxford, Loughborough, Warwick	£900
F. Ghahramani	C.J. Read	Leeds, Newcastle, Lancaster	£880
R.J. Loy	N.J. Laustsen	Newcastle, Lancaster, Leeds	£1,200
S. Cleary	S.E. Rees	Newcastle, Edinburgh, Glasgow	£632
M. Blaszak	E.V. Ferapontov	Loughborough, Leeds, Imperial College	£1,150
A.G. Myasnikov	A.J. Duncan	QMUL, Newcastle, Manchester	£390
S. Vaienti	H. Bruin	Surrey, Exeter, Imperial College	£980
K. Swanepoel	D.G. Larman	Oxford, University College London, Cambridge	£515
J.A. Sanders	J.P. Wang	Lancaster, Leeds, Kent	£950
D. Lebedev	M. Nazarov	York, Loughborough, Durham	£1,000
S.B. Iyengar	J.P.C. Greenlees	Sheffield, Leicester, Leeds	£968
R.L. Devaney	S. Bullett	QMUL, Warwick, Open	£1,200
J. Levine	A. Ranicki	Warwick, Durham, Edinburgh	£450
H.T. Banks	J.R. Whiteman	Brunel, Reading, Cardiff	£1,200

### Scheme 3 – Support of Joint Research Groups

Topic	Recipients	Institutions	Grant
Yorkshire Durham Geometry Days	I. McIntosh, M. Speight, J. Bolton	York, Leeds, Durham	£1,200
North British Mathematical Physics Seminar	J. Figueroa-O'Farrill, P. Dorey, N. MacKay	Edinburgh, Durham, York	£900
North of England Algebraic Number Theory Group	A.F. Jarvis, R. de Jeu, I. Fesenko	Sheffield, Durham, Nottingham	£1,000

Topic	Recipients	Institutions	Grant
Group Theory and its Applications	C. Eaton, C. Parker, A. Ivanov	UMIST, Birmingham, Imperial College	£1,200
Bristol Leicester Oxford Colloquium (BLOC)	N. Snashall K. Erdmann, J. Rickard	Leicester, Oxford, Bristol	£1,200
Patterns, Nonlinear Dynamics and Applications (PANDA)	R. Hoyle, J.H.P. Hawes, P.C. Matthews	Surrey, Cambridge, Nottingham	£1,200
Ergodic Theory	R. Sharp, O. Jenkinson, M. Pollicott	Manchester, QMUL, Warwick	£1,200
CAMELEON	M. Dzamonja, T. Forster, J. Truss	UEA, Cambridge, Leeds	£900
K-theory and Analysis	J. Brodzki, R. Plymen, U. Tillman	Southampton, Manchester, Oxford	£1,200
Algebraic Geometry Seminar (COW)	G.K. Sankaran, M. Reid, G. Megyesi	Bath, Warwick, UMIST	£1,200
London Dynamical Systems Group	J.S.W. Lamb, I. Melbourne, O. Jenkinson	Imperial College, Surrey, QMUL	£1,200
Singularity Theory and Applications	D. Mond, V. Goryunov, K. Houston	Warwick, Liverpool, Leeds	£1,200
North Eastern Geometric Group Theory Seminar	S.E. Rees*, J. Howie, S. Pride	Newcastle, Heriot-Watt, Glasgow	£900
London-Cambridge-Oxford Topology and Geometry Group	R. Thomas, M. Lackenby, I. Smith	Imperial College, Oxford, Cambridge	£1,200
Transpennine Topology Triangle	J.P.C. Greenlees, J.R. Hunton, N. Ray	Sheffield, Leicester, Manchester	£1,200
Classical and Quantum Integrability	A.P. Fordy, I.A.B. Strachan, A.P. Veselov	Leeds, Glasgow, Loughborough	£1,200
British Inverse Problems Workshops	Y.V. Kurylev, W. Lionheart, S. Arridge	Loughborough, UMIST, University College London	£1,200
East Midlands Stochastic Analysis Seminar	X-M. Li, H-Z Zhao, K.D. Elworthy	Nottingham Trent, Loughborough, Warwick	£1,200
East Midlands Mathematical Physics Seminar	H.R. Dullin, S. Creagh, R.L. Davidchack	Loughborough, Nottingham, Leicester	£1,200
Scalar mixing in fluid flows and mappings	A.D. Gilbert, P.H. Haynes, S. Tobias	Exeter, Cambridge, Leeds	£900
QMW-Swansea-Warwick joint research group: Quantum Geometry of Hopf Algebras and Hopf Algebroids	T. Brzezinski, S. Majid, D. Rumynin	Swansea, QMUL, Warwick	£900
SECANTS	S.D. Galbraith, J.E. Cremona, N.P. Smart	Royal Holloway, Nottingham, Bristol	£600
Algebra and Representation Theory in the North (ARTIN)	I. Gordon, T. Lenagan, D. Jordan	Glasgow, Edinburgh, Sheffield	£900
Calf Algebraic Geometry Seminar	G. Sankaran, A. Kasprzyk, E. Baldwin, E. Segal	Bath, Oxford, Imperial College	£600

#### Scheme 4 – Collaborative Small Grants

Recipient	At	Collaborators	At	Grant
A. Hone	Kent	G. Everest, T. Ward	UEA	£250

<b>Recipient</b>	<b>At</b>	<b>Collaborators</b>	<b>At</b>	<b>Grant</b>
S. Whitehouse	Sheffield	F. Clarke, M. Crossley	Swansea	£250
V.A.R. Gould	York	G.M.S. Gomes	Lisbon	£500
S.E. Rees*	Newcastle	S. Hermiller, G. Baumslag, R. Charney	Nebraska, CCNY, Brandeis	£500
O.H. King	Newcastle	A.C. Cossidente	Basilicata, Italy	£500
S.G. Scott	King's College London	D. Zagier	College de France, Paris	£425
M. van den Berg	Bristol	P.B. Gilkey	Oregon	£500
R.L. Hudson	Nottingham Trent	S. Pulmannová	Slovak Academy of Sciences	£500
M.D. Groves	Loughborough	G. Schneider	Karlsruhe, Germany	£400
J.R. Partington	Leeds	B. Jacob	Dortmund, Germany	£500
C-H. Chu	QMUL	A.T.M. Lau	Alberta, Canada	£500
A. Stuart	Warwick	P.R. Kramer	RPI, New York	£442
E.V. Ferapontov	Loughborough	S.P. Tsarev	Krasnoyarsk State Pedagogical, Russia	£250
D. Kahrobaei	St Andrews	E. Ghys, E. Breuillard	Ecole Normale Superieure de Lyon, IHES	£500
J. Grbic	Aberdeen	V. Buchstaber, T. Panov	Steklov MI, Moscow State	£500
M.R. Pistorius	King's College London	F. Avram	Pau, France	£450
P. Butkovic	Birmingham	K. Zimmermann	Charles, Prague	£500
E. Winstanley	Sheffield	A. Ottewill, E. Radu	Dublin, Maynooth	£500
P.J. Rowley	Manchester	C. Parker	Birmingham	£250
J.C. Wood	Leeds	L. Fernández	Universidad de los Andes, Colombia	£500
B. Zegarliniski	Imperial College	R. Olkiewicz	Wroclaw, Poland	£500
G.A. Jones	Southampton	J. Wolfart	J-W Goethe, Frankfurt	£500
A. Movchan	Liverpool	R.C. McPhedran	Sydney	£500
V.C. Mavron	Aberystwyth	J.D. Key	Clemson, USA	£500
M. Feigin	Imperial College	Y. Burman	Independent, Moscow	£400
N. Heuer	Brunel	A. Bepalov	Russian Academy of Sciences	£500
C. Christopher	Plymouth	D. Schlomiuk	Montreal	£350
J.C. Wood	Leeds	D. Krupka, O. Krupkova	Palacky, Olomouc, Czech Republic	£500
J. Siemons	UEA	E. Konstantinova	Sobolev Institute of Mathematics, Russia	£500
F.P.A. Coolen	Durham	T. Augustin	Ludwig Maximilians, Munich	£440
P. Harris	Liverpool	K. Chen	Liverpool	£250
L. Sbano	Warwick	D.R.J. Chillingworth	Southampton	£250
R. Baker	Oxford	N. Kotov	Kazan State, Russia	£500
R.S. Simon	LSE	B. Weiss	Hebrew, Israel	£500
K.J. Sandiford	Salford	D.A. Prikazchikov	Russian State Technical University of Railway Transport	£500

### Scheme 5 – International Short Visits

Applicant	Visitor	To Visit	Grant
S.C. Power	R. El-Harti	Lancaster	£1,625
P.K. Maini	A.S.R. Srinivasa	Oxford	£1,900
D.L. Salinger	H. Dedania	Leeds	£1,400
J. Eggers	M. Habibi	Bristol	£1,500
R. Curtis*		South Africa	£1,200
R.M. Williams		Cape Town, AIMS	£1,150
W.J. Harvey		Harish Chandra Institute, India	£600
K. Brown (I. Gordon, S. Majid, J. Rawnsley)		Benin	£4,800

### Scheme 6 – Connectivity Grants

Recipient	At	Collaborator	At	Grant
J. Gough	Nottingham Trent	H. Mabuchi	California Institute of Technology	£405

### International Grants

#### Young Russian Mathematicians Scheme

Visitor	Host	Place	Date	Grant
A Malyutin	P Walters	Warwick	Feb-05	£2,500
D Osipov	M Taylor	Manchester	Jan-05	£2,500
T Panov	N Ray	Manchester	Jan-05	£2,500
N A Tyurin	M Reid	Warwick	Jun-05	£2,500
A Guterman	P Butkovic	Birmingham	Oct-05	£2,500

### Mathematics in Africa

Name	Grant Purpose	Grant
Neil Turok, African Institute for Mathematical Sciences	To provide support towards travel costs for research students with mathematics degrees to visit AIMS.	£7,500
Jean-Pierre Ezin, African Mathematics Millennium Science Initiative	To provide support towards travel costs for up to 4 research students with mathematics degrees to attend a conference on "Representation Theory in Geometry and Mathematical Sciences" in Porto-Novo, Benin	£2,000
Wandera Ogana, African Mathematics Millennium Science Initiative	To provide support towards travel costs for up to 4 research students with mathematics degrees to attend a general mathematics conference, with a one-day session on "Mathematics in the Living Environment" in Mombasa, Kenya	£2,000
Sizwe Mabizela, Rhodes University, Grahamstown	To pay travel costs for an African delegate to attend the Chinese Mathematical Society 70th Anniversary Conference	£1,200

**GRANTS AWARDED BY THE SOCIETY****Research Meetings Committee**

During the year to 31 August 2005 the Research Meetings Committee's awards and forward commitments for the support of research and instructional activity in mathematics were as follows:

<b>Title of Event</b>	<b>Organiser</b>	<b>Amount (£)</b>
<b>1. Durham Symposia</b>		
Geometry, Conformal Field Theory and String Theory (22 July-1 August 2005)	P. Bowcock, P. Dorey, K. Wendland	1000.00
Operator Theory and Spectral Analysis (2-12 August 2005)	B. Davies, Y. Safarov, E. Shargarodsky	1000.00
<b>2. LMS workshops</b>		
String Theory in Twistor Space (Oxford, January 2005)	P. Candelas, S. Huggett, L. Mason	12,000.00
<b>3. LMS-EPSRC Short Courses</b>		
Noncommutative spaces (Southampton, September 2004) (SC20)	J. Brodzki	10,952.55
Algebraic Groups (Birmingham, September 2004) (SC21)	G. Röhrle	7,207.83
Mathematical Biology (Manchester, January 2005) (SC22)	M. Heil	11,056.10
Euclidean Harmonic Analysis (Edinburgh, April 2005) (SC23)	J. Wright	7,759.55
Topics in Stochastic Processes (Swansea, May-June 2005) (SC24)	N. Jacob	6,195.24
Nonlinear Wave Phenomena (Reading, July 2005) (SC25)	B. Pelloni	9,799.58
Algebraic Topology (Swansea, July 2005) (SC26)	F. Clarke	12,234.99
<b>Total</b>		<b>79,205.84</b>

*Notes:*

- \* indicates guarantee offered should an alternative funding application be unsuccessful.
- Figures for Short Courses indicate the net cost, of which the LMS contributes 20% and EPSRC 80%.

### Education Committee

The following table lists the grants awarded by the Education Committee during the year ended 31 August 2005:

<b>Purpose of Grant</b>	<b>Recipient/s</b>	<b>Amount (£)</b>
To award high-achievers in the 2005 Scottish Higher Mathematics Exams	Bill Richardson	200.00
Sponsorship of a workshop at BCME 2005	BCME	500.00
Lunch at BA festival Maths Event, September 2004	University of Exeter	462.50
To support an Exploratory Conference on Exemplification	Oxford University, Department of Educational	500.00
To support the running of the 2005 Mathematical Challenge	Scottish Mathematical Challenge	300.00
<b>Total:</b>		<b>1962.50</b>

### Computer Science Committee

The following table lists the grants awarded by the Computer Science Committee during the year ended 31 August 2005:

<b>Purpose of Grant</b>	<b>Recipient/s</b>	<b>Amount (£)</b>
<b>Scheme 7 Grants</b>		
To aid collaboration between various academics and the applicant at the Winter 2004 meeting of the Canadian Mathematical Society	A. Krokhin	500.00
To aid collaboration between the applicant and U. Zwick (Tel Aviv University)	M. Paterson	500.00
<b>BCTCS Grants</b>		
Sponsorship of two speakers (H. Broersma and S. Cook) to attend the 2006 BCTCS Annual Conference	F. Moller	1250.00
<b>Total:</b>		<b>1350.00</b>

### Women in Mathematics Committee

The following table lists the grants awarded by the Women in Mathematics Committee during the year ended 31 August 2005:

<b>Purpose of Grant</b>	<b>Recipient/s</b>	<b>Amount (£)</b>
<b>Child care supplementary grants</b>		
To aid with child-care costs at conference in USA, November 2004	R. Khamin	150.00
To aid with child-care costs at conference in Geneva, June 2005	S. Rees	150.00
<b>Women in Mathematics Day 2005</b>		
Travel grants for student attendees	Various	254.65
<b>Mary Cartwright Lecture 2005</b>		
Travel grants for student attendees	Various	101.35
<b>Total:</b>		<b>656.00</b>

## **Council**

The following table lists the grants awarded by Council during the year ended 31 August 2005:

<b>Purpose of Grant</b>	<b>Amount (£)</b>
<b>UK</b>	
Isaac Newton Institute	20,000
Warwick Research Centre	7,500
David Crighton Fund	2,000
Meeting 'Where do Mathematicians come from?', Manchester, March 2005	1,500
CMS Maths Careers.org.uk website support	3,000
<b>International</b>	
IMU – Special Development Fund	2,840
<b>Total:</b>	<b>36,840</b>

SOCIETY MEETINGS

<b>Date, Location, (Number Present)</b>	<b>Speakers (Affiliation)</b>	<b>Topics</b>
17 September 2004 South West & South Wales Regional Meeting Exeter (30)	R.P. Langlands (IAS)  G. Henniart (Paris)	The Trace Formula's Potential as a Tool in Number Theory  Extending the Langlands Conjectures: p-adic Representations of p-adic Groups
19 November 2004 London AGM (90)	D.I. Olive (Swansea)  P. Goddard (IAS)	Unified Theories and the Increasing Synergy Between Mathematics and Physics  Infinite Dimensional Symmetry [Presidential Address]
25 February 2005 London (90)	S. Lauritzen (Oxford)  E.Thompson (University of Washington, Seattle)	A Pedigree Perspective of Local Computation  Relatedness, Genome Sharing, and the Detection of Genes [Mary Cartwright Lecture]
18 May 2005 Midlands Regional Meeting Birmingham. (80)	R. Oliver (Paris XIII)  W.T. Gowers (Cambridge)  S. Smith (Chicago)	p-local Structure of Finite Groups and of Their Classifying Spaces [Fröhlich Lecture]  Is There Another Way to Explain Mathematics?  Homology Decompositions From Subgroup Complexes of Finite Groups
10 June 2005 Oxford (100)	I.M. Singer (MIT)	The Projective Dirac Operator and its Fractional Analytic Index
17 June 2005 London (60) [Launch of 'The Book of the Presidents: 1865- 1965']	J. Barrow-Green (Open University)  R. Jozsa (Bristol)  R. Penrose (Oxford)	An Indulgent Freedom: 100 Years of Presidential Addresses  An Invitation to Quantum Computation and Recent Theoretical Developments [Naylor Prize Lecture]  Quanglement, Spin-Networks, and Twistor Theory
8 July 2005 Northern Regional Meeting York (50)	P. Horodecki (Gdansk)  C.H. Bennett (IBM)	Quantum Communication and Entanglement: Selected Phenomena and Open Problems  Information is Quantum

The following Spitalfields Days were held, with financial support from the Society, during the year:

<b>Date and Location</b>	<b>Speakers (Affiliation)</b>	<b>Theme</b>
6 December 2004 INI, Cambridge	S.C Cowley (University of California, Los Angeles) D.O. Gough (IoA, University of Cambridge) J.H. Thomas (University of Rochester, NY) P.S. Cally (Monash University, Melbourne) A. Shukurov (University of Newcastle)	Magnetic Fields in Plasmas, Stars and Galaxies
10 March 2005 INI, Cambridge	R. Uppal (London Business School) A. Ledford (Management Investments) C. Beckers (Barclays Global Investors) W. Fung (PI Asset Management) J. Hugonnier (École des Hautes Études Commerciales) S. Hodges (Warwick Business School)	Risk Management of Hedge Funds
16 March 2005 INI, Cambridge	T. Altinel (Université Lyon-1) G. Cherlin (Rutgers University) E. Jaligot (Université Paris VII) B. Zilber (Oxford University) A. Borovik (University of Manchester)	Groups of Finite Morley Rank

**REPORTS, SUBMISSIONS AND STATEMENTS**

<b>Made by</b>	<b>Submission made to</b>	<b>In response to</b>
LMS	UUK-SCOP-HEFCE-HEA	Consultation “Towards a Framework of Professional Teaching Standards”
LMS	–	Media statement on the Secretary of State’s request that HEFCE advise on ways to protect HE courses of national strategic importance
LMS	RSS	Submission to the Study into Statistics and Data Handling in the Maths Curriculum
LMS	DfES	Response to the Report of the Tomlinson Group on 14–19 Curriculum and Qualification Reform
CMS	–	Report on the Bologna Agreement on Higher Education Qualifications
LMS	ACME	Consultation on the National Centre of Excellence in the Teaching of Mathematics
LMS	ACME	Consultation on Mathematics in 16–19 Further Education
LMS	EPSRC	Annual report for 2004 to EPSRC on the contract to run short instructional courses
LMS	QCA	Consultation on “A Framework for Achievement”
CMS	EPSRC	Comments on the EPSRC Action Plan in response to the <i>International Review of Mathematics Research in the UK</i>
LMS	–	Statement by the Women in mathematics Committee in response to comments made by the President of Harvard University, USA
LMS	–	Media statement on the Government’s response to the Tomlinson Report on 14–19 Education
LMS	Select Committee on S&T	Evidence to the House of Commons Select committee Inquiry into Strategic Science Provision in English Universities (also oral evidence)
LMS– IMA	–	Consultation: <i>Frameworks Study Initiative – looking at the future options for the IMA and LMS</i>
LMS	HEA	Consultation on Sustainable Development in HE
LMS	DfES	Response to the Government White Paper on Skills
LMS	RSS	Response to the Report on Statistics and Data Handling in the Maths Curriculum
LMS	RCUK	Response to the Position Statement on Access to Research Outputs

**PUBLICATIONS****Periodicals**

- *Proceedings of the London Mathematical Society* (editors C. Teleman and B. Totaro)
- *Journal of the London Mathematical Society* (editors F.E. Burstall and J.F. Toland)
- *Bulletin of the London Mathematical Society* (editors J.W. Anderson and J. Brodzki)
- *LMS Journal of Computation and Mathematics* (editor in chief J.H. Davenport; editors D. Duval, A. Iserles, L.C. Paulson)
- *Nonlinearity* (LMS editor A Neishtadt) [published jointly with the Institute of Physics]
- *Compositio Mathematica* (editors S.J. Edixhoven and G.B.M. van der Geer) [published on behalf of Foundation Compositio Mathematica]
- *Transactions of the Moscow Mathematical Society* (LMS editor F.H. Goldman) [published jointly with the American Mathematical Society]
- *Russian Mathematical Surveys* (English translation editor H.H. McFaden) [published jointly with the Russian Academy of Sciences and Turpion Ltd]
- *Izvestiya: Mathematics* (English translation editor D.L. Johnson) [published jointly with the Russian Academy of Sciences and Turpion Ltd]
- *Sbornik: Mathematics* (English translation editor G.G. Gould) [published jointly with the Russian Academy of Sciences and Turpion Ltd]

**Book series**

- LMS Monographs (editors E.B. Davies, M.R. Bridson and P. Sarnak) [published by Princeton University Press]
- LMS Lecture Note Series (editor N.J. Hitchin) [published by Cambridge University Press]
- LMS Student Texts Series (editor J.W. Bruce) [published by Cambridge University Press]
- History of Mathematics Series (LMS editors R.J Wilson, A. Craik, J.J. Gray and P.M. Neumann) [published jointly with the American Mathematical Society]

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