



LONDON
MATHEMATICAL
SOCIETY
EST. 1865

London Mathematical Society
Report of the Trustees for the period
1 August 2016 - 31 July 2017

Cover image:
Praxis 2015 by Mark Francis



INTRODUCTION

2016-17 has seen the Society work to consolidate the programme of events and projects from its 150th Anniversary while looking forward to explore and the shape the Society's future over the coming years. Both Council and Publications Committee held Retreats, discussing the strategic direction of the Society and its major income stream.

The Society is in the process of reviewing its governance arrangements on a number of levels. One important change that has been implemented in 2016-17 and that will take effect in 2017-18 is a review of the committee structure. Three new Committees have been formed – Early Career Research, Society Lectures and Meetings, and Research Grants – and two Committees disbanded – Programme and Research Meetings. The new committees will cover all of the work of the former committees, but the new arrangements will enable stronger strategic focus on these three key areas of the Society's work. Sustaining the mathematical community is one of the Society's core objectives and the new Early Career Research Committee will provide vital strategic insight into the support required to maintain a healthy people pipeline.

The Society's Publications have moved into an exciting new phase, with three new contracts taking effect in 2017, including the new partnership with Wiley for the Society's core journals. The journals and books that are published fulfil two vital objectives for the Society: in publishing and disseminating quality mathematics, while also providing an income which is then reinvested directly into UK mathematics without which many of the Society's grant schemes, meetings,

workshops, training and advocacy work and other charitable activities would not be funded.

Ensuring the healthy future of mathematics in the UK is central to the Society's mission and advocating on behalf of the discipline continues to be a priority. The Society published *Mathematical Sciences: The Route to Economic Prosperity* in 2017, a document which provides an overview of the many industrial and economic sectors that are underpinned by the mathematical sciences and the return on investment that the mathematical sciences offer to the UK economy. The document was distributed at the Society's Spring Reception held in May 2017, at which guests attended from Government, the civil service, various industry sectors and policy making bodies. The Society continues to be an active member of the Council for the Mathematical Sciences (CMS) and is working to provide evidence to strengthen the case for mathematics on current policy issues.

The Society was delighted to be the recipient of the inaugural Royal Society Athena Prize in 2016. The Prize was awarded in recognition of the Society's work supporting women in mathematics and as such recognises the huge amount of work undertaken by the women and men of the Women in Mathematics Committee since the Committee's inception in 1999.

This report provides an overview of the full range of activities undertaken by the Society in meeting its charitable objectives during 2016-17. Further information on the Society's work can be found on its website, lms.ac.uk.



The London Mathematical Society has, since 1865, been the UK learned society for the dissemination and promotion of mathematical knowledge. Our mission is to advance mathematics through our members and the broader scientific community worldwide.

2,972 members of the Society

312 new members in 2016-17 including 109 female members

Persi Diaconis and Étienne Ghys elected Honorary Members

Active Network of LMS Representatives

Global membership with members from over 60 countries

The Membership

The membership is the core of the London Mathematical Society. Mathematicians drive the Society and volunteers' contributions are vital to the Society in defining its priorities, running its activities and achieving its objectives. The Society at present has 25 committees with 274 volunteer committee roles and other individual roles, as well as 31 volunteer roles representing the Society on external committees. A large cross-section of the mathematical community is directly involved in the work of the Society, engaging widely with other organisations across the UK and beyond. The Society's global reach is reflected in its membership, with over 20% of LMS members based outside the UK.

The Society was delighted to elect Professor Persi Diaconis (Stanford University) and Professor Étienne Ghys (École Normale Supérieure de Lyon) as Honorary Members in 2017.

Communications and Engagement

Communication with members is of key importance in ensuring that the Society keeps abreast of the most interesting and exciting developments in mathematics and the mathematicians associated with

this work. The Society acknowledges achievements in mathematics through its prize-giving and in those it invites to become Honorary Members, as well as those who are invited to give lectures. Effective communications ensure that the Society can identify the current concerns within the community and can work to address them. The network of LMS Representatives across UK universities is central to these communications. As of 2016-17 the Society has 60 LMS Representatives with whom it communicates via monthly emails and an annual LMS Reps Day in London. The LMS also actively seeks to recruit more Representatives to ensure that all UK mathematical departments are directly engaged with the Society through a Representative. A network of Good Practice Scheme (GPS) Representatives also provides contact points between GPS Supporter departments and the Society to ensure full engagement with and communication about the Good Practice Scheme and matters of good practice in matters of gender equality. There are currently 57 GPS Representatives at departments across the UK.

The regular mid-month LMS e-Update keeps members informed of upcoming events and grant deadlines as well as providing a list of mathematical meetings and conferences that have

received Society grants. The Society hosts a number of 'blogs' on a variety of subjects on its website in order to provide opportunities for dialogue with and between its members and the broader mathematical and scientific community: Members; LMS Departmental Representatives; Open Access; Elections; Infinitesimals; De Morgan Forum; Research Excellence Framework.

The LMS has two very active Twitter accounts (@LondMathSoc and @womeninmaths) with over 12,000 followers and is looking to expand its social media presence with dedicated LinkedIn Groups for the Society and for UK women in mathematics.

The Society's Newsletter functions as a central resource for mathematical and Society news and events. A new-look Newsletter has been developed

in 2016-17 and the first issue will be published in autumn 2017. The refreshed Newsletter will not only have a new appearance, but will include mathematical feature articles as well as other new types of content. The refresh brings new opportunities for members, and the mathematical community as a whole, to be involved in the Society. Contributions are welcomed from members and non-members alike and include, for example, feature articles and micro-theses. Members are very much encouraged to submit ideas for Newsletter articles and features.

Over the past few years, the Society has been developing its online engagement with members so that new members can join online and current members can manage and renew their subscriptions via their online LMS membership record.

In 2017-18 the Society will.....

- **publish a new look Newsletter for the Society including new feature articles on mathematics**
- **increase engagement with its networks of Representatives**
- **exchange membership articles with its reciprocal societies to raise awareness of LMS membership around the world**



SUPPORTING MATHEMATICS RESEARCH

Objective: to advance mathematical knowledge by enabling mathematicians to undertake research and collaboration, and by supporting them in their efforts.

£646,004 awarded in grants to support mathematics

Four new partnerships formed through the fifth round of Mentoring African Research in Mathematics programme

Pólya Prize awarded to Professor Alex Wilkie

IMA-LMS David Crighton Medal awarded to Professor I. David Abrahams

Research Grants Committee established

The Society's grants schemes are at the centre of the Society's work to advance mathematical knowledge and support mathematicians in their research and collaborations. There are 23 grant schemes in operation (for a full list see Annex 5) covering various activities ranging from facilitating research conferences, to small grants supporting education and teacher Continuing Professional Development, to providing funds to help with caring responsibilities and career breaks, and developing international mentoring opportunities. The Society also supports research by maintaining its Library, with various collections available for researchers' use, and by awarding a number of prizes annually to recognise mathematical research excellence.

Grants

As part of the Society's review of its committees and strategic refocusing of activities, the awarding of research grants (Schemes 1-5, 8 and 9) – primarily the remit of the Programme Committee – has been redistributed to two new Committees, and the Programme Committee has been disbanded.

Schemes 1-5 will be under the remit of the Research Grants Committee and Schemes 8 and 9 will fall under the remit of the Early Career Research Committee. This new structure will take effect in 2017-18.

The Society continues to award smaller grants relative to funding available elsewhere, and in doing so fulfils a crucial role in the UK mathematical funding landscape. The Society's grants can offer mathematicians the opportunity to organise much-needed smaller-scale conferences, work collaboratively through short visits, and enable the development of research partnerships, all of which significantly contribute to career development and impact on UK mathematical research at its roots.

To ensure that the wider mathematical community is aware of the funding available from the Society, there are ongoing efforts to promote grant schemes as widely as possible. Advertising grants is achieved through the LMS Representatives network and via the Society's Newsletter, e-updates, website and social media accounts; as a result there has been a continuous increase year on year in the overall number of applications for the core grants (Schemes 1-5, 8 and 9). In particular, there has been a marked increase in applications for the larger conference grants the Society offers (Scheme 1), as well as a steady increase in the number of applications to support collaborative research (Schemes 3 and 4 in particular).

Through its core grant schemes the Society has supported many mathematicians and their research. In

2016-17 the Society awarded a total of £368,686 through 194 grants via its core grant schemes. Eight grants were awarded to support visits for collaborative research at the interface of Mathematics and Computer Science (Scheme 7)

International schemes

As well as supporting UK-based mathematics, the Society also supports mathematical activities on an international level. In 2016-17, a total of £6,000 was awarded in three grants under the Society's Scheme supporting conferences in Africa organised by the African Mathematics Millennium Science Initiative (AMMSI).

The current partnerships under the Mentoring African Research in Mathematics (MARM) programme continued this year. MARM operates in collaboration with the African Mathematics Millennium Science Initiative (AMMSI), using LMS funding combined with funding from the International Mathematical Union Commission for Developing Countries (IMU CDC). The programme aims to slow the academic 'brain-drain' in Africa, in which talented mathematicians often move abroad due to lack of opportunity at home, thus eroding the mathematics people pipeline within the continent. In 2015-16 a fifth round of the programme was launched and, since then, four new partnerships have been created. Including the new partnerships, this means that 21 awards have been made under the programme, in Cameroon, Congo, Ethiopia, Ghana, Côte d'Ivoire, Kenya, Malawi, Morocco, Nigeria, Rwanda, South Africa, Tanzania and Uganda. From

a relatively low-level investment the outcomes of MARM have been substantial, having an effect on the next generation of African mathematicians, improving and enhancing academic curricula, supervising PhD study and leveraging further funding into African institutions, amongst many other achievements. The programme continues to inspire a high application rate from both African institutions and potential European partners and the Society hopes that funding for the scheme will continue into the future, for the benefit of mathematics across the two continents.

Prizes

The Society awarded a number of LMS Prizes this year, as well as the IMA-LMS David Crighton Medal. The Pólya Prize, the highest LMS prize made this year, was awarded to Professor Alex Wilkie. The Crighton Medal was awarded to Professor I. David Abrahams, in recognition of the exceptional contributions he has made to mathematics and the mathematical community. The Society extends warmest congratulations to all winners.

Library

The Society's Library is housed at University College London (UCL) to ensure accessibility to a wide audience. The Library Committee meets annually with representatives from the Science Library at UCL to review the Society's 107 international journal exchange agreements, and to review the services offered by UCL Library to members of the Society. This year two Library Placement Students were recruited as part of ongoing work to make the Society's archives more accessible

online, working particularly on creating item descriptions of the Society's collection of T.A. Hirst's Letters. Further work has also taken place on the development and promotion of the Philippa Fawcett Collection. The Society houses the Plücker Model Collection; a collection of 14 boxwood models, now on display at De Morgan House.

Computer Science

This year's BCS-FACS (BCS- Formal Aspects of Computing Science) Evening Seminar, held in collaboration with the FACS Specialist Group, will take place in November 2017. The speaker will be Professor Erika Ábrahám (RWTH Aachen University), who will speak on Symbolic Computation Techniques in SMT Solving. Since 2005, the Society has funded the costs of an overseas speaker at the British Colloquium for Theoretical Computer Science (BCTCS). In 2017, the LMS-sponsored Keynote Speaker was Professor Laszlo Babai (University of Chicago, USA) at the event held at the University of St Andrews. In collaboration with the Smith Institute, the LMS Computer Science Committee is continuing its work in commissioning further Knowledge Transfer Papers. The LMS-Knowledge Transfer Network (KTN)

Knowledge Transfer Reports are an initiative coordinated jointly by the Industrial Mathematics Knowledge Transfer Network (IM-KTN) and the Society. The reports are produced as an occasional series, each one addressing an area where mathematics and computing have come together to provide significant new capability that is on the cusp of mainstream industrial uptake. They are written by senior researchers in each chosen area, for a mixed audience in business and government. The reports are designed to influence managers and decision-makers by raising awareness of new tools and techniques, in a format that allows them to assess rapidly the potential for impact and exploitation in their own fields, alongside information about potential collaborators and suppliers. In 2017-18 the Committee will look into the feasibility of creating video essays/papers, as part of an effort to expand the format of the Knowledge Transfer Papers.

In addition, the Computer Science Committee runs a grant scheme – Scheme 7. This is to facilitate collaborations in research at the interface of mathematics and computer science. In 2016-17 a total of 8 grants worth £3,795 were awarded.

In 2017-18 the Society will.....

- **move the grant application process onto a dedicated online system, with a grants dashboard for users to review their current (and past) applications and monitor where their applications are in the assessment process**
- **continue to actively promote and further the participation of women speakers at LMS sponsored events and conferences**
- **review and develop the format of the Knowledge Transfer Papers**



REPRESENTING AND PROMOTING MATHEMATICS

Objective: to promote widely mathematical sciences research and its broad benefits to decision makers, policy advisers, funders and users of mathematics.

Responses issued to Government and national agencies' consultations

Second Spring Reception held with speakers Sir John Kingman and Professor Philip Bond focusing on Mathematical Sciences Research

With CMS, hosted parliamentary event focusing on Mathematics Education

Through its external and public relations the Society aims to ensure that the centrality of mathematics to so many aspects of society is represented to Government, other national policy-makers and influential organisations and individuals in order to inform debate and improve decision-making. The Society undertakes significant collaborative work advocating for mathematics both individually and through the Council for Mathematical Sciences (CMS).

Public affairs

The Society has undertaken extensive public affairs work over the past year in promoting mathematics to decision-makers and policy advisers within what has been a challenging political and economic climate. It has responded to various consultations by the Department for Education, Ofqual and the Higher Education Funding Council for England (HEFCE), and inquiries from the House of Commons Business and Innovation Committee, in doing so ensuring the mathematical community's voice is heard with a view to influencing policy decisions.

The LMS Research Policy Committee has continued to seek robust evidence to inform its policy contributions. An online *LMS Mathematical Sciences Directory (MSDirectory)*, containing the names of over 5,000 academic UK mathematical scientists in the form of a searchable electronic database, has been launched in 2017. With the MSDirectory, the LMS seeks

to facilitate greater connection, communication and collaboration between mathematical sciences professionals and academics. The *MSDirectory* will exist as a central resource for members of the mathematical community to network within their own discipline and be discovered by colleagues in other sectors. The advantages of the *MSDirectory* are not exclusive to members of the LMS. Participation is open to anyone who holds, or is registered to study for, a mathematical sciences first degree or above from a UK institution, as well as anyone currently working in mathematical sciences in the UK without such a qualification. It is also open to anyone with a mathematical sciences first degree or above from an overseas institution who now works in the UK. All UK mathematical scientists in both academia and industry not already on the Directory are encouraged to join.

For the fourth year the mathematical sciences, through the CMS, were represented in the prestigious STEM for Britain poster competition at the House of Commons, which brings together young researchers across all STEM (Science, Engineering, Technology and Mathematics) disciplines with Members of Parliament. This year the gold medal for the mathematical sciences (sponsored again by the Clay Mathematics Institute), and £3,000 prize winner, was Dr James Grogan (University of Oxford) for his research on combining state-of-the-art, high resolution computer modelling and

imaging in cancer research. Laura Wadkin (Newcastle University) won the Silver award and £2,000 for her research on mathematically modelling stem cell colony development and Dr Bartosz Naskrecki (University of Bristol) won the Bronze award and £1,000 for his research on the Generalized Fermat Conjecture.

Over the past year the Society has worked with the Department for Education (DfE) on the *Schools that work for everyone* consultation paper and the House of Commons Public Bill Committee on the Higher Education and Research Bill. In addition, a further response issued by the Council for Mathematical Sciences is noted below. The Education Committee continues to work with other societies and groups, including the revamped Advisory Committee on Mathematics Education (ACME), which aims in part to advise the DfE on curriculum content. The A-Level Mathematics Advisory Board (ALMAB) will continue to provide input into the work of ACME.

Within the mathematics research community the LMS President has represented the Society widely at various events, ensuring national and international recognition for the Society and for UK mathematics as a whole and ensuring the Society's and UK's input into international discussions. The President has represented the Society at Parliamentary and Scientific Committee meetings and a Parliamentary Links Day, and Vice-President Ken Brown spoke to the Pan African Conference of Mathematics (PACOM), representing the Society.

Council for Mathematical Sciences

The Society is a founding member of the CMS which aims, through its member bodies, to draw together the mathematical community to speak with one voice on national issues of mutual concern. The CMS provides a forum for the consideration of matters of joint interest; it responds and makes representations to Government and others on relevant issues. The CMS represents the mathematical sciences to government, in particular to the Department for Business, Innovation and Skills (BIS). It meets regularly with the Engineering and Physical Sciences Research Council (EPSRC) and the Higher Education Funding Council for England (HEFCE). The CMS is also a member of the Parliamentary Collaboration Steering Group for STEM learned societies.

The CMS held an event at the House of Commons in February 2017 on Mathematics Education, hosted by Stephen Metcalfe MP, Chair, Science and Technology Select Committee. Over 100 invited guests attended, including Sir Julian Brazier MP and Stephen Timms MP, and representatives of government departments including the DfE, academia, education and a range of STEM organisations. Guests had the chance to network with colleagues and also heard an address from Sir Adrian Smith, Chair of CMS, about his forthcoming review of post-16 mathematics provision in England (subsequently published in July 2017). The invited guests also heard from Professor Frank Kelly as the new chair of the Advisory Committee on Mathematics Education (ACME) about new developments within ACME and its vision moving forward.

The Society, as part of CMS, also took part in Voice of the Future, in March 2017, and Parliamentary Links Day in June 2017, the focus of which was UK Science and Global Opportunities. This was followed by a luncheon in the House of Lords where CMS representatives had the opportunity to meet with Lords and MPs.

The Society has played an active contributory role in the formulation of CMS responses to various consultations and calls for evidence, which over the past year have included the *Inquiry into Implications and opportunities for Science and Research on Leaving the EU* and the *Consultation on the Second Research Excellence Framework*.

CMS' work has continued to ensure that the importance of the mathematical sciences is increasingly recognised at Government level.

Collaborative working

The Society works actively and collaboratively through its membership of and funding for a number of mathematics and science organisations to ensure the interests of mathematics are represented in national policy and public debates and to ensure the Society is kept informed of external policy issues. Membership includes the UK Parliamentary and Scientific Committee, British Science Association, Joint Mathematical Council, Campaign for Science and Engineering (CaSE), and the Foundation for Science and Technology. The Society also works in association with the UK Heads of Departments of Mathematical Sciences (HoDoMs). The Society is also represented on the Parliamentary Affairs Committee run by the Royal

Society of Biology, the Institute of Physics and other STEM learned bodies, and maintains representation within a number of other organisations, including the Programme and Scientific Committees of the International Centre for Mathematical Sciences (ICMS) and Isaac Newton Institute (INI), the Athena Forum (run by the Royal Society) and the STEMM Disability Advisory Committee.

The Society provides funding for the INI and the ICMS as the major organisations supporting mathematical research in the UK, as well as for ACME.

The Society and the IMA have continued their collaborations throughout the year, including through the Joint Promotion of Mathematics (JPM) Steering Group and the award of the David Crighton Medal, won in 2017 by Professor I. David Abrahams. A joint press statement was issued by the two Societies on A-level results.

Development Activities

The Society will be prioritising its Development activities in 2017-18, to help ensure that the financial foundation of the organisation is as secure as possible for future generations, as well as helping ensure that the importance of the mathematical sciences is understood at as wide a level as possible in industry and beyond.

The 'De Morgan Dinners', held in 2013 and 2014 and the Anniversary Dinner held in 2015 have helped develop a group of influential external supporters from a wide range of backgrounds, sympathetic to the Society's mission.

The Society aims to work further with this group to help develop strategies and support for the healthy future development of the mathematical sciences in the UK.

Spring Reception

In May 2017 the LMS held its second Spring Reception, once again generously hosted by LMS member Dr Richard Golding. The reception was attended by 60 guests representing government departments, financial institutions, professional bodies, consultancy and technology firms as well as academics from a range of mathematics-influenced disciplines. The focus of the reception was on mathematical sciences research and

the Society was delighted to have Sir John Kingman (Chair of UKRI) and Professor Philip Bond (Chair of the Review of Knowledge Exchange in the Mathematical Sciences) as speakers at the Reception, who spoke about the current research and funding landscape in the UK. The overarching aim of the Reception was to continue to develop connections with various different areas that use mathematics and with those who are influential in terms of policy and funding. The LMS also produced a leaflet for the Reception entitled *Mathematical Sciences: The Route to Economic Prosperity*, which provided information on how the mathematical sciences are essential to economic growth across the UK.

In 2017-18 the Society will.....

- **further promote the UK Mathematical Sciences Directory electronic database**
- **continue to commission the gathering, analysing and reporting of evidence with respect to UK mathematics**
- **continue to bring to the attention of decision-makers and policy advisers national data on mathematics and the UK mathematics landscape**
- **continue to represent mathematics research and education to Westminster, Whitehall and other national funding bodies and ensure that mathematics is explicitly considered during discussions regarding STEM subject areas**



Objective: to disseminate mathematical knowledge and make it available worldwide.

Continued review of the publications portfolio

New publishing partnership with Wiley for the LMS core journals commenced

10th volume of *Journal of Topology* and 30th volume of *Nonlinearity* published

Society Lectures and Meetings Committee established

Over 500 people attended 8 Society Meetings

Through its publications and meetings the Society aims to disseminate high-quality mathematical research and thinking worldwide. The Society currently publishes 13 peer-reviewed journals, seven of which are in collaboration with other learned societies and institutions, as well as two book series and individual book titles. The Society also hosts regular meetings and lecture series involving some of the most renowned UK and international mathematicians.

The Society's publications serve a dual purpose, in not only disseminating mathematical research but in providing the Society with an income which it utilises entirely in furtherance of its other charitable activities. This broad and developing portfolio of high-quality journals and books serve our authors by providing transparent, timely and professional editorial and production processes. They also offer readers interesting, high quality content whilst maintaining sustainable and ethical pricing, including offering free online access to LMS members and institutions in developing countries.

Publications

A strategic retreat was held in January 2017 to bring together members of the LMS Publications Committee and other key stakeholders. The aim was to formulate a strategic plan for the Society's publications portfolio which will deliver the best support possible to mathematicians and mathematical sciences research. Since the retreat a

smaller working party has been formed that has met regularly, to take forward the key ideas and maintain momentum. A new strategic plan is currently being finalised by the Publications Committee in consultation with Council and other stakeholders.

John Wiley & Sons took over publication of the Society's core journals from Oxford University Press in January 2017. All new and archive content for the *Bulletin*, *Journal*, *Proceedings* and *Transactions*, as well as the *Journal of Topology* is now available via the Wiley Online Library.

In 2017 the *Journal of Topology* entered its 10th volume of publication, and *Nonlinearity*, which the LMS co-owns with the Institute of Physics, published its 30th volume. In recognition of this anniversary *Nonlinearity* are publishing a series of invited articles on an ongoing basis over the course of 2017 and 2018 offering a rich blend of perspectives, reviews and open problems across key and hot-topic areas.

Society Lectures and Meetings

A Society Lectures and Meetings Committee was established in 2017 and will meet for the first time in autumn 2017. The formation of this Committee will help provide a strategic focus on the Society's lectures and meetings to consider how these can be used to maximum potential for the benefit of UK mathematics.

Meetings

Society Meetings enable both members of the mathematical community and the wider public to meet, hear about and discuss current mathematical thinking and developments. In 2016-17 Society Meetings were held in Bath, Birmingham, Durham and York as well as London.

The Mary Cartwright Lecture was given by Professor Rebecca Hoyle at the Society Meeting held in May 2017. A Society Meeting was also held at the British Mathematical Colloquium at Durham University in April 2017, which included a lecture by Professor Isabelle Gallagher.

During 2016-17, the Society held a joint meeting with the Royal Statistical Society and Fisher Memorial Trust with the title "Data Science: The View from the Mathematical Sciences".

Lecture series

The Society's funding for visiting international lecturers helps enable UK-based mathematicians to engage in dialogue with current mathematical

thinking from across the world.

International lecturers included the 2017 LMS Invited Lecturer, Professor Jim Agler (University of California, San Diego), who gave the Invited Lectures Series at Newcastle University on Function Theory by Hilbert Space Methods. The 2017 LMS-NZMS (New Zealand Mathematical Society) Aitken Lecturer, Professor Hinke Osinga (Auckland University) visited the UK in May 2017 to give lectures at Bath, Cambridge, Exeter and Oxford as the first part of the LMS-NZMS Aitken Lecture Tour 2017.

Two Graduate Student Meetings were held prior to the Annual General Meeting in November and the General Meeting in June. Over 60 students attended these meetings and 14 gave presentations of their own research.

All of the Society's meetings and lectures are open to members and non-members alike and are free to attend. In 2016-17, over 500 people have attended the meetings, and were able to hear about important current developments in mathematical sciences research.

In 2017-18 the Society will.....

- **increase focus on publications strategy and further improve communications with editors, editorial boards, referees, members and the LMS publishing partners**
- **continue to identify opportunities for publishing high-quality mathematical research taking into account the evolving scholarly publishing landscape**
- **host a joint Society Meeting with the Institute of Mathematical and its Applications on Symmetry and Computation**
- **facilitate two LMS- Durham Symposia**
- **host the second part of the 2017 LMS-NZMS Aitken Lecture Tour and the 2018 LMS Hardy Lecture Tour**
- **Explore opportunities to collaborate further with mathematical societies across Europe**



SUSTAINING THE MATHEMATICAL COMMUNITY

Objective: to promote equality of opportunity and a culture of fairness across all career stages, ensuring the long-term sustainability of the mathematical research community.

LMS awarded inaugural Royal Society Athena Prize for its women in mathematics work to date

Early Career Research Committee established

New Women in Mathematics and Girls in Mathematics grants schemes launched

4 LMS-CMI Research Schools held across the UK

The Society has recognised increasing concern among the community regarding career progression across academia generally and within mathematics specifically. Decreasing statutory funding leading to fewer opportunities for graduates and postgraduates has caused concern about the sustainability of the mathematics people pipeline. Ensuring that talented mathematicians are enabled to progress securely through the various career stages is critical – not only to academia but to wider industry and the economy more generally. This objective focuses the Society’s work in this area, particularly with respect to the transitions between the early career stages (undergraduate to postgraduate and postgraduate to postdoctoral) and to women in mathematics and the wider diversity agenda.

Early career progression

The Society has established a new committee, the Early Career Research Committee, which will meet for the first time in autumn 2017 and which will oversee all of the Society’s early career research activities. Having a committee that focuses specifically on early career research will help provide a strategic overview of this vital aspect of the Society’s work.

The Society operates a number of schemes which provide support for the early career progress of mathematicians at undergraduate, postgraduate and

postdoctoral level as well as for women in mathematics.

Undergraduate Summer Schools

The Undergraduate Summer Schools aim to introduce exceptional non-final year undergraduates to modern mathematics and, in particular, to make them think seriously about a future academic career. The 2017 School, held at the University of Manchester, attracted a very competitive field of nominees from across many UK institutions. 53 students attended the School which included a combination of short lecture courses given by mathematical experts alongside problem solving sessions and colloquium style talks. The Scheme is designed to particularly encourage attendance from students at institutions that do not normally have a strong tradition of undergraduates continuing to PhD study, and to use the School to help recognise their own potential.

LMS-CMI/Heilbronn Research Schools

The Research Schools Scheme operates in partnership with the Clay Mathematics Institute (CMI) with additional support from the Heilbronn Institute. In 2016-17, four LMS/CMI/Heilbronn Research Schools took place: at Queen’s University Belfast (*Combinatorics and Quantum Information Theory*); the University of Leicester (*New Trends in Representation Theory – the Impact of Cluster Theory on Representation Theory*); the University of Cardiff (*Microlocal Analysis and*

Applications); and the University of Kent (*Orthogonal Polynomials and Special Functions*), attracting over 135 participants. A further two Research Schools will take place in September 2017 at the University of Oxford (*Algebraic Topology of Manifolds*) and the University of Warwick (*Introduction to geometry, dynamics, and moduli in low dimensions*).

150th Anniversary Postdoctoral Mobility Grants

The 150th Anniversary Postdoctoral Mobility Grants Scheme is designed to help early career researchers navigate the difficult stage from submitting their PhD thesis to gaining their first postdoctoral employment by supporting a period of study and research in a new institution, and affording them the opportunity to make new connections and develop their research. In 2016-17, 10 postdoctoral graduates made visits to institutions ranging across the UK, Europe and Canada. Application numbers to the Scheme have been high for all three rounds indicating strong demand within the community for this type of support. On current plans this will be the final year that the Society supports the scheme, however the Society is currently seeking external sponsorship to be able to continue the Scheme in to the future.

Undergraduate Research Bursaries

The fifth round of the Undergraduate Research Bursaries Scheme received a very high number of applications

in 2016-17. 105 applications were received from 29 institutions, and the Society was pleased to see an increase in the number of institutions offering to provide match-funding if the grants were successful, with 23 institutions making this offer. In the event, 42 awards were made and 39 of these were co-funded by the department. The introduction of match-funding has enabled the Society to nearly double the number of awards usually made under this scheme, allowing many more excellent students to gain some experience of mathematical research, and encouraging them to consider research as a future career. The Scheme has widespread recognition and the support across the community is demonstrable. Nearly 150 students have been granted a bursary to date. Feedback from grantholders has indicated how valuable this scheme has been in gaining understanding of exactly what a research career entails.

Other activities

In addition to these specific schemes other ongoing activities continue to support early career researchers. These include providing funding for the Young Researchers in Mathematics (YRM) Conference, held in August 2016 at the University of St. Andrews, in partnership with Think Tank and Winton Capital and attended by 80 early career researchers. The YRM is a national conference specifically for postgraduate students, planned, organised and run by the students themselves. Also, the Society funded the LMS Prospects in Mathematics

event, which was held at York University in December 2016 and attended by 47 undergraduates. The meeting is primarily aimed at final year undergraduates and Masters' Students interested in pursuing a PhD in mathematics. From 2017, the LMS Prospects in Mathematics Meetings will be held in September each year to help students learn about the PhD research opportunities in different areas of mathematics before choosing their final year modules.

Both the YRM Conference and the LMS Prospects in Mathematics Meetings are held annually and are supported by the Society, being held each year at different institutions across the UK. These meetings are important events that encourage and support students in the pursuit of a career in mathematical sciences research.

Women in Mathematics

The Society continues its commitment to improving the proportion of women in mathematics and to helping ensure that equal opportunities are embedded within working practices for the benefit of everyone working and studying within UK university departments. The Women in Mathematics Committee has representatives from all 5 constituent mathematical bodies of the CMS as well as from the Standing Committee of European Women in Mathematics, ensuring it speaks for the entire UK mathematical community. The Chair of the Women in Mathematics Committee represents the Society on the Athena Forum.

The Society was delighted to be awarded the inaugural Royal Society Athena Prize in 2016 for its work supporting women in mathematics. The Royal Society recognised the work that the Society has undertaken in introducing a broad range of initiatives in the field of mathematics, that have resulted in a change of culture nationwide and its leadership in this area that has demonstrably increased the number of women in mathematics. The Prize is a recognition of the huge amount of work undertaken by the women and men of the Committee since its establishment in 1999. The Society received a medal, currently on display in De Morgan House, as well as a £5,000 award.

In conjunction with the Heads of Departments of Mathematics (HoDoMs), the Society operates the LMS Good Practice Scheme, with the aim of helping mathematics departments to take practical actions to improve the participation of women and to share examples of good practice with other departments. The Scheme offers support in applying for an Athena SWAN award for those departments seeking recognition for their work in this area. As part of this initiative a LMS Good Practice Scheme workshop was held in London in October 2017, which focused on 'Good Practice in Recruitment'. The topic was chosen in response to identified needs from the community. There have been over 200 attendees at the GPS workshops held to date, representing over 50 institutions. The LMS Good Practice Scheme and its events are intended

to help mathematics departments implement best practice policies, contributing towards the achievement of Athena SWAN status, and ultimately working towards ensuring that negative, unhelpful or discriminatory practices preventing fair career progression are eliminated. Feedback from the events to date has been overwhelmingly positive. 45 mathematical sciences departments now hold Athena SWAN awards, and 39 of these are registered LMS Good Practice Scheme Supporters.

This year the Committee opened up the organisation of the Women in Mathematics Days to expressions of interest from departments, and made awards to Birkbeck University of London and the University of Warwick. The event hosted by Birkbeck University of London received additional funding from Winton, and the Institute of Mathematics and its Applications provided funding for an industry speaker at the University of Warwick event.

The Committee also initiated a Girls in Mathematics Events scheme, inviting expressions of interests for

departments to host events for school age students, to encourage girls to consider the possibility of future study in mathematics by demonstrating the possibilities of the subject in fun and inspiring ways. Three awards were made for events held in 2016-17 to the Universities of Liverpool, Swansea and Kent.

Both of these schemes received a strong number of applications for the available funding, indicating the level of interest within the community for providing activities that encourage and support girls and women in mathematics.

The Committee continues to operate its Caring Supplementary Grants and Grace Chisholm Young Fellowship Schemes. The Committee is also working on an online resource for young people, *Success Stories in Mathematics* to provide examples of how mathematics is used in a wide range of careers and to demonstrate the variety of career options available to anyone who holds a mathematics degree. The planned launch for the resource will be in late 2017.

In 2017-18 the Society will.....

- **continue to run at least four LMS/CMI/Heilbronn Research Schools**
- **seek sponsorship to continue to run those activities which provide support to early career researchers**
- **launch the *Success Stories in Mathematics* webpages**
- **continue to gather data related to the mathematical sciences people pipeline to evidence gender diversity within the discipline**
- **explore how the Society might approach wider matters of Equality, Diversity and Inclusion**



ENGAGING WITH EDUCATION AND THE PUBLIC

Objective: to support mathematical education in schools, colleges and universities, and to encourage the public and young people to appreciate and engage with mathematics.

Extension of the agreement with Gresham College to host joint lectures

LMS Education Day on teacher shortages in mathematics

300 attendees visited De Morgan House as part of 'Open House London 2016'

The Society is keen to ensure that as far as possible the wider public and young people have the opportunity to engage with and appreciate mathematics and recognise its contributions to society. It operates a number of initiatives which aim to achieve this. In 2016-17 the Society has continued to build on its efforts during the 150th Anniversary to engage with the public on a larger scale than ever before.

Education

The Education Committee works on a number of different activities and schemes, including grants for education, public lectures and responses to consultations. This year the Society's Mathematics Teacher Continuing Professional Development (CPD) grants scheme made 21 awards, supporting the professional development of mathematics teachers and the improvement of mathematics teaching. The Committee produced a statement on the teaching and assessment of mathematics degrees, a support document which aimed to explain to non-mathematical colleagues some of the distinctive features of the assessment and teaching of mathematics, both as a subject in its own right and in a service teaching context. The Committee continues to work closely with other groups and societies in the area of mathematics education, including the revamped Advisory Committee on Mathematics Education (ACME), as well as the Joint Mathematical Council of the UK (JMC), Heads of Departments

of Mathematical Sciences (HoDoMS) and the Higher Education Academy (HEA). In May 2017, an LMS Education Day was held at De Morgan House and attended by a number of representatives of these groups. The event focused on teacher shortages in mathematics and looked at how higher education departments might help to reverse the trend.

The Education Committee continues to run the Holgate Session Leader scheme. The Scheme provides session leaders who are willing to give a talk or run a workshop on a mathematical subject to groups of students or teachers. The sessions are specifically mathematical in content (rather than, say, career talks) and are intended to enrich and enhance mathematical education, looking both within and beyond the curriculum. A new session leader was appointed in 2017 and it is expected that two further session leaders will be appointed in 2017-18.

Popularisation

A sub-committee of the Education Committee chaired by Dr Kevin Houston focuses on popularisation events to ensure that these have greatest possible impact. Professor David Tong and Dr Jason Lotay were the LMS Popular Lecturers in 2017, and gave well-received talks to large audiences.

The Education Committee was also pleased that Gresham College agreed to extend its agreement with the Society to

host a joint annual lecture. Dr Carola-Bibiane Schönlieb of the University of Cambridge gave the 2017 LMS-Gresham lecture at the Museum of London, *Mathematics Can Make You Fly?*

Through the Joint Promotion of Mathematics Steering Group (JPM), mathematics was represented at the Big Bang UK Young Scientists and Engineers Fair held in Birmingham in March 2017, with a range of interactive demonstrations and activities, which, as previously, proved to be very popular. The JPM Steering Group once again produced three *Maths Inside* leaflets in conjunction with the Royal Society and exhibitors at the Royal Society's Summer Science Exhibition in July 2017.

The Society took part in Open House

London for the sixth year. Nearly 2,000 people have visited the building since the Society first participated in this event. Visitors were given a flavour of the architectural features of De Morgan House and those who may have lived in the premises over the years, as well as the building's place in the rich and diverse history of Bloomsbury, through a short tour of selected rooms by Society staff and Open House volunteers. The event is also an opportunity to publicise Society activities and, as well as enjoying a presentation about the history of the Society, visitors had the opportunity to watch *Thinking Space*, the film commissioned by the Society as part of its 150th Anniversary celebrations in 2015. Continued participation in Open House London has helped bring the work of the Society and mathematics as a discipline to a wide audience.

In 2017-18 the Society will.....

- **issue further LMS policy position statements to support mathematics Higher Education and education in schools**
- **increase the capacity of the Holgate Session Leader scheme**



MANAGING THE SOCIETY EFFECTIVELY

Objective: to manage the Society’s affairs and resources effectively and efficiently, operating where appropriate to make a not-for-profit financial return on activities, and to seek a variety of funding sources to support the Society’s work.

The Society aims to ensure that its resources are put to best possible use in achieving its mission and objectives. In all its operations it aims to ensure the longevity of the Society and plan for future circumstances, while also meeting the current needs of mathematics and its community.

In doing so the Society ensures it follows best governance practices by operating in accordance with its Charter, Statutes and By-Laws and by referring to guidance from the Charity Commission and, where appropriate, professional advisors (Annex 1).

The Society is governed by a Council of Member Trustees, elected by the membership from the mathematical community (Annex 1). Day-to-day operations are undertaken by a full-time equivalent (FTE) staff of 15 (Annex 4). Council has chosen to delegate decision making on a number of matters to

15 standing committees and has also set up a number of temporary ad-hoc committees to deal with specific items of business (Annex 2). Council also maintains and reviews annually a Risk Register with respect to all activities undertaken by the Society.

The Society runs its financial operations in accordance with best accounting practices and ensures that all its plans and activities are underpinned by a sound financial basis. The Society’s financial and governance affairs are externally audited on an annual basis.

More detailed information on how the Society operates is available in the sub-sections that follow:

- Governance and Public Benefit
- Financial Review
- De Morgan House
- Statement of Trustees’ Responsibilities

Governance and the Public Benefit

Governance

The Society's governing body is its Council, members of which are also the Trustees of the charity. The Council consists of 20 members of the Society of whom 8 are Officers (including the President) and 12 are Members-at-Large, including one 'Member-at-Large (Librarian)'.

The Officers of the Society, together with the Executive Secretary, comprise the Finance and General Purposes Committee (F&GPC), which is responsible for providing advice to Council on a number of ad-hoc matters, implementing Council's decisions and for ongoing financial management.

All candidates for election to Council are provided with information on the roles and responsibilities of Trustees. Those elected attend an induction normally in advance of their first Council meeting, which includes information on the work of Council, its strategies and plans, the operation of the financial systems, the administration of the Society and the responsibilities of a Trustee. All Council members are required to return a Declaration of Interests, a Declaration as a Fit and Proper Person, and to sign up to the Society's Anti-Bribery policy; these declarations must be renewed by all Trustees on an annual basis. Staff in management positions also sign an annual Declaration of Interests.

Council met 6 times in 2016-17: in October and November 2016 and in February, April, May and June 2017 (F&GPC met 5 times: in September 2016

and in January, March, April and June 2017). The Society holds an Annual General Meeting and a mid-year General Meeting each year – held in November 2016 and July 2017 respectively.

Council has established several standing committees which advise Council and to which it has delegated some decision making. A list of all committees and committee membership is given in Annex 2. A review of the terms of reference of the committees is being undertaken to ensure that the Society has the appropriate committees to implement its strategies and activities effectively.

As Trustees, Council members receive reimbursement only for expenses actually incurred in attending meetings or representing the Society. However, if a Trustee works over and above normal Trustee's duties, the Society may pay an honorarium for that service if there is a written agreement produced in advance between the Society and the Trustee outlining the work to be undertaken and stating the exact or maximum amount.

The Society depends heavily on the unpaid voluntary work of many of its members and others across the mathematical community, 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 Society appoints representatives on external bodies and committees; these are listed in Annex 3.

The Society has, since 2012, engaged the Electoral Reform Services (ERS) to provide the voting element of the election procedures. At the 2016 election, a total of 614 valid votes were cast, 99% of which were online votes. The turnout among eligible voters was 23%. This represents an approximately 75% increase on the proportion of members voting prior to the implementation of e-voting in 2012.

Council is in the process of reviewing the Charter, Statutes and By-Laws of the Society and has set up a working group for this purpose, under the chairmanship of the General Secretary and including the current President and one Past President. Good progress has been made and it is expected that the membership will see more details in late 2017 or early 2018.

Public benefit

In shaping objectives for the year and planning activities, Council has considered the Charity Commission's guidelines on Public Benefit, including the guidance, 'Public benefit: running a charity' (PB2).

Council holds that the development and extension of mathematical knowledge, expanding humanity's ability to determine and affect the natural, artificial and social worlds, leads overwhelmingly to public benefit, providing for improved health and wealth for nations and individuals and providing tools to understand and sustain the world in which we live. The Society's activities directly correlate with its mission and its objectives, and are focused on: supporting mathematicians in their endeavours through grants for research collaboration; by sharing of knowledge through conferences and publications; by improving the quality of mathematics education for people of all ages; by promoting mathematics and its impact on everyday life to the general public; and by encouraging policies that will benefit mathematics.

Members of the general public are able to participate without charge in all Society activities of a suitable level. Charges for events aimed at professional mathematicians, whether or not members of the Society, are kept low, a policy that is maintained when deciding on criteria for grant awards; publications are sold at prices that keep them competitive in the academic publishing world.

Financial Review

Due to increased income, cost savings and underspends in its activities, the Society achieved a surplus while funding its charitable activities across the mission areas. In the period 2016/17, income exceeded expenditure (excluding gains on investment assets) by £409k.

The gain on Investments was £878k.

During the year, the value of the Society's net assets rose from £15.2m to £16.5m.

Publications net income increased compared with last year, mainly due

to cost savings in organisational restructuring. The Society will continue to seek new opportunities for the expansion of the Society's publishing programme. However, Council is acutely aware of the potential risks to publications income and continues to keep this under review.

The Society remains in a strong position financially and has significant reserves. Given the continuing volatility in the economic climate the Society will keep under review where resources might best be used to further the Society's aims.

The sources of income (see Figure 1, p.29) were:

<i>Publications</i>	67.8%
<i>Investments</i>	15.5%
<i>Conference facilities and rentals</i>	10.2%
<i>Grants and Contracts</i>	2.1%
<i>Members' subscriptions</i>	4.0%
<i>Advertisements in LMS Newsletter</i>	0.3%
<i>Donations</i>	0.1%
<i>Other</i>	-

Figure 2 (p.29) shows expenditure (including governance and support costs) broken down by objective. These were:

<i>Advancing mathematics (e.g. membership, links with the mathematics community, library, prizes)</i>	13.8%
<i>Enabling mathematics (e.g. grants, and training courses)</i>	33.7%
<i>Disseminating mathematics (e.g. publishing, meetings and lectures)</i>	27.0%
<i>Promoting mathematics (e.g. decision/policy makers, education, public, media)</i>	14.9%
<i>Other (e.g. conference facilities costs, managing residential properties, Investment management fees)</i>	10.6%

Income

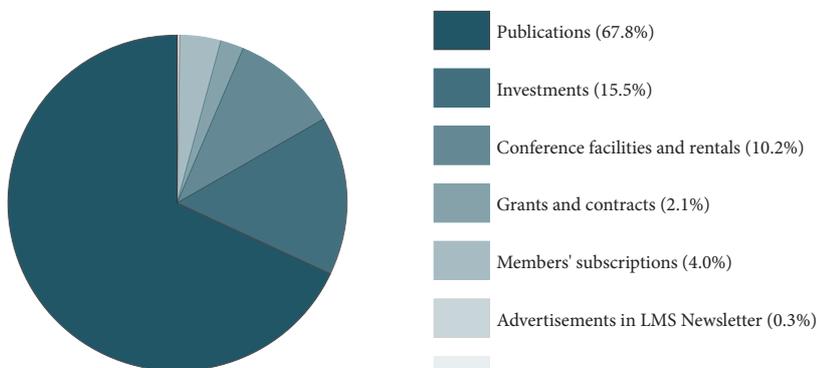


Figure 1

Expenditure

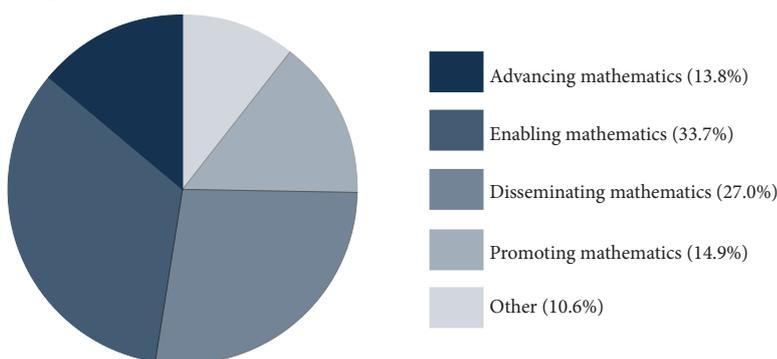


Figure 2

Budgets are set by Council on the recommendation of F&GPC, based on bids from budget holders, in line with the strategic objectives of the Society. Expenditure is monitored quarterly by F&GPC, which is responsible for recommending any variation in the budgets set by Council.

The full audited accounts of the Society, including the accounting policies, are annexed to this Report.

Risk management

Council and F&GPC annually review the Society's Risk Register identifying and quantifying potential risks to the Society and its plans and objectives, and laying out systems and strategies for mitigating those risks. These are addressed under the following headings: Governance and Management, Law and Regulation, Reputation, External and Environment, Financial, and Operational. In certain cases Council has established Designated Funds to set against potential risks (see Reserves below); the risks or commitments that are covered by each fund are reviewed and revised annually.

The Risk Register includes the potential threat to Publications income, which in the worst-case scenario could have a devastating effect on the income which the Society derives from its learned journals. This income contributes to the Society meeting its charitable objects. In the past year, Council has sought information and expert advice in order to be better prepared for possible future changes to the publishing models and income streams. At its last Strategic Retreat, Council considered various financial models derived from certain assumptions regarding the potential future income of the Society. Open Access publishing remains under close consideration.

Reserves

Council reviews its policy on reserves on an annual basis. The unrestricted reserves comprise a General Fund and

other Designated Funds. In addition there are several Restricted Funds. Council has several specific Designated Funds to meet the potential costs of activities, to set against risks relating to the building and to publishing (see above) and to meet grant awards made for projects or activities which span a number of years – these are given at Annex 6. The Society has a broad-ranging programme of activities in support of its strategic objectives as described in this report. While some activities are supported from Restricted Funds, all need continuity of funding. Due to the scale and future risks to academic publishing (a key part of the Society's income), Council continues to operate from the basis that it is prudent to hold a General Fund from which income can be drawn to maintain and extend its charitable activities. The General Fund acts both to provide income for activities not funded from Designated or Restricted Funds, and also as a 'free reserve', providing adequate working capital for the Society to operate effectively and efficiently, and for the pursuit of the Society's objectives as Council may from time to time determine.

The Society holds several Restricted Funds, as described in the audited accounts. These originate from various donations and bequests, and are invested and accounted for on an aggregated 'total return' basis.

Grant Awards and Commitments

Where the Society has contractual or constructive obligations to make grant

payments these amounts are accrued in the accounts in accordance with the requirements of the Statement of Recommended Practice (SORP). Resources expended on grants shown in the Statement of Financial Activity (SoFA), therefore, recognise (within the year the grant is awarded) both liabilities and provisions for grant commitments. Normally grant commitments will be claimed by the end of the financial year, although the claim period may be extended by a further year where the start or end date of the grant so requires.

The Society also awards some grants with conditions for payment (such as delivery of a specific level of service or other specific output). Such commitments are reserved in the Designated Funds, and the grants are only recognised in the SoFA when the recipient of the grant has provided evidence of the specific service or output.

Investments

The Society decided to invest up to 20% of its relevant assets in residential property, as valued at the time of purchase, with the remainder given over to the Society's investment managers. Investment in such residential property would be directly managed by the Society rather than the investment managers. The percentage calculation excludes the value of De Morgan House, though this could be reviewed at any point. Also excluded are any investments made by the investment managers in the property area of asset classes.

1. *Quoted investments*

The current quoted investment strategy for the portfolio, which is managed by investment managers Schroders (Cazenove), has been modelled to achieve RPI + 4% per annum nominal return over five years (a 4% return in real terms after allowing for average service sector wage inflation). Due to the change in the investment climate Council agreed to accept a lower than 4% return in order to reduce risks. Close attention is paid to our investment policy and to the performance of Schroders, with whom we have regular meetings.

The drawdown each year, as agreed by Council, follows the 'Yale model' and consists of 50% of the previous year's drawdown together with 3.5% of 50% of the current value of the portfolio.

Thus the drawdown is determined by a formula and so may be less or greater than the dividends and interest received: it is shown in the SoFA as Investment Income. The growth in the value of the Society's investments (capital plus income) is the sum of this drawdown and the figure shown in the SoFA for Gains on investment assets. The scale of the Society's activities is designed to match this level of return through the annual budgeting process.

The majority of the Society's reserves – both Restricted and Unrestricted – are invested and managed by the Society's investment managers, Schroders (Cazenove). It is Society policy to review on a regular basis the

performance of those professional bodies it employs. Accordingly, Council has an Investment Sub-Committee, which includes six external financial experts, to provide professional advice on the Society's investments and on Schroders' performance. Council has confirmed an investment mandate with discretionary powers with Schroders, based on a 'total return' basis, designed to maximise investment income while maintaining the real value of the investments.

The investment managers have discretion in both the mix and selection of investments in order to meet the growth targets for the portfolio, without exposing to undue risk the Society's reserves, on which its future capacity to maintain its activities depends. The primary long-term target is that the Society's portfolio produces a total return of inflation (RPI) plus 4% pa. The portfolio has exposure to a range of equity, cash, fixed-interest investments and alternative asset classes in both UK and overseas markets, accessed via a single investment in the Schroder Charity Multi-Asset Fund. A summary of the main categories of investments and the geographical split is provided in the notes to the financial statements in accordance with the Charities' SORP. The Schroder Charity Multi-Asset Fund is a common investment fund designed for charities seeking to maintain the real value of their capital over the medium to long term whilst generating a sustainable and reliable distribution level (from income and capital). The portfolio which aims to deliver returns similar to equity markets but with a

lower level of volatility, is well diversified across asset classes. This approach is considered by the trustees to give optimum total return without exposing the Society's investments to undue risk; it is consistent with the principles set out in the Charity Commission guidelines Investment of Charitable Funds, Basic Principles (CC14) and conforms with the Trustee Act 2000.

2. *Residential property investments*

As a safeguard against fluctuating performance of the stock exchange,

the Society expanded its investments portfolio to include residential property and now owns four long lease residential properties in the Central London area, all of which are rented out. The rental derived is shown on the SOFA under 'Investment Income'. The growth in the value of the Society's residential property investment will be shown in the SoFA as Gains on investment assets. The primary long-term target of the Society's residential property is to produce a yield of 4% pa and to increase in capital value by at least the rate of inflation.

De Morgan House

Staff management

The Society currently employs a team of full and part time staff, who are predominantly based within De Morgan House. A list of staff in post during the period is at Annex 4.

The Executive Secretary is responsible for staff-related issues with strategic overview provided by the Society's Personnel Committee.

The remuneration of all staff within the Society is considered in detail by Personnel Committee, and set against the salary scales of the University of London. Any recommendations from the Personnel Committee regarding remuneration are then formally approved by the Trustees (the governing Council). The pay ranges for key management personnel (Senior Management Team) are determined and set by Trustees following analysis of roles and performance by the Personnel Committee. The Personnel Committee will also, as appropriate, compare the Society's pay ranges with those of similar roles in other similar organisations.

De Morgan House

The Society holds a long lease (to 2118) from Bedford Estates on De Morgan House, 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 offices on 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. This last category includes other mathematical and charitable organisations, where there is both a mathematical and financial benefit; discounts are available and some rooms are offered at either reduced rates or at no charge as part of the Society's charitable giving. £38,600 has been granted in charitable giving for LMS rooms in this manner over the last financial year.

In 2016-17 the use of the Conference Facilities for mathematical meetings and as a source of revenue achieved the highest level of income and occupancy since the operation began in 2006 with two new rooms to be added in the coming year. One tenant vacated in late 2016-17 in the letting of office space and a new tenant is currently being sought.

Statement of Trustees' Responsibilities

The trustees are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The law applicable to charities in England and Wales requires the trustees to prepare financial statements for each financial year which give a true and fair view of the state of the affairs of the charity and of the incoming resources and application of resources of the charity for that period. In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently
- observe the methods and principles in the Charities' Statement of Recommended Practice (SORP);
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

For and on behalf of the Council of the London Mathematical Society:

S. Tavaré

.....
Professor Simon Tavaré
(President)

13.10.17

.....
(Date)



Annex 1 - Council, Executive team and Professional Advisers

Members of Council during the period 1 August 2016 to 31 July 2017

President:	Simon Tavaré
Vice-Presidents:	Ken Brown John Greenlees
Treasurer:	Robert Curtis
General Secretary:	Stephen Huggett
Programme Secretary:	Iain Stewart
Publications Secretary:	John Hunton
Education Secretary:	Alice Rogers
Members-at-Large:	June Barrow-Green (Librarian) Alexandre Borovik Tara Brendle Francis Clarke David Evans (until November 2016) David E. Evans (from November 2016) Tony Gardiner Cathy Hobbs Sam Howison Diane Maclagan Beatrice Pelloni (until November 2016) Gwyneth Stallard Alina Vdovina Sarah Zerbes (from November 2016)
In attendance:	Caroline Series (President Designate) (from November 2016) Eugenie Hunsicker (Chair, Women in Mathematics Committee)

Executive Management Team during the period 1 August 2016 to 31 July 2017

Executive Secretary:	Fiona Nixon
Head of Finance and Accounting:	Ephrem Abate
Head of Society Business:	Lindsay Walsh
Head of Conferences & Building:	Dominic Clark

External Advisers

Auditor:	Kingston Smith LLP, Devonshire House, 60 Goswell Road, London, EC1M 7AD
Investment Advisers:	Cazenove/Schroder & Co. Limited, 12 Moorgate, London, EC2R 6DA
Bankers:	National Westminster Bank plc, 208 Piccadilly, London, W1A 2DG
Solicitors:	Bates Wells & Braithwaite, 2-6 Cannon Street, London, EC4M 6YH

Registered Address

London Mathematical Society, De Morgan House, 57-58 Russell Square, London, WC1B 4HS
www.lms.ac.uk

Charity Registration Number

252660



Annex 2 - Committee Membership(as at July 2017)

Membership of Committees as at 31 July 2017

Computer Science Committee: A. Czumaj (Chair), N. Alechina, J. Cooke (British Computer Society – Formal Aspects of Computing Science Specialist Group), J. Davenport (Institute of Mathematics and its Applications (IMA)), P. Jimack, R. Leese, A. Luqmani (Engineering and Physical Sciences Research Council (EPSRC) observer), F. Moller (Academy of Computing), J. Shawe-Taylor, I. Stewart.

Development Committee: Treasurer (Chair), President, Vice-President K. Brown, Vice-President J. Greenless, General Secretary, President Designate, Executive Secretary.

Education Committee: Education Secretary (Chair), Vice-President K. Brown, J. Anderson, F. Berkshire, R. Emanuel, A. Gardiner, K. Golden (Heads of Departments of Mathematical Sciences (HoDoMS)), K. Houston, V. Neale, P. Ransom, J. White.

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

International Affairs Committee: President (Chair), Programme Secretary, Publications Secretary, C. Budd (UK representative to International Commission on Mathematical Instruction (ICMI)), C. Campbell (Delegate of President of the Edinburgh Mathematical Society (EdMS)), P. Glaister (IMA), S. Huggett, D. Mond, S. Schroll, J. Toland (International Mathematical Union (IMU) Executive), N. Walkey (Royal Statistical Society (RSS)).

Investment Sub-Committee: Treasurer (Chair), All Members of Finance and General Purposes Committee, R. Bogni, J. Dodd, G. Keniston-Cooper, S. Mossaheb.

Library Committee: Librarian (Chair), Publications Secretary, LMS Archivist, C. Hollings, N. Kavalleris.

Nominating Committee: J. Toland (Chair), S. Blackburn, T. Brendle (Council), R. Heath-Brown, M. Mazzocco, S. Rees, U. Tillmann, A. Wilkie.

Personnel Committee: Vice-President K. Brown (Chair), Publications Secretary, D. Applebaum, S. Howison, G. Stallard, Executive Secretary.

Prizes Committee: President (Chair), J. Barrow-Green, D. Higham, J. Keating, M. Liebeck, C. Mouhot, J. Toland, U. Tillmann, S. Waters.

Programme Committee: Programme Secretary (Chair), F. Clarke (Deputy Programme Secretary), G. Derks, D. Evans, D. Maclagan, E. Mansfield, G. Stallard, A. Vdovina.

Publications Committee: Publications Secretary (J. Hunton), Vice-President (J. Greenless), F. Clarke, A. Corti, C. Hobbs, P. Jorgensen, M. Jubb, T. Sanders, S. Sierra, S. Taylor, R. Thomas, Treasurer (in attendance ex officio).

Research Meetings Committee: C. Parker (Chair), Vice-President J. Greenless, S. Olhede, N. Peake, D. Schuetz (Durham representative), M. Speight, S. Velani, S. Whitehouse, N. Woodhouse (Clay Mathematics Institute (CMI) observer).

Research Policy Committee: Vice-President K. Brown (Chair), Vice-President J. Greenless, P. Clarkson (HoDoMs), J. Giansiracusa, S. Howison, O. Jensen, C. Molina-Paris, S. Olhede, M. Singer, R. Thomas.

Women in Mathematics Committee: E. Hunsicker (Co-Chair), Vice-President J. Greenlees (Co-Chair), S. Beg (Operational Research Society (ORS)), T. Brendle (Edinburgh Mathematical Society (EdMS)), R. Cotton-Barratt, A. Davies, C. Hobbs, L. Rodgers (RSS), D. Maclagan, M. Mazzocco (IMA), J. McKee, S. Pumpluen, C. Smith, A. Taormina (European Women in Mathematics (EWM)).

Sub-Groups, Ad-hoc Committees and LMS Appointments as at 31 July 2017

Publications Nominating Group: Publications Secretary (Chair,) K. Ball, G. Brown, M. Gross, P. Jorgensen, R. Kessar, M. Pollicott, A. J. Scholl, U. Tillmann, C. Tretter.

Journals Editors Group: Publications Secretary (Convenor), Editors for the *Bulletin*, *Journal*, *Proceedings* and *Transactions* (BJPT), 3 members of the BJPT Advisory Board, Obituaries Editor of the *Bulletin*, Managing Editor for the *Journal of Topology*, Member of the *Journal of Topology* Editorial Board, Editorial Manager.

Good Practice Scheme Steering Group: P. Clarkson (Chair), A. Davies, P. Davies, Vice-President J. Greenlees (Co-Chair, Women in Mathematics Committee), E. Hunsicker (Co-Chair, Women in Mathematics Committee) J. Levesley (HoDoMS), G. Stallard, A. Taormina.

LMS-IMA Joint Working Group (LMS members): President (Chair), Vice-President J. Greenlees, Executive Secretary.

LMS-IMA Crichton Medal Committee 2017 (LMS Members): President, S. Howison, E. Rees.

Mentoring African Research in Mathematics (MARM) Board: J. Ball (Chair), H. Clemens (IMU), S. Huggett (LMS), F. Neumann (LMS), W. Ogana (AMMSI), Executive Secretary.

Newsletter Editorial Board: I. Moffatt (Editor-in-Chief), J. Barrow-Green, T. Brzezinski, L. Di Vizio, J. Fraser, J. Grbic, T. Hudson, A. Johansen, B. Lionheart, M. McCartney, K. Meeks, V. Neale, S. Oakes, A. Wade, General Secretary.

Joint Promotion of Mathematics Steering Group: LMS Vice-President J. Greenlees (Chair), LMS Education Secretary, K. Houston (LMS), N. Steele (IMA), A. Stevens (IMA), LMS Head of Society Business.

Standing Orders Review Group: General Secretary (Chair), President, J. Barrow-Green, A. Borovik, J. Toland, Executive Secretary, President Designate (in attendance).

Website Working Group: Council Webmaster (Chair), Vice-President J. Greenlees, J. Barrow-Green, A. Borovik, P. Cameron, Executive Secretary.

Council Diarist: T. Brendle.

Council Webmaster: S. Huggett.

LMS/EMS Newsletter Correspondent: D. Chillingworth.

Scrutineers: C. Lance, R. Sharp.



Annex 3 - External Representatives (as at July 2017)

Representatives on external committees and boards as at 31 July 2017

Athena Forum: Chair, Women in Mathematics Committee.

British Science Association Mathematics Section: Education Secretary.

British Mathematical Colloquium Scientific Committee: J. Hunton, S. Rees, P. Rippon.

Council for the Mathematical Sciences Board: President, Vice-President K. Brown, Vice-President J. Greenlees, Executive Secretary (any 3 of).

Council for the Mathematical Sciences-Engineering and Physical Sciences Research Council (CMS-EP SRC) Liaison Sub-Group: President, Vice-President K. Brown, Vice-President J. Greenlees, Executive Secretary (any 3 of).

European Mathematical Society Council: President, Programme Secretary, B. Pelloni, C. Roney-Dougal.

Heads of Departments of Mathematical Sciences Committee: General Secretary.

International Centre for Mathematical Sciences (ICMS) Board: M. Kim.

International Centre for Mathematical Sciences (ICMS) Programme Committee: D. Rand, U. Tillmann.

International Commission on Mathematical Instruction (ICMI) UK representative: C. Budd.

Isaac Newton Institute (INI) Management Committee: U. Tillmann.

Isaac Newton Institute (INI) Scientific Steering Committee: V. Isham, M. Harris.

Isaac Newton Institute (INI) Correspondent: B. Pelloni.

Joint Mathematical Council (JMC): Education Secretary.

Parliamentary and Scientific Committee: President, Vice-President J. Greenlees, Executive Secretary.

STEMM Disability Advisory Committee: Chair, Women in Mathematics Committee.



Annex 4 - Staff

Staff in post in the period 1 August 2016 to 31 July 2017

Executive Secretary's Office

Executive Secretary
PA to the Executive Secretary
Head of Finance and Accounting
Accounts Assistant
Administrative Editor, LMS Newsletter

F. Nixon
C. Chessis (until March 2017)
E. Abate
V. Kolesnykova ◊
S. Oakes ◊*

Publications

Publications Development Manager
Managing Editor
Publications and Communications Administrator

S. Abbott (from November 2016)
O. Törnkvist
K. Wright (until March 2017)
George Ross (from May 2017)

Society Business

Head of Society Business
Membership and Engagement Officer
Council and Research Officer
Society Communications Officer
Education and Research Officer
Society Business Officer
Grants and Membership Administrator

L. Walsh
E. Fisher
K. Henderson
J. Johnston
D. Turton (until March 2017)
K. Wright (from March 2017)
A. Byrne

Conferences and Building Group

Head of Conferences and Building
Receptionist and Facilities Coordinator
Facilities Assistant

D. Clark
Z. Edah-Tally
A. Waidson ◊

◊ Part-time posts * not based at De Morgan House



Annex 5 - Grant Schemes

General policy on grant-making

The grant schemes are funded from the Society's resources received from its endowments, investments and publishing activities and are one of the primary mechanisms through which the Society achieves its central purpose, namely to 'promote and extend mathematical knowledge'. The principles governing its grant-giving are:

- As a charity the Society is able, and wishes, to take advantage of different opportunities and to work within a different regulatory framework from other funding bodies, such as the Engineering and Physical Sciences Research Council (EPSRC). Its grant schemes are focused accordingly.
- The Society's funds are under pressure, and it is not able to make awards as often or as fully as it would like.
- The Society does not normally meet the full cost of an activity. Rather it will aim to give added value to an event largely funded by other means, or to bridge the gap between cost and the resources that might reasonably be made available by a university department.
- The Society does not pay Full Economic Costs.
- The Society does not make grants to cover departmental overheads, secretarial costs, etc., which could be seen as part of normal departmental provision.
- The Society does not normally make grants to cover room hire, although consideration will be given to cover room hire charges at De Morgan House.
- Applicants are expected to make economical travel arrangements where possible.
- The Society expects that organisers of conferences and activities who are seeking grants from the Society will invite both male and female speakers (or explain why this is not appropriate or possible) and give consideration to the provision of mechanisms to enable participation by people with children or family responsibilities, in line with the Society's policy on Women in Mathematics.
- The Society will not allow its limits for individual grant schemes to be exceeded by artificially sub-dividing an application into a number of separate requests under different headings.
- The Society considers it to be the responsibility of the institution to which the grant is paid to check receipts in accordance with its normal financial procedures.

The Society's committees that assess applications for grants are made up of mathematicians with a wide spread of research interests. Under most schemes, proposals are judged by the committees themselves, although they may seek advice. Each committee judges each application on its merits.

Any mathematician working in the UK is eligible to apply for a grant but for some schemes if they are not a member of the Society, then the application must be countersigned by a member who is prepared to support the application.

Summary of grant and training schemes

Conference Grants (Scheme 1)

Grants are made to the organisers of conferences to be held in the UK. Priority is given to the support of meetings where an LMS grant can be expected to make a significant contribution to the viability and success of the meeting. Support of larger meetings of high quality is not ruled out, but for such meetings an LMS grant will normally cover only a modest part of the total cost.

Celebrating New Appointments (Scheme 1)

Grants are made to provide partial support for meetings held in the UK to celebrate the appointment of a new lecturer in mathematics at a UK institution. The aim of the grant award is to embed the new lecturer in their home institution and the local mathematical community, and to allow the new appointment to create useful and lasting relationships with the local mathematical community. It is expected that the new appointment themselves will present a lecture at the meeting.

Following the start of the 2017-18 financial year, the Celebrating New Appointments schemes will be under the remit of the newly formed Early Career Research Committee, and will be known as 'Celebrating New Appointments (Scheme 9)'.

Visitors to the UK (Scheme 2)

The aim of the Scheme is to provide grants to mathematicians based within the UK to partially support visitors to the UK; the visitors are expected to give lectures in at least three separate institutions.

Support of Joint Research Groups (Scheme 3)

The Scheme is to provide support for groups of mathematicians, working in at least three different locations (of which at least two must be in the UK), who have a common research interest and who wish to engage in collaborative activities. It is expected that four meetings will be held in the academic year (or an equivalent level of activity).

Research in Pairs (Scheme 4)

The Scheme is to provide small grants to mathematicians within the UK to help support visits for collaborative research.

International Short Visits (Scheme 5)

The Scheme is to provide grants to mathematicians within the UK to support visits for collaborative research, either to or from a country in which mathematics is considered to be in a state of development.

Countries considered to be eligible for Scheme 5 funding are those contained within (but not exclusively limited to) the International Mathematical Union Commission for Developing Countries (IMU CDC) Definition for Developing Countries - mathunion.org/cdc/grants/cdc-definition-for-developing-countries/.

Computer Science Small Grants (Scheme 7)

The aim of the Scheme is to provide small grants to researchers based within the UK to help support visits for collaborative research at the interface of Mathematics and Computer Science.

British Colloquium for Theoretical Computer Science

The Society supports the annual meeting which provides a forum in which researchers in theoretical computer science can meet, present research findings, and discuss developments in the field. Specifically, the Society funds

the costs of a speaker who is ordinarily from overseas and who is introduced as the 'LMS Keynote Lecturer in Discrete Mathematics'.

LMS Caring Supplementary Grants

The Society recognises that parents and carers are sometimes prevented from attending conferences and meetings and making research visits because there is no provision for the extra costs incurred in caring for dependants. It is the LMS' view that institutions should make provision for caring costs but, while this is not largely the case, the Society is willing to make a supplementary grant as a contribution to the costs.

LMS Grace Chisholm Young Fellowship

These fellowships, named after Grace Chisholm Young, aim to provide some support when a mathematical career is interrupted by family responsibilities, relocation of partner, or other similar circumstance, making possible some continuous mathematical activity and so enabling the fellow to be in a position to apply for posts when circumstances allow. Each holder will be based in a specific Mathematics Department in a University or Research Institute in the UK; the host is expected to provide an email address, use of library and IT facilities and access to research literature. The normal duration of a fellowship is one year.

Small Educational Grants

These grants support such activities as popular lectures, exhibitions, masterclasses, mathematical competitions, etc., that help to encourage joint mathematical ventures between higher education institutions and schools, or the development of projects that would improve the public image of mathematics.

LMS Workshop-Symposia

The Society supports research workshops, which may be held anywhere in the UK and are an opportunity for a small group of active researchers to work together for a concentrated period on a specialised topic. Applications to support the development of research in an area not ready for a larger-scale application are welcomed; applications for partial support for larger events will only exceptionally be supported.

Mentoring African Research in Mathematics (MARM)

The aim of the programme is to enable all mathematicians in Africa to pursue academic careers of the highest standard. The Society believes that enhancing and developing academic research and research institutions in Africa will help ensure that pursuing world-class mathematical careers within Africa will be both achievable and a more attractive option than moving permanently to the developed world. Over time, the strengthening of the mathematical community within Africa will benefit not only the African community but mathematics as a whole. Grants are awarded for two-year academic partnerships between European and African institutions for activities including exchange visits, lectures and workshops, conferences, PhD supervision and mentoring support.

Support for Mathematics in Africa

The Society awards grants to contribute to the travel costs of postgraduates attending conferences organised or supported by the African Mathematics Millennium Science Initiative (AMMSI).

Support for Young Mathematicians and Early Career Researchers

LMS Prospects in Mathematics

The Society provides support for this annual event, primarily for final year undergraduates and Masters' Students who are considering applying for a PhD after they have completed their studies to discuss current research and potential career opportunities.

Undergraduate Research Bursaries in Mathematics

The Scheme aims to give experience of research to undergraduates with research potential to encourage them to consider a career in scientific research. Grants are awarded for a six-to-eight week summer research project undertaken with the guidance of a research supervisor.

Undergraduate Summer Schools

The goal of the Summer Schools is to introduce exceptional pre-final year undergraduates to research mathematics and, in particular, to make them think seriously about an academic career at this stage. The Summer Schools are a combination of short lecture courses with problem-solving sessions and colloquium style talks. Talks are given by lecturers mostly (though not exclusively) from the UK, including high-profile speakers. The Schools are for around 50 students and involve 10 lecturers. The event is hosted by a UK university for a period of 10 days in summer.

LMS/Clay Mathematics Institute (CMI)/Heilbronn Research Schools Programme

The purpose of the Research Schools is to provide training for young researchers in a core area of mathematics. Students and post-docs can meet a number of leading experts in the topic as well as other young researchers working in related areas.

The series aims at the highest international standing of these research schools, allowing for support of both international lecturers and participants. The main criteria for funding are the topicality and the mathematical significance of the course material, the general alignment with the mission of the LMS and the Clay Mathematics Institute (CMI) and the likely demand for places nationally and internationally, and the standing of the proposed lecturers in the international mathematical community.

Postgraduate Research Conferences (Scheme 8)

The aim of this Scheme is to support postgraduate research conferences, organised by and for postgraduate research students, to be held in the UK.

Following the start of the 2017-18 financial year, the Postgraduate Research Conference scheme will be under the remit of the newly formed Early Career Research Committee.

Young Researchers in Mathematics Conference

The Society provides a grant for the Young Researchers in Mathematics Committee to help support the Young Researchers in Mathematics Conference, a mathematics conference specifically targeting early career researchers.

LMS 150th Anniversary Postdoctoral Mobility Grants

The purpose of the grants is to support a period of study and research in mathematics between three and six months at one or more institutions other than the holder's home institution. The grants are intended to support promising researchers during the transitional period between having submitted their thesis and the start of their first postdoctoral employment.

Mathematics Teacher Continuing Professional Development (CPD) Grants

The Scheme is to provide opportunities for mathematics teachers to attend training which is specifically mathematical. Any application for a grant under this scheme must be made by a teacher of mathematics or Initial Teacher Education provider based in the UK. The grants are open to teachers of mathematics from primary school to A-Level or equivalent.

The grants are to support teacher attendance at one or two day conferences/events organised by professional mathematical organisations. The grants are also to assist providers of professional development to run conferences

and courses that allow participants to further their professional development. The grants can also cover the costs of external trainers in schools or educational institutions.

Girls in Mathematics Events

Events are aimed at schoolgirls, up to and including A-levels or equivalent, with mathematics as a main focus. Individuals or groups are able to express interest in organising and hosting an event.

Women in Mathematics Events

These events are aimed at academic mathematicians (from at least postgraduate level and up and may include undergraduates). The events are intended to help early career women mathematicians when considering the next stages in their careers and typically have included mathematical talks combined with panel discussions, social opportunities and networking. Individuals or groups are able to express interest in organising and hosting an event.



Annex 6 - Reserve Funds

For the purposes of our financial planning we choose to define Relevant Funds to consist of Quoted Investments + Residential Properties + Cash at bank. There is a need to rebuild the investment portfolio and guarantee a real return, hence the aim of inflation + 4% as primary long term target. Over the last ten years the value of the portfolio has reduced by approximately 25% in real terms. Council considers that the present level of the Relevant Funds should (if possible) be increased to at least £15m by 2020. At present Residential Properties are making a return of 4% through rent, and more than keeping pace within inflation.

The Society normally maintains £600k free reserve (operating reserve) cash at bank to ensure that there is enough working capital to stabilise the Society's finances by providing contingency against unexpected events, as well as to handle losses in income and large unbudgeted expenses.

General Fund

The General Fund is to provide for the general operation of the Society including its charitable activities not funded from Designated or Restricted Funds. Within the Society's reserves, the General Fund is deemed an expendable reserve to be used in pursuit of the Society's objectives as Council may from time to time determine. At present the fund exists to assure the availability of resources for the Society's grant schemes and other continuing charitable activities in future years. This manages the risk to the Society's ability to generate income to provide for such activities and offers a contingency against threats such as open access.

General Fund	£12,450,252
--------------	--------------------

Building & Development Reserve Fund

This reserve, originally built up for the Society to purchase or rent its own property was utilised in part in the purchase of a leasehold property. This reserve fund exists in the case of disaster recovery should any major incident affect the physical aspects of the Society's offices. The agreed purposes and recommended levels as from the next financial year would be:

Rehousing and re-establishing the administration for one year were DMH to be lost through fire etc.	£195,000
Costs of venue hire for all LMS meetings held in DMH	£15,000
Costs of re-establishing the Society's work	£13,000
Dilapidations, were the Society to leave DMH	£23,000
External redecoration	£34,000
Internal redecoration	£45,000
Major modifications and developments, unexpected repairs/replacement	£275,000
	£600,000

Publication Reserve Fund

This fund is to provide a reserve to meet the costs of producing and publishing the Society's LMS periodicals should the Society's income from these periodicals be unable to cover such commitments. It is intended that the reserve will be reviewed as circumstances arise each year. The agreed purposes and recommended levels are:

Repaying subscriptions income if the Society ceased to trade, and other commitments	£1,725,000
Buffer against over/under shooting the budget	£175,000
New ventures. Based on the costs of launching and producing a new journal, but its failing to gain subscriptions	£825,000
Insurance against breach of copyright and libel (including legal fees)	£275,000
	£3,000,000

Grants Payable Reserve Fund

This fund is set aside for grant awards to mathematical projects or activities which span a number of years. Such grants are reviewed annually and are paid once the recipient of the grant has provided a progress report with satisfactory performance of the project.

Grants awarded and approved by Council to be paid in future accounting periods	£65,000
--	----------------

Undergraduate Research Bursaries Fund

This fund is set aside for grant awards to undergraduates with research potential. The fund has been set up for 3 years starting from the 2016/17 financial year	£68,545
--	----------------

Special Activities Reserve Fund

Gifts and bequests received by the Society to be used for diverse activities in support of the Society's objectives	£32,199
---	----------------



Annex 7 - Auditor's Report

Opinion

We have audited the financial statements of London Mathematical Society for the year ended 31 July 2017 which comprise the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 'The Financial Reporting Standard Applicable in the UK and Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 July 2017, and of its incoming resources and application of resources, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

This report is made solely to the charity's trustees, as a body, in accordance with Chapter 3 of Part 8 of the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to any party other than the charity and charity's trustees as a body, for our audit work, for this report, or for the opinion we have formed.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs(UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the audit of financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the trustees' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the trustees have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the charity's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Other information

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge

obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- the information given in the Trustees' Annual Report is inconsistent in any material respect with the financial statements; or
- the charity has not kept adequate accounting records; or
- the financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we required for our audit.

Responsibilities of trustees

As explained more fully in the trustees' responsibilities statement, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the charity or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (UK) we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the charity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the trustees.
- Conclude on the appropriateness of the trustees' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the charity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the charity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

N.F. Statutory Auditor

Neil Finlayson, Statutory auditor

Date: *2/11/2017*

Kingston Smith

Devonshire House
60 Goswell Road
London
EC1M 7AD

Kingston Smith LLP is eligible to act as auditor in terms of Section 1212 of the Companies Act 2006.



Annex 8 - Statement of Financial Activities

Page	
50	Statement of financial activities
51	Balance sheet
52	Cash flow statement
53	Accounting policies
59	Investment income
60	Income from other trading activities
60	Costs of raising funds
60	Charitable activities: Advancing the interests of mathematics
61	Charitable activities: Enabling mathematicians to undertake research and collaboration
62	Charitable activities: Disseminating mathematical knowledge - Publications
63	Charitable activities: Disseminating mathematical knowledge - Society lectures and meetings
63	Charitable activities: Promoting mathematical research and its benefits
64	Governance and other committee costs
64	Analysis of general support and governance costs
65	Allocation of support and governance costs by activity
66	Employment costs
67	Fixed asset investments
68	Tangible fixed assets
68	Debtors
68	Creditors and deferred income
69	Restricted funds
70	Unrestricted funds
71	Analysis of net assets between funds
71	Grants and contracts management account
72	Gains and losses on investment assets
72	Transactions with Trustees and connected persons
73	Comparison figures of each fund (2015-16 financial statements)

STATEMENT OF FINANCIAL ACTIVITIES
For the year ended 31st July 2017

	Notes	Unrestricted General Funds £	Designated Funds £	Restricted Funds £	2017 Total Funds £	2016 Total Funds £
Income and endowments:						
<i>Donations and legacies</i>		2,551	-	50	2,601	102,329
<i>Income from charitable activities:</i>						
Membership subscriptions		118,024	-	-	118,024	106,760
Publications – LMS Periodicals	7a	1,396,910	-	-	1,396,910	1,480,482
Publications – Ventures and Royalties	7c,d	259,077	358,228	-	617,305	662,324
Grants and contracts	21	51,894	-	10,000	61,894	87,184
<i>Total income from charitable activities</i>		1,825,905	358,228	10,000	2,194,133	2,336,750
<i>Income from other trading activities</i>	3	310,123	-	-	310,123	254,507
<i>Income from Investments</i>	2	453,135	160	6,861	460,156	436,025
<i>Other income</i>		3,357	-	-	3,357	239
Total Income		2,595,071	358,388	16,911	2,970,370	3,129,850
Expenditure:						
<i>Costs of raising funds</i>	4	269,402	-	-	269,402	218,828
<i>Expenditure on charitable activities:</i>						
Advancing the interests of mathematics	5	342,048	-	12,000	354,048	389,961
Enabling mathematicians to undertake research and collaboration	6	754,734	89,455	20,000	864,189	886,977
Disseminating mathematical knowledge:						
- Costs of publications	7b,c,d	311,963	243,561	-	555,524	895,131
- Society lectures and meetings	8	135,777	-	-	135,777	133,131
Promoting mathematical research and its benefits	9	382,684	-	-	382,684	492,260
<i>Total expenditure on charitable activities</i>		1,927,206	333,016	32,000	2,292,222	2,797,460
Total expenditure		2,196,608	333,016	32,000	2,561,624	3,016,288
Net income/(expenditure) before gains and losses on investment		398,463	25,372	(15,089)	408,746	113,562
Net gains on investment assets	22	863,957	-	14,162	878,119	296,888
Net Income /(expenditure) for the year		1,262,420	25,372	(927)	1,286,865	410,450
Transfers between funds	18,19	94,167	(114,667)	20,500	-	-
Actuarial gain (losses) on defined benefit pension schemes	17	13,418	-	-	13,418	(93,284)
Net movement in funds for the year		1,370,005	(89,295)	19,573	1,300,283	317,166
Reconciliation of funds:						
Total funds brought forward		11,080,247	3,855,039	257,663	15,192,949	14,875,783
Fund balances carried forward		12,450,252	3,765,744	277,236	16,493,232	15,192,949

The comparative figures for each fund are shown in the notes to the accounts, (see note 24).

BALANCE SHEET
as at 31st July 2017

	Notes	2017		2016	
		£	£	£	£
Fixed Assets					
Fixed Asset Investments					
Quoted Investment	14a	11,064,751		10,331,929	
Residential Property	14b	<u>3,043,950</u>		<u>2,323,450</u>	
			14,108,701		12,655,379
Tangible Fixed Assets					
Leasehold Property	15	1,344,521		1,389,338	
Fixtures, Fittings and Equipment	15	<u>12,991</u>		<u>12,393</u>	
			<u>1,357,512</u>		<u>1,401,731</u>
			15,466,213		14,057,110
Current Assets					
Medals in stock		3,061		3,061	
Debtors	16	236,729		333,048	
Cash at bank and in hand		1,190,581		1,330,651	
Bank Deposits		<u>433,770</u>		<u>433,228</u>	
		1,864,141		2,099,988	
Liabilities:					
Creditors: Amounts falling due within one year					
Creditors	17	661,726		602,667	
Deferred Income	17	<u>2,196</u>		<u>174,864</u>	
		663,922		777,531	
Net current assets			1,200,219		1,322,457
Creditors: Amounts falling due after more than one year					
Provision of Pension Liability	17		(173,200)		(186,618)
Total Net Assets			<u><u>16,493,232</u></u>		<u><u>15,192,949</u></u>
Represented by:					
General Funds	19	12,450,252		11,080,247	
Designated Funds	19	3,765,744		3,855,039	
Restricted Funds	18	<u>277,236</u>		<u>257,663</u>	
			<u><u>16,493,232</u></u>		<u><u>15,192,949</u></u>

Approved on behalf of Council and authorised for issue on:


.....
Professor Robert Curtis
(Treasurer)

13/10/17
.....
Date

The notes on pages 52 to 73 form part of these financial statements

Cash Flow Statement

For the year ended 31 July 2017

	2017		2016	
	£	£	£	£
Cash flow from operating activities				
Net movements in funds	1,300,283		£317,166	
Deduct gains on investments (note 22)	(878,119)		(296,888)	
Add back re-invested gains (note 22)	58,215		80,518	
Add back investment management fees (note 4)	53,114		52,194	
Add back VAT on investment management fees	2,121		2,433	
Deduct investment income (note 2)	(460,156)		(436,025)	
Add back depreciation charge (note 15)	50,939		51,081	
(Increase)/decrease in debtors (note 16)	96,319		(70,696)	
(Decrease)/Increase in creditors (note 17)	(127,027)		47,889	
Net cash (used in)/ provided by operating activities		95,689		(252,328)
Cash flow from Investing activities				
Purchase of tangible fixed assets (note 15)	(6,720)		(10,333)	
Purchase of fixed asset investments (note 14)	(703,301)		(172,577)	
Proceeds on disposal of fixed assets investments (note 14)	1,894		612,741	
Investment income (note 2)	460,156		436,025	
Net cash provided /(used in) by investing activities		(247,971)		865,856
Change in cash and cash equivalent in the year		(152,282)		613,528
Cash and cash equivalent at the beginning of the year				
Cash in bank and deposit		1,763,879		1,082,483
Cash held in investments		12,754		£80,622
		1,776,633		1,163,105
Cash and cash equivalent at the end of the year				
Cash in bank and deposit		1,624,351		1,763,879
Cash held in investments		-		12,754
		1,624,351		1,776,633

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 31st July 2017

1. Accounting Policies

The accounting policies adopted by the Society are as detailed below:

a) **Basis of accounting**

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2015) – (Charities SORP (FRS 102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

The London Mathematical Society meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The trustees have assessed whether the use of going concern basis is appropriate and have considered possible events or conditions that might cast significant doubt on the ability of the Society to continue as a going concern. The trustees have made this assessment for a period of at least one year from the date of approval of the financial statements. In particular the trustees have considered the Society's forecasts and projections and have taken account of pressures on membership subscription, publication and investment income. After making inquiries the trustees have considered that there is a reasonable expectation that the Society has adequate resources to continue in operational existence for the foreseeable future. The Society therefore continues to adopt the going concern basis in preparing its financial statements.

The financial statements are prepared in sterling, which is the functional currency of the company. Monetary amounts in these financial statements are rounded to the nearest pound.

An explanation and reconciliation of how the transition has affected the comparative balances is provided in the notes to the financial statements.

b) **Judgements and key sources of estimation uncertainty**

In the application of the Society's accounting policies, the trustees are required to make judgement, estimates and assumptions about the carrying amount of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from the estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised where the revision affects only that period, or in the period of the revision and future periods where the revision affects both current and future periods.

The most significant estimates and assumptions which affect the carrying amount of assets and liabilities in the accounts relate to:

- Useful Economic Lives- The annual depreciation charge for property, fixture, fittings and equipment is sensitive to change in the estimated useful economic lives and residual value of assets. These are reassessed annually and amended where necessary to reflect current circumstances.
- Defined benefit scheme pension liability can be estimated based on recommended modeller provided by USS. For more details, see note 1m.

c) **Financial Instruments**

The Society has elected to apply the provision of Section 11 'Basic Financial Instrument's and Section 12 'Other Financial Instruments Issues' of FRS 102 to all of its financial instruments. Financial Instruments are recognised in the Society's balance sheet when the Society becomes party to the contractual provisions of the instrument. Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

With the exceptions of prepayments and deferred income all other debtor and creditor balances are considered to be basic financial instruments under FRS 102. (See notes 16 and 17 for details)

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

1. Accounting Policies (continued)

d) Members' Subscriptions

Subscription income from members is recognised in the year to which it relates. No account is taken of members' subscriptions in arrears at the balance sheet date. No time apportionment of subscriptions is calculated as members who join or leave during the year are not entitled to partial payments or refunds.

e) Donations

Cash donations are credited to the General Fund in the year of receipt but donations in kind are not recognised in these financial statements.

f) Fixed Assets

Depreciation is provided on all tangible fixed assets at rates calculated to write off, on a straight-line basis, the cost less estimated residual value over their expected useful lives as follows:

Leasehold Property	Over 50 years
Fixtures, Fittings and Office Equipment	20%
Computer equipment	33.33%

The Society operates a policy of capitalising assets whose unit cost exceeds £1,000, with expenditure below this level written off as incurred.

g) Investments

The Society may invest up to 20% of its relevant assets in residential property, as valued at the time of purchase, with the remainder given over to the Society's investment managers. Investment in such residential property will be directly managed by the Society rather than by the investment managers. The percentage calculation excludes the value of De Morgan House, though this could be reviewed at any point. Also excluded are any investments made by the investment managers in the property area of asset classes.

• **Quoted investments**

All quoted investments are valued at their market value at the balance sheet date, giving rise to unrealised gains and losses which are included in the Statement of Financial Activities. The market value is determined as follows:

- i) Listed securities are valued at mid-market value ruling at the balance sheet date;
- ii) Unit trust and managed fund investments are stated at the mid-point of the latest prices quoted by the investment managers immediately prior to the balance sheet date;
- iii) Investments held in foreign currencies have been valued on the relevant basis and translated into sterling at the rate ruling at the balance sheet date.

The portfolio is invested in a range of equity, cash and fixed-interest investments in both UK and overseas markets. The key objective of the Society's portfolio is to produce a real return (capital growth) of at least 4% pa, and to provide an investment income determined by 'total return policy' of 3.5% pa (based on Yale model).

The Society in its total returns policy treats all cash withdrawals from the investment portfolio as investment income. This is analysed in the notes to the financial statements as investment income split between the various categories of investment based on information provided by the investment managers and the proportion of total return drawn down relating to gains. The balance of unrealised gains and losses on revaluation of investments, and realised gains and losses arising on disposal of investments are separately identified in the notes to the Financial Statements and on the SoFA.

• **Residential property investment**

As a safeguard against possible poor performance of the stock exchange, the Society expanded its investments portfolio to include residential property and owns three long lease residential properties in the Central London area, all of which are rented out. The rental derived is shown on the SoFA under '*Investment Income*'. The growth in the value of the Society's residential property investment will be shown in the SoFA as *Gains on investment assets*. The primary long-term target of the Society's residential property is to produce a yield of 4% pa and to increase in capital value by at least the rate of inflation.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

1. Accounting Policies (continued)

h) Publications

- i) Income from the Society's contracts with printers for the production, distribution and sales of its journals [periodicals] is determined as the best estimate for that proportion of the income (i.e. subscriptions less costs of production, distribution, sales and commission) relating to the number of issues published before the Balance Sheet date. (Proceedings 7 issues out of 12, Journal and Bulletin 3 issues out of 6; and from 2017 Journal of Topology 2 issues out of 4.) Income received in 2016/17 for the 2016 volume of the Journal of Topology is recorded on a cash basis. A proportionate adjustment has been made for unexpired subscriptions received direct by the Society relevant to subsequent publications. No account has been taken of costs incurred or sales proceeds received in respect of publication after the Balance Sheet date.
- ii) Income or loss (i.e. received publishing fees less costs of production, distribution and commission) from the Transactions (which has no issues and is published uniformly throughout the year) is determined as that portion of the income or loss which corresponds to the part of the year (7 months of 12) which falls before the Balance Sheet date.
- iii) From 2017, 60% of the budgeted income from each annual volume of *Compositio Mathematica* (i.e. subscriptions less costs of production, distribution, sales and commission) is received before the Balance Sheet date; the remaining balance is received after the Balance Sheet Date. An appropriate portion (corresponding to 5 issues of 12) of the income from the 2016 volume is being brought forward into 2016/17 as deferred income.
- iv) Publications income from LMS periodicals is recorded based on an estimated accrued basis; all other publications income is treated on a cash basis which is considered to be the most appropriate and prudent approach given the information available.
- v) No valuation for accounting purposes is taken of any stocks of publications unsold at the Balance Sheet date.
- vi) The cost of publishing rights and subscribers' lists are written off in the year of acquisition.
- vii) Royalties are taken into the Statement of Financial Activities as declared due by the relevant printers and publishers.

i) Joint Ventures

The results of joint ventures are included in the accounts up to the year- end indicated.

j) Grants and Contracts

The Society has been awarded contracts and grants for some of its activities. These comprise: a contribution from IMU to support mentoring activities for mathematicians in Africa; shared costs of some activities with sister societies. The income and expenditure relating these are handled through this Fund.

k) Recognition of grant liabilities

Where the Society has contractual or constructive obligations to make grant payments these amounts are accrued in the accounts in accordance with the requirements of the SORP. The liability will be recognised within the year the grant is awarded. The unpaid grant commitments should normally be claimed by the end of the following financial year. However, the claim period may need to be extended for a further year (award year + 2) if the grant cannot be claimed by the end of the year following the award due to constraints on the start or end date of a grant, or due to other circumstances outside the control of the Society.

The Society also awards some grants with conditions for payment being a specific level of service or specific output to be delivered. Such grant awards (commitments) will be reserved in the Designated funds, and the grants are only recognised in the SoFA once the recipient of the grant has provided evidence of the specific service or output. Such grants are therefore reviewed annually and the grant payments subject to the condition of a progress report with satisfactory performance. If the project spans a number of years and satisfactory progress reports are received after year one, the first stage of the grant will be released from the Designated fund and that part of the grant expenditure will be recognised in the SoFA at that point.

Grants unclaimed by the end of award year +2 will be released back to the Society's general funds.

l) Grants payable

Grants payable out of existing revenues are provided for in full in the accounts. Those payable out of future resources are held in the Grant payable Reserve Fund (see also note 1(r) (iii)).

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

1. Accounting Policies (continued)

m) Pension costs

The Society participates in the Universities Superannuation Scheme (the scheme). With effect from 1 October 2016, the scheme changed from a defined benefit only pension to a hybrid pension scheme, providing defined benefits (for all members), as well as defined contribution benefits. The assets of the scheme are held in a separate trustee-administered fund. Because of the mutual nature of the scheme, the assets are not attributed to individual institutions and a scheme-wide contribution rate is set. The Society is therefore exposed to actuarial risks associated with other institutions' employees and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis and therefore, as required by Section 28 of FRS 102 "Employee benefits", accounts for the scheme as if it were a wholly defined contribution scheme. As a result, the amount charged to the profit and loss account represents the contributions payable to the scheme. Since the Society has entered into an agreement (the Recovery Plan) that determines how each employer within the scheme will fund the overall deficit, the Society recognises a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit), and therefore an expense is recognised.

The total movement to the profit & loss account is a gain of £13,418 (2016: loss of £93,284) as shown in note 17.

The latest available full actuarial valuation of the scheme was at 31 March 2014 ("the valuation date"), which was carried out using the projected unit method. The valuation as at 31 March 2017 is underway.

Since the Society cannot identify its share of scheme assets and liabilities, the following disclosures reflect those relevant for the scheme as a whole.

The 2014 valuation was the third valuation for USS under the scheme-specific funding regime introduced by the Pensions Act 2004, which requires schemes to adopt a statutory funding objective, which is to have sufficient and appropriate assets to cover their technical provisions. At the valuation date, the value of the assets of the scheme was £41.6 billion and the value of the scheme's technical provisions was £46.9 billion indicating a shortfall of £5.3 billion. The assets therefore were sufficient to cover 89% of the benefits which had accrued to members after allowing for expected future increases in earnings.

Defined benefit liability numbers for the scheme have been produced using the following assumptions:

	2017	2016
Discount rate	2.57%	3.6%
Pensionable salary growth	n/a	2%
Pension Increases (CPI)	2.41%	2.2%

The main demographic assumption used relates to the mortality assumptions. Mortality in retirement is assumed to be in line with the Continuous Mortality Investigation's (CMI) S1NA tables as follows:

Male members' mortality	98% of S1NA ["light"] YoB tables – No age rating
Female members' mortality	99% of S1NA ["light"] YoB tables – rated down 1 year

Use of these mortality tables reasonably reflects the actual USS experience. To allow for further improvements in mortality rates the CMI 2014 projections with a 1.5% pa long term rate were also adopted. The current life expectancies on retirement at age 65 are:

	2017	2016
Males currently aged 65 (years)	24.4	24.3
Females currently aged 65 (years)	26.6	26.5
Males currently aged 45 (years)	26.5	26.4
Females currently aged 45 (years)	29.0	28.8

	2017	2016
Scheme assets	£60.0bn	£49.8bn
Total scheme liabilities	£77.5bn	£58.3bn
FRS 102 total scheme deficit	£17.5bn	£8.5bn
FRS 102 total funding level	77%	85%

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

1. Accounting Policies (continued)

n) Taxation

The Society is a registered charity and no liability to taxation arises on the results of its business activities in support of its charitable purposes.

The Society has partial exempt status in respect of VAT, based on the split of its business and non-business activities. The proportion of VAT that cannot be recovered because of partial or fully exempt status of the activity is redistributed to the activities. The basis on which irrecoverable VAT have been allocated to the activities are set out in note 12.

o) Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the Balance Sheet date. Transactions in foreign currencies are recorded at the rate ruling at the date of the transaction. All differences are taken to the Statement of Financial Activities.

p) Medals in stock

The medal stock for the prize is stated at the lower of cost and net realisable value.

q) General Fund

The Unrestricted reserves are analysed between the General Fund and other Designated Funds. The General Fund, detailed in note 19 to the financial statements, is to provide for the general operation of the Society including its charitable activities not funded from Designated or Restricted Funds. Within the Society's reserves the General Fund is deemed an expendable reserve to be used in pursuit of the Society's objectives as Council may from time to time determine. At present it is managed to provide the income to be used to ensure the availability of resources for its grant schemes and other continuing charitable activities in future years.

r) Designated Funds

The Unrestricted reserves are analysed between general and designated funds. The Trustees have created the following designated funds:

(i) Building & Development Reserve Fund

This reserve is to meet the costs of (a) consequences of the temporary loss of De Morgan House, (b) periodic internal and external decoration and maintenance, (c) major modifications, developments or repairs. The value of these reserves is recalculated annually to allow for increase in the costs of covering the relevant risks.

(ii) Printing & Publication Reserve Fund

This reserve is to meet the costs of (a) consequential costs were the Society to cease publishing, (b) unpredictable annual fluctuations in the surplus, (c) costs of breaches of copyright or libel actions against the Society, (d) exploration and start-up costs of new ventures. The value of these reserves is recalculated annually to allow for increase in the costs of covering the relevant risks.

(iii) Grants Payable Reserve Fund

This fund has been established to cover grants awarded and approved by Council to be paid in future accounting periods, subject to available finance and satisfactory report.

(iv) Special Activities Reserve Fund

This fund contains gifts and bequests received by the Society to be used for diverse activities in support of the Society's objectives.

(v) Undergraduate Research Bursaries (Harding) Reserve Fund

This fund is set aside for grant awards to undergraduates with research potential. The fund has been set up for 3 years from 2016/17 financial year.

(vi) LMS 150 Anniversary Fund

This fund was set aside for LMS 150th Anniversary celebration activities, which spanned 2-3 years. The fund was for special projects, including employment costs for the project administrator, but not for those enhancement costs which are under the remit of individual Committee budgets.

(vii) Compositio Fund

This fund holds the transaction relating to, and any year-end excess of income over expenditure, relating to the Society's joint venture with the Foundation Compositio to produce the journal Compositio.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

1. Accounting Policies (continued)

s) Restricted Funds

The income of these restricted funds is to be used for the following purposes:

- (i) The Berwick Prize Fund
To support the Annual prize for mathematical work published by the Society
- (ii) De Morgan Medal Fund augmented by the Sir Joseph Larmor Prize Fund
To support the award of the De Morgan Medal and the Larmor Prize, awarded every three years.
- (iii) Lord Rayleigh's Fund
To support the general activities of the Society.
- (iv) J. H. C. Whitehead Prize Fund
To support the cost of the Annual prizes awarded for lecturing and mathematical work.
- (v) Fröhlich Fund
To support the cost of the Annual prizes awarded for lecturing and mathematical work.
- (vi) Shephards Prize Fund
To support mathematics with a strong intuitive component which can be explained to those who have little or no knowledge of university mathematics.
- (vii) A. J. Cunningham Research Fund
To support the cost of publication of work on the factorisation of large numbers.
- (viii) Zeeman Fund
To support the costs of Undergraduate Research Bursaries named in honour of Professor Sir Christopher Zeeman.

t) Support and governance costs

Support costs are those functions that assist the work of the charity but do not directly undertake charitable activities. Support costs include back office costs, finance, personnel, payroll and governance costs which support the Society's Mathematical Sciences programmes and activities. The Governance costs include external audit, legal advice and the costs of trustee and committee meetings, as well as costs associated with constitutional and statutory requirements. Support and governance costs have been allocated between the costs of raising funds and charitable activities. The bases on which support and governance costs have been allocated to activities are set out in note 12.

u) Employee benefits

Termination benefits are recognised immediately as an expense when the Society is demonstrably committed to terminate the employment of an employee through, for example, redundancy, or to provide termination benefits.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

2. Investment Income

	Unrestricted	Designated	Restricted	Total
2017	£	£	£	2017 £
a) Investment income receivable:				
Total returns/ Unit Trust Distribution <i>(Bond interest, Equities dividends, etc.)</i>	410,961	-	6,550	417,511
Re-invested total returns	(58,215)	-	-	(58,215)
<i>Net investment income receivable</i>	352,746	-	6,550	359,296
b) Residential property rental income	99,112	-	-	99,112
c) Interest receivable:				
Treasury Reserve deposits	102	160	311	573
Other deposits	1,175	-	-	1,175
<i>Total interest receivable</i>	1,277	160	311	1,748
Total investment income 2017	453,135	160	6,861	460,156
2016	£	£	£	Total 2016 £
a) Investment income receivable:				
Total returns/ Unit Trust Distribution <i>(Bond interest, Equities dividends, etc.)</i>	426,942	-	5,983	432,925
Other investment income <i>(Interest on Investment cash/rebate, etc.)</i>	1,249	-	-	1,249
Re-invested total returns	(80,518)	-	-	(80,518)
<i>Net investment income receivable</i>	347,673	-	5,983	353,656
b) Residential property rental income	78,880	-	-	78,880
c) Interest receivable:				
Treasury Reserve deposits	1,711	159	308	2,178
Other deposits	1,311	-	-	1,311
<i>Total interest receivable</i>	3,022	159	308	3,489
Total investment income 2016	429,575	159	6,291	436,025

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

3. Income from other trading activities

	2017	2016
	£	£
a) DMH Conference facilities	203,789	168,766
b) DMH Rental income	98,550	77,446
c) Advertising in Newsletter	7,784	8,295
Total	<u>310,123</u>	<u>254,507</u>

4. Costs of raising funds

	2017		2016	
	£	£	£	£
a) Conference facilities				
General expenditure	21,848		20,970	
Apportioned support and governance costs	100,439		81,620	
		<u>122,287</u>		<u>102,590</u>
b) Service for tenants		55,325		50,898
c) Investment Management fees		53,114		52,194
d) Residential Investment Property costs		38,676		13,146
Total		<u>269,402</u>		<u>218,828</u>

5. Charitable activities: Advancing the interests of Mathematics

	2017		2016	
	£	£	£	£
Members' services:				
<i>LMS Newsletter</i>	26,489		28,634	
Other costs	9,657		37,763	
Unrecoverable subscriptions	1,820		2,558	
		<u>37,966</u>		<u>68,955</u>
Activities to support Women in Mathematics		4,509		6,195
Activities to support Maths -Computer Sciences		899		20,706
Library, binding and archives		5,578		6,378
EMS, IMU, ICIAM subscriptions & ICM costs		18,222		27,661
Prizes		19,512		16,448
Apportioned support and governance costs (note 12)		267,362		243,618
Total		<u>354,048</u>		<u>389,961</u>

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

6. Charitable activities: Enabling Mathematicians to undertake research and collaboration

	2017		2016	
	£	£	£	£
Grant Schemes				
Scheme 1 – 5, and 8	368,967		409,250	
Prospects in Mathematics	7,000		7,000	
Support for Mathematics in Africa	6,000		11,400	
Research Workshops Grants	15,479		14,723	
Computer Science Grants	5,185		5,399	
Small Educational Grants	3,986		6,000	
Summer School Grants	33,500		33,500	
Teachers CPD Grants	3,952		7,870	
LMS Postgrad Grants	565		314	
Postgraduate Mobility Grants	66,600		51,600	
Women in Mathematics Event Grants	7,000		-	
Child care and related Grants	1,722		4,142	
ECM travel Grants	-		5,379	
	<u>519,956</u>		<u>556,577</u>	
Less: cancellation and refunds	(56,143)		(72,878)	
		463,813		483,699
Mentoring African Research in Mathematics (MARM) (Restricted)		20,000		20,000
INI/ICMS/ACME Grants (Designated)		58,000		58,000
Undergraduate Bursaries(Designated 2017/ General Fund 2016)		31,455		29,730
Ad hoc Grants to Mathematical Bodies (UK & International)		16,593		15,150
Charitable giving of LMS rooms		40,654		30,797
Training (Research School)		18,263		32,460
Apportioned support and governance costs (note 12)		215,411		217,141
Total		<u>864,189</u>		<u>886,977</u>
ANALYSIS OF GRANT AWARDS		2017		2016
		£		£
a) Grants: contractual commitments				
University of Cambridge (INI grant)		35,000		35,000
Heriot- Watt University (ICMS grant)		16,000		16,000
Royal Society (ACME grant)		7,000		7,000
University of Manchester (Summer School grant)		33,500		-
University of Kent (Summer School grant)		-		33,500
		<u>91,500</u>		<u>91,500</u>
b) Other grant awards to institutions *		450,210		488,568
c) Other grant awards to individuals		104,294		99,389
<i>Total grant awards</i>		<u>646,004</u>		<u>679,457</u>
<i>* Grant awards to each institution can be up to a maximum of £30k</i>				
GRANT REFUNDS AND CANCELLATION		2017		2016
		£		£
Grant refunds		26,256		59,881
Grants not taken up (out of date)		29,887		12,997
<i>Total grant refunds and cancellation</i>		<u>(56,143)</u>		<u>(72,878)</u>
MOVEMENT IN OBLIGATION GRANT COMMITMENTS		2017		2016
		£		£
Grant recognised at the start of the year		215,115		242,050
New grants charged to the SoFA in year		646,004		679,457
Grants paid during the year		(595,979)		(693,395)
Grants not taken up ('out of date')		(29,887)		(12,997)
Amount of grant recognised at the end of the year		<u>235,253</u>		<u>215,115</u>

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

7. Charitable activities: Disseminating Mathematical Knowledge - Publications

	2017		2016	
	£	£	£	£
a) Net Income from LMS periodicals		1,396,910		1,480,482
b) Payments for LMS periodicals				
Other Costs	(5,814)		(6,984)	
<i>Journal of Computation and Mathematics</i>	(7,834)		(6,575)	
		(13,648)		(13,559)
Net LMS periodicals surplus before Support and governance costs		1,383,262		1,466,923
Apportioned support and governance costs (note 12)		(297,280)		(572,786)
Net LMS periodicals surplus after Support and governance costs		1,085,982		894,137
c) Ventures & Royalties (net income)				
<i>Nonlinearity</i>	152,654		135,933	
Russian journals (Turpion/RAS/LMS joint venture)	49,131		62,055	
TMMS (AMS/LMS joint venture)	19,658		15,964	
LMS Books and Royalties	15,402		12,099	
		236,845		226,051
<i>Compositio</i>				
Profit share & Management fee (see 7d)	114,667		113,449	
Costs of <i>Compositio</i> (LMS - only)	(5)		(549)	
		114,662		112,900
<i>Mathematika</i>		21,202		14,587
NET PUBLICATIONS SURPLUS		1,458,691		1,247,675

The Society was involved in the following publishing ventures in the year:

- (I) *Nonlinearity* – the journal co-owned with the IOP Publishing Ltd and is produced at the IOP Publishing Ltd, Temple Circus, Temple Way, Bristol BS1 6HG
- (II) The three translation journals *Russian Mathematical Surveys*, *Sbornik: Mathematics* and *Izvestiya: Mathematics* are owned and managed jointly by the Department of Mathematics Russian Academy of Sciences, Turpion Ltd & the LMS. The main business address is Turpion Ltd, c/o IOP Publishing Ltd, Temple Circus, Temple Way, Bristol BS1 6HG.
- (IV) The journal *Transactions of the Moscow Mathematical Society (TMMS)* is managed on a day-to-day basis at the American Mathematical Society, 201 Charles Street, Providence, RI 02904 - 2294, USA.
- (V) *Compositio Mathematica* – the journal is wholly owned by Foundation Compositio Mathematica & managed by the LMS.
- (VI) *Mathematika* – the journal is wholly owned by UCL and managed by the LMS.

d) *Compositio* management account

	2017	2016
	£	£
Income	358,228	411,571
Expenditure		
Direct costs	(67,008)	(124,407)
Profit share to <i>Compositio</i> Foundation	(176,553)	(173,715)
	(243,561)	(298,122)
Net <i>Compositio</i> surplus before LMS fees and Profit share	114,667	113,449
Management fee to LMS	(39,000)	(39,000)
Profit share to LMS	(75,667)	(74,449)
Balance C/fwd on <i>Compositio</i> Fund	-	-

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

8. Charitable activities: Disseminating Mathematical Knowledge – Society Lectures and Meetings

	2017		2016	
	£	£	£	£
Society meetings and regional workshops	28,316		33,006	
Hardy Lecturer	-		4,675	
Mary Cartwright Lecture	955		1,852	
Forder Lecturer	-		2,650	
Invited Lectures	7,004		6,310	
150 Anniversary meetings and lectures	-		2,436	
		36,275		50,929
Apportioned support and governance costs (note 12)		99,502		82,202
Total		<u>135,777</u>		<u>133,131</u>

9. Charitable activities: Promoting Mathematical Research & its benefits

	2017		2016	
	£	£	£	£
Policy				
CMS	13,018		37,614	
Communication and External Relations	35,735		99,885	
Annual dinner	7,275		3,257	
Subscriptions to UK organisations	1,990		3,230	
Research Policy Activities	627		488	
		58,645		144,474
Education and young people, public engagement				
Holgate Lecturers	3,600		2,250	
Popular Lectures	9,390		8,673	
Other educational activities	3,488		4,087	
Knowledge Transfer	(4,855)		4,855	
		11,623		19,865
Promoting Women in Mathematics activities		93		160
Apportioned support and governance costs (note 12)		312,323		327,761
Total		<u>382,684</u>		<u>492,260</u>

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

10. Governance and other committees' costs

	2017		2016	
	£	£	£	£
Professional services				
Solicitors fees	630		25,749	
Audit and accountancy fees	10,000		12,073	
Audit and accountancy fee over/under - accrual	850		-	
Other professional fees	35		585	
	<hr/>		<hr/>	
		11,515		38,407
Costs of meetings (<i>Catering/Accommodation/Travel & Subsistence/ etc.</i>)				
Governance (Council/F&GPC/Nomination, etc.)	39,992		32,739	
Retreat	8,016		-	
Other Committees	29,818		26,524	
	<hr/>		<hr/>	
		77,826		59,263
Election of Trustees		4,343		3,898
General office and staff costs (<i>apportioned</i>) (note 11)		191,931		177,948
Total		<hr/> 285,615 <hr/>		<hr/> 279,516 <hr/>

11. Analysis of general support and governance costs

2017	Governance and Committee related	Other general support	Total 2017
	£	£	£
Staff costs	138,767	813,237	952,004
Office and Premises costs	27,487	118,671	146,158
IT costs	10,064	88,577	98,641
Depreciation	11,478	39,461	50,939
Irrecoverable VAT	4,135	12,770	16,905
Professional services	11,515	-	11,515
Costs of meetings	77,826	-	77,826
Elections of Trustees	4,343	-	4,343
	<hr/>	<hr/>	<hr/>
Total 2017	285,615	1,072,716	1,358,331
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

2016	Governance and Committee related	Other general support	Total 2016
	£	£	£
Staff costs	131,442	1,029,649	1,161,091
Office and Premises costs	20,373	117,126	137,499
IT costs	10,054	92,338	102,392
Depreciation	11,864	39,217	51,081
Irrecoverable VAT	4,215	17,808	22,023
Professional services	38,407	-	38,407
Costs of meetings	59,263	-	59,263
Elections of Trustees	3,898	-	3,898
	<hr/>	<hr/>	<hr/>
Total 2016	279,516	1,296,138	1,575,654
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

12. Allocation of support and governance costs by activity

2017	Direct Staff	General Office	General Management and Finance	Governance and Committee	Total 2017
	£	£	£	£	£
Raising funds					
Conference facilities (DMH)	44,770	44,364	10,825	480	100,439
Services for tenants (DMH)	8,818	43,741	2,286	480	55,325
Managing Residential Property	7,270	1,599	1,340	480	10,689
<i>Total support costs for raising funds</i>	60,858	89,704	14,451	1,440	166,453
Charitable activities					
Advancing the interest of Mathematics	104,185	45,760	60,582	56,835	267,362
Enabling Mathematicians to undertake research and collaboration	77,504	28,765	52,307	56,835	215,411
Disseminating Mathematical Knowledge – Publications	133,813	55,999	50,633	56,835	297,280
Disseminating Mathematical Knowledge – Society lectures and meetings	13,934	4,847	23,886	56,835	99,502
Promoting Mathematics research and its benefits	150,174	45,074	60,240	56,835	312,323
<i>Total support costs for Charitable activities</i>	479,610	180,445	247,648	284,175	1,191,878
Total 2017	540,468	270,149	262,099	285,615	1,358,331
2016					
	£	£	£	£	£
Raising funds					
Conference facilities (DMH)	38,737	36,826	5,669	388	81,620
Services for tenants (DMH)	4,862	39,390	1,421	1,937	47,610
Managing Residential Property	1,342	326	666	582	2,916
<i>Total support costs for raising funds</i>	44,941	76,542	7,756	2,907	132,146
Charitable activities					
Advancing the interest of Mathematics	96,983	40,846	54,148	51,641	243,618
Enabling Mathematicians to undertake research and collaboration	86,650	32,788	46,062	51,641	217,141
Disseminating Mathematical Knowledge – Publications	358,199	96,819	47,723	70,045	572,786
Disseminating Mathematical Knowledge – Society lectures and meetings	9,462	3,315	17,784	51,641	82,202
Promoting Mathematics research and its benefits	159,502	60,136	56,482	51,641	327,761
<i>Total support costs for Charitable activities</i>	710,796	233,904	222,199	276,609	1,443,508
Total 2016	755,737	310,446	229,955	279,516	1,575,654

Basis of apportionment

Support costs include (a) **Staff costs** (salaries, benefits, training, H&S, recruitment, etc. of staff directly attributable to each of the above Society's activities); (b) **General Office Costs** (rent, rates, services, cleaning, equipment, maintenance, telephones, postage, equipment, stationery, etc., depreciation and Irrecoverable VAT, and IT costs such as computer hardware and software, network, internet access, websites, software development, etc.), (c) **General management and finance** (cost of services that cannot be directly attributed to an activity, i.e. general accounting and financial controls, HR and Executive Secretary's general management, etc.) (d) **Governance costs** (costs of meetings, trustees' expenses, and costs associated with constitutional and statutory requirements).

The costs of these are attributed across all the activities of the Society in proportion to (a) salary or f.t.e., (b) space occupied in De Morgan House, and (c) f.t.e. respectively, based on a time analysis undertaken by all staff.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

12. Allocation of support and governance costs by activity (continued)

Support and governance costs have been allocated between the costs of raising funds and charitable activities as:

- **Direct staff costs** = staff time directly attributable to each of the above Society's activities in proportion to the salary or pro rata to staff f.t.e. on a time analysis undertaken by all staff.
- **General Office costs** = (a) apportioned Building, Office and IT costs of staff who are directly attributable to (deal with) each of the above Society's activities as per staff time analysis and in proportion of the office space occupied, and (b) indirect costs, which are re-apportioned staff costs for those dealing with Building, Office and IT management.
- **General management and finance** = the costs of services that cannot be directly attributed to an activity (i.e. general accounting and financial controls, HR and Executive Secretary's general management, etc.) are attributed to each area of activity on the same basis as the original elements (i.e. staff time and space occupied, IT and office use etc.), which includes re-apportioned costs of the office space occupied, the IT costs and other general office costs in dealing with HR, finance and general management.
- **Governance and committee costs** = apportionment made on the basis of (a) salary or pro rata to staff F.T.E. on a time analysis undertaken by all staff (b) meetings and staff office space occupied in De Morgan House in relation to governance and committee functions, and (c) Invoices and claims for catering, accommodation, travel and subsistence regarding governance and committee meetings, as well as costs of professional services (i.e. external audit, legal advice, etc.).

The Society has partial exempt status in respect of VAT, based on the split of its business and non-business activities. The proportion of VAT that cannot be recovered because of partial or fully exempt status of the activity is redistributed to the activities on the same basis as the original elements (i.e. staff time and space occupied, IT and office use etc.), under General Office costs.

Support costs for each area of the above activities can be higher or lower than last year due to staff time allocation. This changes from year to year and will have an effect on direct staff costs, general office costs, general management costs and governance costs.

13. Employment Costs	2017	2016
	£	£
Total employment costs of all staff including taxable benefits for the year comprise:		
Salaries and Wages	719,576	821,862
Redundancy *	-	109,738
Employer's National Insurance Contributions	79,737	78,898
Employer's Pension Contributions	121,426	123,497
Total	920,739	1,133,995

* This represents the costs of organisational restructuring.

The total employment costs (Salaries & Pension) for the Executive Management Team amounted to £346,091 (2016: £444,238). This team is considered to Key Management Personnel and consists of Executive Secretary, Head of Finance, Head of Society Business, Head of Conference and Building.

The number of employees earning £60,000 per annum or more was:

	2017	2016
	No.	No.
£60,000 - £70,000	2	2
£90,000 - £100,000	-	1
£110,000 - £120,000	1	1

The pension payments for the above members of staff amounted to £42,663 (2016: £52,191). These contributions were paid into a defined benefits pension scheme.

The average number of employees over the year (and full time equivalent) was:

	2016/2017		2015/2016	
	Total	FTE	Total	FTE
Management and administration	14.4	12.4	14.9	12.9
Publishing and editorial	2.6	2.1	3.8	3.7
Total	17	14.5	18.7	16.6

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

14. Fixed Asset Investments

	£	2017 £	£	2016 £
a) Quoted investments				
	<i>Investment Assets in the UK</i>	<i>Investment Assets outside the UK</i>	Total	Total
Total Market value at 31st July 2017	6,528,203	4,536,548	11,064,751	10,331,929

In the prior year, £6,302,477 of investment assets were in the UK with the remaining £4,029,452 being outside the UK.

Reconciliation of opening and closing market values:

Market value at 1 st August 2016	10,331,929	10,689,668
Additions at cost	58,301	161,127
Disposals proceeds	(1,894)	(612,741)
Realised & Unrealised gains/ (losses) (note 22a)	802,619	296,888
Movement in cash	(126,204)	(203,013)
Total Market value at 31st July 2017	11,064,751	10,331,929

Analysis by Fund:

Restricted Funds	214,712	195,502
Unrestricted Funds	10,850,039	10,136,427

**% value of
portfolio**

Details of material investments are as follows:

Schroder QEP Global Core Fund	10.4%
Schroder Charity Equity Fund	8.2%
Vanguard S&P 500 ETF	6.7%
Old Mutual UK Alpha Fund	6.2%
Majedie UK Equity Fund	6.1%
Schroder Global Emerging Markets	5.5%

b) Residential Property

	2017 £	2016 £
Market value at 31st July 2017	3,043,950	2,323,450
Reconciliation of opening and closing market values:		
Market value at 1st August 2016	2,323,450	2,312,000
Additions at cost	645,000	11,450
Unrealised gains (note 22b)	75,500	-
Total Market value at 31st July 2017	3,043,950	2,323,450

Represents purchase of property for residential letting purposes to diversify the Society's investment portfolio. The rental derived is shown on the SoFA under 'Investment Income'.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

15. Tangible Fixed Assets	Leasehold Property	Fixtures Fittings and Equipment	Total
	£	£	£
Cost			
Brought forward at 1st August 2016	2,175,353	111,733	2,287,086
Additions	-	6,720	6,720
Carried forward at 31 st July 2017	<u>2,175,353</u>	<u>118,453</u>	<u>2,293,806</u>
Depreciation			
Brought forward at 1 st August 2016	786,015	99,340	885,355
Charge for the year	44,817	6,122	50,939
Carried forward at 31 st July 2017	<u>830,832</u>	<u>105,462</u>	<u>936,294</u>
Net book value			
At 31 st July 2017	<u>1,344,521</u>	<u>12,991</u>	<u>1,357,512</u>
At 31 st July 2016	<u>1,389,338</u>	<u>12,393</u>	<u>1,401,731</u>

- Part of the leasehold property is let out and the rental derived is shown on the SOFA under 'Activities for Generating Funds'.

16. Debtors	2017	2016
	£	£
Publications	124,089	176,714
Conference facilities	18,364	20,047
Other debtors	66,183	108,528
Income tax/VAT recoverable	395	397
Prepayments and accrued interest	27,698	27,362
	<u>236,729</u>	<u>333,048</u>

17. Creditors and Deferred Income	2017	2016
	£	£
Creditors: amounts falling due within one year		
Accruals	54,791	102,169
Grant creditors	235,253	215,115
Other creditors	371,682	285,383
	<u>661,726</u>	<u>602,667</u>
Deferred income:		
Unexpired publications' subscriptions:		
Balance brought forward	174,864	169,282
Amount released in year	(174,864)	(169,282)
Income deferred to future years	2,196	174,864
Balance carried forward	<u>2,196</u>	<u>174,864</u>
Creditors: amounts falling due after more than one year		
Brought Forward Pension Provision	186,618	93,334
Movement	(13,418)	93,284
Carried Forward Pension Provision	<u>173,200</u>	<u>186,618</u>

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

18. Restricted Funds

2017	<i>Balance at 1.08.16</i>	Other & Investment Income	Expenditure	Investment gain	Transfers	Balance at 31.07.17
	£	£	£	£	£	£
<u>Prize (Capital) funds</u>						
Berwick Fund	31,906	160	-	-	-	32,066
De Morgan Medal & Larmor Fund	30,086	151	-	-	-	30,237
<u>Prize (Income) funds</u>						
Berwick Fund	20,710	694	(1,500)	1,500	-	21,404
De Morgan Medal & Larmor Fund	39,980	1,339	-	2,896	-	44,215
Lord Rayleigh's Fund	15,384	515	-	1,115	-	17,014
J.H.C. Whitehead Fund	-	-	(10,500)	-	10,500	-
Fröhlich Fund	14,056	471	-	1,018	-	15,545
Shephards Fund	31,144	1,043	-	2,256	-	34,443
<u>Other funds</u>						
A.J. Cunningham Research Fund	74,227	2,487	-	5,377	-	82,091
Grants and Contracts	-	10,000	(20,000)	-	10,000	-
Zeeman Fund	170	51	-	-	-	221
Total Funds	<u>257,663</u>	<u>16,911</u>	<u>(32,000)</u>	<u>14,162</u>	<u>20,500</u>	<u>277,236</u>

- The transfer of £10,500 from the General Fund to Restricted Funds is to cover a shortfall in income for the Whitehead prizes.
- The transfer of £10,000 from the General Fund to the Grants and Contracts represents LMS's contribution for MARM grant. (See note 21).

2016	<i>Balance at 1.08.15</i>	Other & Investment Income	Expenditure	Investment gain	Transfers	Balance at 31.07.16
	£	£	£	£	£	£
<u>Prize (Capital) funds</u>						
Berwick Fund	31,748	158	-	-	-	31,906
De Morgan Medal & Larmor Fund	29,936	150	-	-	-	30,086
<u>Prize (Income) funds</u>						
Berwick Fund	21,070	664	(1,500)	476	-	20,710
De Morgan Medal & Larmor Fund	39,351	1,241	(1,500)	888	-	39,980
Lord Rayleigh's Fund	14,594	460	-	330	-	15,384
J.H.C. Whitehead Fund	-	-	(6,000)	-	6,000	-
Fröhlich Fund	14,758	465	(1,500)	333	-	14,056
Shephards Fund	29,546	932	-	666	-	31,144
<u>Other funds</u>						
A.J. Cunningham Research Fund	70,418	2,221	-	1,588	-	74,227
Zeeman Fund	-	170	-	-	-	170
Grants and Contracts	-	10,000	(20,000)	-	10,000	-
Total Funds	<u>251,421</u>	<u>16,461</u>	<u>(30,500)</u>	<u>4,281</u>	<u>16,000</u>	<u>257,663</u>

- The transfer of £6,000 from the General Fund to Restricted Funds is to cover a shortfall in income for the Whitehead prizes.
- The transfer of £10,000 from the General Fund to the Grants and Contracts represents LMS's contribution for MARM grant. (See note 21).

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

19. Unrestricted Funds

2017	<i>Balance at 01.08.16</i>	Income	Expenditure	Gain/(loss) on investments	Actuarial gains (losses) on pension scheme	Transfer	Balance at 31.07.17
	£	£	£	£	£	£	£
General Fund: (see note 1(r))	11,080,247	2,595,071	(2,196,608)	863,957	13,418	94,167	12,450,252
Designated Funds:							
a) Building & Development Reserve Fund	600,000	-	-	-	-	-	600,000
b) Printing & Publication Reserve Fund	3,000,000	-	-	-	-	-	3,000,000
c) Grants Payable Reserve Fund	123,000	-	(58,000)	-	-	-	65,000
d) Special Activities Reserve Fund	32,039	160	-	-	-	-	32,199
e) Undergraduate Research Bursaries Fund	100,000	-	(31,455)	-	-	-	68,545
f) Compositio Fund	-	358,228	(243,561)	-	-	(114,667)	-
	<u>3,855,039</u>	<u>358,388</u>	<u>(333,016)</u>	<u>-</u>	<u>-</u>	<u>(114,667)</u>	<u>3,765,744</u>
	<u>14,935,286</u>	<u>2,953,459</u>	<u>(2,529,624)</u>	<u>863,957</u>	<u>13,418</u>	<u>(20,500)</u>	<u>16,215,996</u>

f) The transfer of £114,667 from the Compositio Fund to General Fund represents the management fee and the LMS's profit share relating to the journal.

2016	<i>Balance at 01.08.15</i>	Income	Expenditure	Gain/(loss) on investments	Actuarial gains (losses) on pension scheme	Transfer	Balance at 31.07.16
	£	£	£	£	£	£	£
General Fund: (see note 1(r))	10,696,086	2,701,659	(2,553,181)	292,607	(93,284)	36,360	11,080,247
Designated Funds:							
a) Building & Development Reserve Fund	600,000	-	-	-	-	-	600,000
b) Printing & Publication Reserve Fund	3,000,000	-	-	-	-	-	3,000,000
c) Grants Payable Reserve Fund	181,000	-	(58,000)	-	-	-	123,000
d) Special Activities Reserve Fund	31,880	159	-	-	-	-	32,039
e) Undergraduate Research Bursaries Fund	-	-	-	-	-	100,000	100,000
f) 150 Anniversary Fund	115,396	-	(76,485)	-	-	(38,911)	-
g) Compositio Fund	-	411,571	(298,122)	-	-	(113,449)	-
	<u>3,928,276</u>	<u>411,730</u>	<u>(432,607)</u>	<u>-</u>	<u>-</u>	<u>(52,360)</u>	<u>3,855,039</u>
	<u>14,624,362</u>	<u>3,113,389</u>	<u>(2,985,788)</u>	<u>292,607</u>	<u>(93,284)</u>	<u>(16,000)</u>	<u>14,935,286</u>

e) The transfer of £100,000 from General Fund is in respect of Undergraduate Research Bursaries (Harding).

f) The transfer of £38,911 from Anniversary Fund to General Fund represents the closure of the 150th Anniversary Fund.

g) The transfer of £113,449 from the Compositio Fund to General Fund represents the management fee and the LMS's profit share relating to the journal.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

20. Analysis of net assets between funds

2017	Unrestricted funds		Restricted Funds	Total Funds
	General	Designated		
	£	£	£	£
Fund balances are represented by				
Tangible fixed assets	1,357,512	-	-	1,357,512
Investments	10,228,989	3,665,000	214,712	14,108,701
Current assets	1,700,873	100,744	62,524	1,864,141
Current liabilities	(663,922)	-	-	(663,922)
Long-term liabilities	(173,200)	-	-	(173,200)
Total net assets	12,450,252	3,765,744	277,236	16,493,232

2016	Unrestricted funds		Restricted Funds	Total Funds
	General	Designated		
	£	£	£	£
Fund balances are represented by				
Tangible fixed assets	1,401,731	-	-	1,401,731
Investments	8,736,877	3,723,000	195,502	12,655,379
Current assets	1,905,788	132,039	62,161	2,099,988
Current liabilities	(777,531)	-	-	(777,531)
Long-term liabilities	(186,618)	-	-	(186,618)
Total net assets	11,080,247	3,855,039	257,663	15,192,949

21. Grants and Contracts Management account

	2017		2016	
	£	£	£	£
a) IMU grant to the MARM				
Income	10,000		10,000	
Expenditure	(20,000)		(20,000)	
LMS's Contribution to the MARM		(10,000)		(10,000)
b) IMA, RSS & EdMS contributions to the CMS				
Income	36,894		57,184	
Expenditure (including support costs)	(76,824)		(98,992)	
LMS's Contribution to the CMS		(39,930)		(41,808)
c) IMA contribution to the JPM				
Income	5,000		5,000	
Expenditure (including support costs)	(16,087)		(20,666)	
LMS's Contribution to the JPM		(11,087)		(15,666)

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

22. Gains and losses on investment assets

2017	Unrestricted funds £	Restricted funds £	Total £
a. Quoted investments			
Realised gain on sale of investments	111,448	2,002	113,450
Unrealised gain in market value of investments	677,009	12,160	689,169
Realised and Unrealised gain (Fixed Asset Investments: Note 14)	<u>788,457</u>	<u>14,162</u>	<u>802,619</u>
b. Residential property investment			
Realised gain on sale of investments	-	-	-
Unrealised gain in market value of the Properties	75,500	-	75,500
Realised and Unrealised gain (Fixed Asset Investments: Note 14)	<u>75,500</u>	<u>-</u>	<u>75,500</u>
Total gains	<u>863,957</u>	<u>14,162</u>	<u>878,119</u>
2016	Unrestricted funds £	Restricted funds £	Total £
a. Quoted investments			
Realised gain on sale of investments	111,164	1,626	112,790
Unrealised gain in market value of investments	181,443	2,655	184,098
Realised and Unrealised gain (Fixed Asset Investments: Note 14)	<u>292,607</u>	<u>4,281</u>	<u>296,888</u>
b. Residential property investment			
Realised gain on sale of investments	-	-	-
Unrealised gain in market value of the Properties	-	-	-
Realised and Unrealised gain (Fixed Asset Investments: Note 14)	<u>-</u>	<u>-</u>	<u>-</u>
Total gains	<u>292,607</u>	<u>4,281</u>	<u>296,888</u>

23. Transactions with Trustees and connected persons

Trustees receive reimbursement only for expenses actually incurred in attending meetings. No remuneration is paid to trustees except as disclosed below. The gross amount that has been reimbursed in respect of attendance of meetings in the period amounted to £25,944 (2016: £25,129) for 18 Trustees (2016:17).

During the year £450 was paid to Dr A. Gardiner for delivering Holgate lectures. As this work falls outside of his duties as a trustee, a written agreement was produced between the Society and Dr Gardiner.

As disclosed in the Trustees' Report, where grants are awarded to Trustees the payment is always made to the relevant institution.

NOTES TO THE FINANCIAL STATEMENTS
For the year ended 31st July 2017

24. Comparison figures of each fund (2015/16 financial statements)

	Notes	Unrestricted General Funds £	Designated Funds £	Restricted Funds £	2016 Total Funds £
Income and endowments:					
<i>Donations and legacies</i>		102,159	-	170	102,329
<i>Income from charitable activities:</i>					
Membership subscriptions		106,760	-	-	106,760
Publications – LMS Periodicals	7a	1,480,482	-	-	1,480,482
Publications – Ventures and Royalties	7c,d	250,753	411,571	-	662,324
Grants and contracts	21	77,184	-	10,000	87,184
<i>Total income from charitable activities</i>		1,915,179	411,571	10,000	2,336,750
<i>Income from other trading activities</i>	3	254,507	-	-	254,507
<i>Income from Investments</i>	2	429,575	159	6,291	436,025
<i>Other income</i>		239	-	-	239
Total Income		2,701,659	411,730	16,461	3,129,850
Expenditure:					
<i>Costs of raising funds</i>	4	218,828	-	-	218,828
<i>Expenditure on charitable activities:</i>					
Advancing the interests of mathematics	5	379,461	-	10,500	389,961
Enabling mathematicians to undertake research collaboration	6	808,977	58,000	20,000	886,977
Disseminating mathematical knowledge:					
- Costs of publications	7b,c,d	597,009	298,122	-	895,131
- Society lectures and meetings	8	130,695	2,436	-	133,131
Promoting mathematical research and its benefits	9	418,211	74,049	-	492,260
<i>Total expenditure on charitable activities</i>		2,334,353	432,607	30,500	2,797,460
Total expenditure		2,553,181	432,607	30,500	3,016,288
Net income/(expenditure) before gains and losses on investment		148,478	(20,877)	(14,039)	113,562
Net gains on investment assets	22	292,607	-	4,281	296,888
Net Income /(expenditure) for the year		441,085	(20,877)	(9,758)	410,450
Transfers between funds	18,19	36,360	(52,360)	16,000	-
Actuarial losses on defined benefit pension schemes	17	(93,284)	-	-	(93,284)
Net movement in funds for the year		384,161	(73,237)	6,242	317,166
Reconciliation of funds:					
Total funds brought forward		10,696,086	3,928,276	251,421	14,875,783
Fund balances carried forward		11,080,247	3,855,039	257,663	15,192,949