



Incorporated by Royal Charter

Trustees' Annual Report

2021

Registered Charity Number: 1017777

TRUSTEES' REPORT 2021

LEGAL AND ADMINISTRATIVE INFORMATION

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2021. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (i.e. the Trustees). The charity registration number is 1017777.

PRESIDENT	Dr N Chamberlain
VICE-PRESIDENTS	Dr P Rowlett Dr R Pinch Dr M Barons
HONORARY TREASURER	Professor A Osbaldestin
HONORARY SECRETARIES	Professor P Glaister Professor M Grove
PAST PRESIDENTS	Professor A Fitt Professor C Linton Professor Dame Celia Hoyles

MEMBERS OF THE COUNCIL

The following were Councillors for the full year:

Mr A Apostolou	Dr S Lawrence (re-elected June 2021)
Professor R Bearon	Professor S Lombardo
Professor C Breward	Professor G Niblo (elected June 2021, previously co-opted)
Mr C Chipperton (re-elected June 2021)	Professor E Rothead
Dr F de Melo Viríssimo (elected June 2021, previously co-opted)	Professor N Steele (co-opted June 2021, previously elected)
Dr M B Dias	Mr N Turner
Professor C Hobbs	

The following was Councillor and Trustee for the period up to 30 June 2021:

Elected Members: Dr S Plata Iturralde.

The following were Councillors and Trustees for the period from 30 June 2021: Dr Eduard Campillo Funollet (co-opted) and Dr S Carr (elected).

The following completed their term of office as Councillors and Trustees at the end of 2021:

Mr A Apostolou and Professor Dame Celia Hoyles.

Additionally, Professor Paul Glendinning succeeded Dr Nira Chamberlain as IMA President with effect from 1 January 2022. Dr Chamberlain remains a Councillor and Trustee of the IMA as as Past President.

The Institute's Head Office is:

Catherine Richards House,
16 Nelson Street,
Southend-on-Sea,
Essex, SS1 1EF.

Its bankers are:

Lloyds Banking Group,
Business Service Centre,
Sedgemoor House,
Deangate Avenue,
Blackbrook Business Park,
Taunton, TA1 2UG.

Its auditors are:

Croucher Needham (Essex) LLP,
Market House
10 Market Walk,
Saffron Walden,
Essex, CB10 1JZ.

STRUCTURE, GOVERNANCE AND MANAGEMENT

As set out in the Royal Charter, the Honorary Officers are appointed by Council. Fifteen further Corporate Members are nominated by the Corporate Members of the Institute. If the number of nominations is more than the number of vacancies, a postal ballot of corporate members is held.

The Council may co-opt any Corporate Member to be a member of the Council, provided that at any time the total number of co-opted members shall not exceed six, of whom not more than one shall be an Associate Member, not more than one will be a Student Member and not more than one shall be an Affiliate Member.

At 4 January 2022 the Secretariat included the following staff of the Charity:

Rosalind Azouzi – Executive Director
Alan Peacock – Operations Director
Joanna Baldacci – Services Officer: Journals and MathsCareers website
Nikki Barnes – Marketing Officer (part-time)
Pam Bye – Conferences and Administration Officer (part-time)
Maya Everson – Conference Officer
Sabeen Hansraj – Membership Assistant
Karen Hedderley – Administration Officer: Mathematics Today (part-time)
Caroline Irwin – Membership Manager
Eugene Kidwell – Services Officer: IT and MathsCareers website
Catherine Marshall – Administration Assistant: Conferences
Alison Penry – Executive Manager: Council, Executive Board and Research Committee
Gemma Reeves – Services Officer: Council, Executive Board and Branches
Natalie Stanton – Membership Officer (part-time)
Debbie Sullivan – Administration Assistant: Professional Standards (part-time)
Vanessa Thorogood – Education Manager and Project Manager, Scholarships
Erica Tyson – University Liaison Officer (part-time)
Rebecca Waters – Editorial Officer

The IMA's organisational structure is led by the Council with support from the Executive Board. Council has responsibility for all decision-making but will normally delegate day-to-day business to committees such as Branches, Communications, Conferences, Early Career Mathematicians, Education, Finance, Journals Board of Management, Mathematics Today Editorial Board, MathsCareers, Membership, Professional Affairs and Research. Matters concerning the Secretariat are normally delegated to the Executive Director. Executive Board includes the Honorary Officers of the Institute (President, Vice-Presidents, Honorary Secretaries, Honorary Treasurer and President Designate/Past President) supported by the Executive Director and ad hominem members. Executive Board prepares and prioritises business for Council and maintains the activities of the IMA between Council Meetings. However, Council maintains overall responsibility for policy and decision making.

Trustees (Councillors) receive two categories of training. The Charity Commission publications "The Essential Trustee: What you need to know, what you need to do (CC3)" and "Managing Charity Finances" are the basis of generic training. Training in Institutional Affairs is provided by an IMA Briefing Pack that Councillors receive when they are appointed.

OBJECTIVES AND ACTIVITIES FOR THE PUBLIC BENEFIT

The Royal Charter sets the IMA's Object(ive)s as:

- to advance mathematics and its applications in all areas including commerce, engineering, finance, health, industry, scientific and other academic disciplines and the public sector and to promote and foster research and other enquiries directed to the advancement, teaching and application of mathematics for the public benefit;
- to seek to establish and maintain high standards of professional conduct for Corporate Members;
- to seek to promote, encourage and guide in the development of education and training in all matters relevant to the advancement of mathematics and its applications for members and all other persons who are engaged in or likely to be engaged in mathematics or its applications.

The activities for the Public Benefit are as set out as Mission and Goals in the Council approved Strategic Review (2018-2023). In particular the Mission is to benefit society through:

- Providing a suite of member focused services commensurate with its position as the principal professional and learned body for mathematics and its applications in the United Kingdom;
- Being a driving force for the use of mathematics in industry and commerce;
- Ensuring that the importance of mathematics is well represented to Government; a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being an influencing voice for the use of mathematics in science, technology, engineering, economics and other fields of endeavour;

- Advancing its reputation as a major contributor to mathematics research initiatives;
- Engaging proactively at all levels with the full spectrum of the media and society for the promotion of mathematics in the UK;
- Adding value to the worldwide mathematics community by providing a range of services, conferences, publications and events that are fulfilling and beneficial for its membership and for mathematics;
- Promoting high standards of professional conduct for members;
- Regulating the Chartered Mathematician and Chartered Mathematics Teacher designations;
- Working with other mathematical organisations to develop a unified voice for mathematics in the UK;
- Collaborating with organisations in other countries to promote mathematics at an international level.

Trustees carefully consider the approved objectives and mission when planning and reviewing activities at their three meetings each year. Council has judged that the 2021 programme has been successful in the delivery of the agreed Objectives and Mission for the public benefit.

ACHIEVEMENTS AND PERFORMANCE IN 2021

Overall

The COVID-19 pandemic continued to dominate IMA activity in 2021, with staff continuing to work mainly from home and nearly all activities taking place online. As in 2020, most services were maintained and operations ran smoothly, and the Trustees remain very appreciative of the staff's hard work and flexibility.

Following the rapid expansion into virtual conferences and events in 2020, the Conference Team focussed this year on embedding and assessing the effectiveness of online delivery, with the primary aims of meeting the needs of delegates and improving accessibility. The team also trialled a hybrid event in September at the Isaac Newton Institute in Cambridge.

Last year we launched a series of Maths Teas virtual events that were established by our Social Media Taskforce. These have proved to be very popular with members, and have continued and expanded in 2021: in particular, we experienced high membership engagement for the Maths Teas which took place during Women's History Month 2021, Pride Month 2021 and Black History Month 2021.

We ran the Department for Education Mathematics Teacher Training Scholarships scheme for a ninth successful year, recommending 260 outstanding applicants for scholarship funds.

A large number of Branch events were held online, allowing members in much greater numbers from around the country to attend these regional events.

We played the leading role with the CMS in the inclusion of mathematics within STEM for Britain at Parliament; the results of the 2021 competition were announced on 8 March.

All issues of Mathematics Today continued to be printed and posted on time.

The membership eBulletins were issued every two months, alternating with Maths Today.

The popular IMA MathsCareers website received 399,939 visits. and increased its followers on Twitter to 7,537. We also issued six more editions of our e16plus newsletter which currently has 1,536 subscribers

Our eStudent offer continues to be highly popular, and we issued five eStudent newsletters to 6,648 subscribers during 2021.

Our grant programmes for research, education and university activities continued to be under-utilised because so few face-to-face activities, which are the mainstay of our grant programmes, could be held.

We ran our regular activities including education, journals, and mathematics consultations.

Our membership numbers continue to be healthy. We have strived to maintain IMA services throughout and we are grateful to all our members who support the Institute and to the Volunteers and Secretariat that maintained our Services to Mathematics at such a high standard in 2021.

SERVICES TO MATHEMATICS

Research Committee

Dr Martine Barons, Vice President Learned Society, chaired the Research Committee in 2021. The full membership of the Committee can be viewed on the IMA website:

<https://ima.org.uk/roles/research-committee/>

These researchers contribute to our discussions with the research funding councils and policy makers, and work to promote the benefits of fundamental and applied mathematical research to the economy and to society. The Research Committee also assess applications for Small Grants.

In addition to the three Committee meetings, Research Committee worked throughout the year, on behalf of the community in many ways, including the following:

- The Committee continued to consider the output of the Big Mathematics Initiative and the proposed creation of the ‘Connected Centres Knowledge Exchange Network’ and ‘Academy for the Mathematical Sciences’. In July several members of the Committee attended a meeting hosted by the IMA Professional Affairs Committee (PAC) at which invited guests, Joanna Jordan and Matt Butchers gave insight into how such initiatives might work. Further details on this topic are included in the update on the Professional Affairs Committee.
- As usual, the Committee worked to support the community in many ways, including by liaison with external bodies. For example, Committee members encouraged others in the community to stand for nomination to the EPSRC Mathematical Sciences Strategic Advisory Team, and an IMA representative attended a learned society workshop which was held as part of the EPSRC review of Doctoral Education.
- Nominations for the inaugural award of the ‘IMA Hedy Lamarr Prize for Knowledge Exchange in Mathematics and its Applications’, which had been introduced to the

community in 2020, closed on 31 January 2021. The first award was made to Professor Rebecca Hoyle for her sustained contributions to knowledge exchange in the mathematical sciences, creating new links between academia and the wider world, and inspiring, enhancing and supporting others in their knowledge exchange.

- Martine Barons worked with IMA and LMS colleagues to organise the 2021 joint IMA-LMS scientific meeting, which took place on 30 September and 1 October, on the theme of ‘Maths in Human Society’. This meeting, which was held virtually, included a number of mathematical lectures, as well as artistic exhibitions; a range of topics including pure and applied geometry, network science, and urban systems featured on the programme. Thanks are given to ICMS for hosting the event as part of its online Mathematical Sciences Seminars and to all involved from both societies, speakers, other participants and attendees.

Journals

The Institute’s eight academic journals are published by Oxford University Press (OUP). Three of these are traditional hybrid print journals:

- *IMA Journal of Applied Mathematics*
Editors: Alan Champneys, (Bristol), and Demetrios Papageorgiou, (Imperial);
- *IMA Journal of Numerical Analysis*
Editors: Arieh Iserles, (Cambridge), Endre Süli, (Oxford) and Charles Elliot (Warwick);
- *Teaching Mathematics and its Applications: an International Journal of the IMA*
Editors: Duncan Lawson, (Coventry); Christopher Sangwin, (Edinburgh) and Cathy Smith (OU).

Four are online only hybrid journals:

- *IMA Journal of Mathematical Control and Information*
Editors: Christophe Prieur (Grenoble), Sarah Spurgeon OBE, (UCL) and Joachim Rudolph (Saarland University);
- *Mathematical Medicine and Biology: A Journal of the IMA*
Editors: Oliver Jensen, (Manchester); John King, (Nottingham), James Keener, (Utah) and Bob. Guy (University of California Davis);
- *Information and Inference: A Journal of the IMA*
Editors: Robert Calderbank, (Duke); David Donoho, (Stanford); John Shawe-Taylor, (UCL) and Jared Tanner, (Oxford);
- *IMA Journal of Management Mathematics*
Editors: Philip Scarf, (Salford); and Aris Syntetos, (Cardiff).

One is an open access only online journal:

- *Transactions of Mathematics and its Applications*
Editor in Chief: Arieh Iserles (Cambridge) and Dominic Vella (Oxford).

Five journals currently have impact factors (IF). During the most recent assessment period the IF increased for *IMA Journal of Numerical Analysis* to 2.601.

Conferences

The IMA Conferences Committee met in January 2021 when it reviewed the position regarding the possibility of in-person conferences resuming in 2021. The committee agreed that we should continue to convert in-person events to online events for the next six months.

The Conferences Committee met again in June 2021, and reviewed the progress made in delivering online events. The committee agreed that the combination of Zoom and additional networking software was working well and that this should be continued for the rest of 2021.

Following the success of the IMA 2020 Mathematics Series in July/August we ran a similar online series in May this year. The IMA 2020 Gold Medal winner, Professor Nick Higham delivered his Gold Medal Lecture as the inaugural event of the 2021 Mathematics series.

The programme for 2021 was as follows:

- *Python for A-Level Mathematics and Beyond - online*
22 & 23 January 2021
- *Early Career Mathematicians Spring Conference - online*
13 March 2021
- *6th IMA Conference on Mathematics in Defence – online*
30 & 31 March 2021
- *3rd Mathematics of Operational Research – online (with the OR Society)*
20-23 April 2021
- *IMA Mathematics 2021- online*
6 May & 25 May 2021
- *11th IMA International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR) – online*
28 June-2 July 2021
- *4th IMA Conference on Nonlinearity and Coherent Structures- online*
7-9 July 2021
- *Python for A-Level Mathematics and Beyond – Summer – online*
16 & 17 July 2021
- *3rd New Lecturers' Induction Course – hybrid (at the INI)*
8 & 9 September 2021
- *2nd IMA Conference on the Mathematics of Robotics - online*
8-10 September 2021
- *Maths in Human Society - Joint conference with LMS – online*
30 September & 1 October 2021
- *Black Heroes of Mathematics Conference –online (with BSHM, ICMS, LMS, INI, ICTP-East African Institute for Fundamental Research, African Institute for Mathematical Sciences and the Mathematical Association)*

5 & 6 October 2021

- *Early Career Mathematicians Autumn Conference – online*
23 October 2021
- *18th IMA International Conference on Cryptography and Coding – online*
14-16 December 2021

The feedback from delegates has been very positive, and we have noted that going online has resulted in an upward trend in female participation, more international delegates, and an overall accessibility of the conferences.

We give our thanks to the mathematical organising committees, and the conference team for working so diligently to ensure effective and engaging online delivery in 2021. We anticipate a mix of online and in-person events in 2022.

IMA Lectures

As reported within the Conferences events section, Professor Nick Higham gave the 2020 Gold Medal Lecture, *Communicating Applied Mathematics in 2021*, online.

Two 16plus lecture events are also reported within the Conferences events section.

Small Grants

The IMA's Small Grants Scheme is designed to be flexible, so that it can be used to facilitate any research activity within the scope of mathematics and its applications. Grants are available up to a value of £600 for individuals and up to £1,200 when enabling an event to take place. Applications are limited to IMA members only.

The budget for 2021 was £12,000. Events continued to be affected by affected by Covid-19 so application numbers were reduced. The Scheme received 10 applications, requesting a total amount of £5,550, however, two were withdrawn. The remaining eight were awarded in full. Awards for 2021 are shown on the IMA website. Included in the financial statements are £1,750 worth of small grant applications relating to 2020.

Education

During 2021, our contribution to mathematics education was led by Professor Michael Grove (Honorary Secretary with responsibility for Education), supported by Professor Nigel Steele (Deputy Honorary Secretary Education), Professor Andrew Osbaldestin (Chair, HEdSA), Mr Christopher (Chris) Chipperton (Chair, S&FE), succeeded by Dr Gordon Laing (Chair, S&FE) and Vanessa Thorogood (Education Manager) together with all our education committee members.

The Education Service Area actively promotes the engagement of the Institute's members in education with its work through communications by email, on the website, and in *Mathematics Today*. For instance:

- notification of the publication of key reports;
- invitations to participate in events and / or contribute to external initiatives;
- opportunity to provide feedback on specific issues;
- invitations to contribute to Institute responses to consultations;

- publication of the Institute's submissions to consultation exercises.

Higher Education

During 2021, HEdSA updated the IMA Employability Statement.

Dr Tony Hill was invited to the meeting to present to HEdSA about his initiative Levelling up: Maths, which aims to support the provision of online tutoring for A-Level Mathematics students who come from underrepresented backgrounds in mathematics. To achieve this, undergraduate student tutors are brought together with A-Level Mathematics students who wish to study a STEM degree at university. The project works with universities who help to identify local schools with students who the project is aimed at, and recruit undergraduate students.

As a result, a Working Group was established to take forward the IMA's involvement with the Scheme and the IMA had engaged with four new universities to join the programme during Autumn 2021.

HE Teaching and Learning Series

The continuation of the COVID-19 pandemic resulted in the already postponed workshops from 2020 being postponed further.

We have agreed with the successful applicants to our third call in 2019/20 that their workshops can be held in 2022 (subject to government advice on COVID-19):

- University of Birmingham - *Making Mathematics Accessible to All*
- Cardiff University & University of Bristol - *Reflection? Action? Research: Enhancing Mathematical Research and Scholarship*
- University of Glasgow - *Assessment strategies for mathematical sciences in the digital era*
- University of Nottingham - *Project-based and synoptic modules*
- University of Plymouth - *Involving employers in the development of the mathematical sciences curriculum*
- University of Sheffield - *Effectively teaching small classes as a postgraduate demonstrator*

Induction Course for New Lecturers

The Induction Course for New Lecturers took place on Wednesday 8 and Thursday 9 September 2021 as a hybrid event.

IMA John Blake University Teaching Medal

The IMA John Blake University Teaching Medal is awarded to individuals who have made a significant and sustained contribution to the teaching of the mathematical sciences at university-level (Level 4 and above). The award is named in honour of Professor John Blake (1947-2016) who, in addition to his research profile in bubble dynamics and low Reynolds number biological flows, was amongst the first true champions of teaching and learning within higher education.

In 2021, the Council of the IMA has awarded the first IMA John Blake University Teaching Medal to Dr Lara Alcock (Reader in mathematics education at Loughborough University).

Course Accreditation

The Institute's Course Accreditation scheme accredits university degree courses from which all its graduates will meet the educational requirements for the CMath designation. A total of 64 universities currently have degrees accredited by the Institute.

During 2021, revised guidelines for Course Accreditation were published and have been fully implemented.

A list of accredited degree courses can be found on the Course Accreditation page of the Institute's website.

In February, the IMA was contacted by Dr Chris Tisdell (Professor of Mathematics and Mathematics Education (UNSW)) in his capacity as Vice-President of the Australian Mathematical Society (Education).

Chris has been given the task of looking into setting up an accreditation scheme for mathematics degrees in Australia and wanted to see what he can learn from the IMA's Course Accreditation scheme.

An online meeting took place, after which, a copy of the Course Accreditation guidelines and associated paperwork was shared with Chris with the proviso that the IMA's assistance is acknowledged if a similar scheme is introduced by the AMS.

Schools and Further Education

Mr Chris Chipperton's second three- term as Chair of the S&FE Committee ended in 2021. Chris was succeeded by Dr Gordon Laing.

- RS ACME Mathematical Futures Call for Views (joint response with HEdSA)
- DfE - Introducing international qualified teacher status (iQTS)
- Ofqual and the DfE Joint Consultation - How GCSE, AS and A level grades should be awarded in summer 2021
- Pearson - National Consultation into the Future of Qualifications and Assessment in the UK
- DfE & Ofqual Consultation: Proposed changes to the assessment of GCSEs, AS and A levels in 2022
- DfE & Ofqual Consultation: Contingency arrangements: GCSE, AS, A level, Project and AEA

Polymaths

Polymaths is a part-time open access course validated by the Institute offered by the University of Bolton. A total of five people was awarded the Polymaths certificate in 2021.

Education Grants

Individuals in schools, FE and HEIs in the UK can apply for a grant, normally up to a maximum of £600, to help with the costs of running or attending an educational activity relating to mathematics.

The Education Grants Judging Panel, consisting of the Institute's Honorary Secretary with Responsibility for Education and the Chairs of the education committees, decides on each

application.

During 2021, the Education Grants scheme received 17 applications; of which three were awarded grants for the full amount requested, one received a reduced grant and 13 were declined.

The Education Grants awarded a total of £1,801.34 in 2021.

Applications approved for 2021 are shown on the Institute's website.

IMA MathsCareers

During 2021 MathsCareers received 399,939 visits. The site is one of the top websites of its kind within the STEM community and continues to be popular among undergraduates seeking career advice as well as school audiences. Content planned for 2022 includes an increased range of articles on GCSE maths topics, as well articles on a variety of mathematical careers. Two contests are run every year where entrants submit posters on a mathematical theme. Members and non-members can take part, including school age children, with an exclusive IMA Water Bottle as the prize.

Social Media is used to raise the profile of IMA MathsCareers, and it now has 7,537 followers on Twitter including several 'verified' followers. The profile of the site, as well as mathematics generally, is raised via the distribution of classroom posters.

Mathematics Teacher Training Scholarships

The IMA, working with LMS, MA, MEI, STEM Learning and RSS, delivered the Mathematics Teacher Training Scholarships on behalf of the Department for Education. The overall aim of the Scholarships scheme is to improve the quality, and widen the pool, of applicants for secondary teacher training by attracting highly qualified graduates and career-changers who might not normally consider teaching as a career.

The 2020/21 (year nine) scheme was announced in October 2020 and opened for applications in January 2021, with a target of awarding 270 Scholarships to those who commence secondary mathematics teacher training in the 2021/22 academic year. We had another successful year, receiving 520 applications and awarding 260 Scholarships. It is important to note that whilst the number of Maths Scholarships is less than the previous year, the number of awards was capped by the Government at 270.

Whilst all our activities remained online during 2020/21, in comparison to previous cohorts of Maths Scholars, we continued to provide the same quality and quantity of CPD for our Maths Scholars. The webinars that our Maths Scholars received were:

- The NRICH Maths Project (Mathematics resources for children, parents and teachers to enrich learning). - Dr Ems Lord (Director of NRICH)
- Operational Research - Let's play with Lego - Robin Wood (The OR Society)
- Using Desmos for Statistics - Natalie Vernon (MEI)
- Finding the Richness - Alison Kiddle (Consulting Mathematician)
- Maths Engagement in and Beyond the Classroom - Jess Sashaw and Beth Hawkins (Science Museum Group Academy)
- Mathemagic! - Steve Lyon and Michael Anderson (STEM Learning)

- Teaching for Mastery and Visual Learning - Simon Mazumder (NW1 Maths Hub)
- What's the point? Bringing the real world into maths lessons with STEM Ambassadors – Tamasin Greenough Graham (North Yorkshire STEM Ambassador Hub)
- Lost in transition? How to support students as they move from KS2 to KS3 - Alison Hopper (MEI)
- Financial Maths - how to make the finance of maths come to life for students - Bobby Seagull (Maths Teacher and Alumni)

Other than the first two webinars, our Alumni were also invited to attend the webinars.

In July we held our final CPD event, the Online Summer Bash 2021, which was hosted by Dr Nira Chamberlain.

To address the lack of networking opportunities that comes with online CPD, The Common Room was established to provide an informal space where Scholars and Alumni can mingle and share resources in a relaxed but purposeful way. There were five Common Rooms held in total.

The tenth year (2021/22) of the Mathematics Teacher Training Scholarships was announced in October 2021 and applications will open in January 2022. There is no change to the financial incentives for those going into mathematics initial teacher training for both the government bursary and the Scholarships. The Maths Scholarship is still a £26k tax-free bursary during the initial teacher training year.

Again, there are 270 Maths Scholarships available for individuals commencing secondary mathematics teacher training in the 2022/23 academic year.

University Liaison

The University Liaison activity increases membership, awareness of, and participation with the IMA amongst undergraduate and postgraduate students, and the university community. This is achieved through newsletters to our nearly 6,800 strong eStudent community, grants to postgraduate and undergraduate student mathematical societies, careers talks for mathematics undergraduates and supporting careers events and student conferences. In 2021 there were five issues of the eStudent newsletter. From October 2021 in-person talks resumed though some remained online. The Tomorrow's Mathematicians Today conference was hosted online in March by University of Greenwich, with over 120 delegates registered across the two days and 18 student presentations.

In 2021, £4,000 was paid in grants. Undergraduate awards were made to the Mathematical societies of the Universities of Aberdeen, Cardiff, Dundee, Newcastle, University College London, and Warwick. Awards were made to the IMA-SIAM Joint Student Chapters of the universities of Cardiff, Dublin, Edinburgh/Heriot-Watt, Sheffield and Warwick. Sponsorship of £850 was also given for prizes for the Oxford Industrially Focused Mathematical Modelling (InFoMM) Graduate Camp and speaker costs at the SIAM UKIE annual conference. Society activities supported included conferences, competitions, talks and participation in IMA conferences. The University Liaison Officer (ULO) delivered 28 careers talks, 15 of which were delivered remotely, and supported two careers panels, eight conferences and the InFoMM camp. Two events were delivered by IMA ambassadors.

In September, Council agreed that the IMA would support the Levelling Up Mathematics project piloted in 2020 by the LMS with the Universities of Durham and Leicester. The University Liaison Officer is coordinating this activity with our partner universities.

Academic Representatives

The Academic Representatives scheme was established by the Institute in 2017, and we currently have 60 Representatives at 58 universities. Representatives are members of academic staff and they support the Institute by highlighting the work of the IMA in the community and beyond, to their students and colleagues, as well as providing feedback on the priorities of academic members. During 2021 two AR Newsletters were sent to help to grow the full membership of students and academics. It is planned that the scheme will develop further over the next year.

Early Career Mathematicians' Group

The Early Career Mathematicians' (ECM) Group aims to provide those starting out in the profession with opportunities to develop their skills and network with peers. Two ECM conferences took place online in March and October. Both conferences were well-attended and offered early-career members a varied programme of engaging talks and dedicated time to network with other attendees. These conferences were organised with assistance from the Secretariat.

The Group also organised a popular Virtual Maths Tea session on the topic of working as a mathematician in industry. The ECM Group continues to work closely with the University Liaison project to recruit student members and is also active on social networking sites.

Professional Affairs

The Professional Affairs Committee (PAC) met three times during 2021 via remote conference facilities, chaired by Richard Pinch. The Key agenda items were advancing a Knowledge Exchange (KE) strategy within the IMA, and engagement with the Data Science Professionalisation steering group, which had emerged in 2020 following an initiative by the Royal Society, and comprising a number of professional bodies led by the RSS.

At the meeting in July, the committee was joined by members of the IMA's Research Committee to discuss KE. The Chair noted that both Executive Board and Council had agreed recently that PAC should take the lead on KE for the IMA to ensure that the non-academic side of KE is properly represented. He welcomed guests, Joanna Jordan and Matt Butchers, who provided an overview of the Connected Centres proposition, and described how they saw the project developing, how the IMA could contribute to the project, and specifically how the IMA could deploy the connection with members in supporting this.

The Employers' Forum did not take place this year due to the ongoing COVID-19 situation. It had been considered whether a specific KE Employers' Forum would be desirable in future, and following the earlier discussion it was agreed that the aim would be to hold an Employers' Forum in person in 2022, possibly with some online component, on the theme of KE, aiming to support some aspect of the proposed Academy of Mathematical Sciences and Connected Centres work programs.

The committee noted that the Data Science Professionalisation steering group had made a proposal regarding new professional designations which would not replace or compete with the chartered or professional designations of any of the existing societies, and which would be awarded in accordance with a jointly agreed set of criteria. This was welcomed as a positive step in improving data skills and enhancing professional standards in Data Science.

Details of our Corporate Affiliate members can be found at:

<https://ima.org.uk/affiliates/corporate-affiliates/>

We are very grateful for the involvement of these organisations with mathematics and with the Institute.

Mathematics Today

We continued to produce six printed issues of our publication in 2021. Highlights include the August Summer ‘Bumper’ issue, which contained an article by Mark Pencovitch on Knot Theory entitled ‘What’s Knot to Love?’; this was particularly well received and went on to be awarded the Catherine Richards Prize for the best article published in 2021. We celebrated Black History Month in the October issue, which included the Presidential Address from Dr Nira Chamberlain and learned contributions from mathematicians from ethnic minority groups.

The Graham Hoare Prize 2021 was awarded to Robyn Goldsmith for her entertaining article ‘Could Mathematics Be Big at the Box Office?’ which was published in the December 2021 issue.

IMA Website and Social Media

The Social Media Task Group was established in 2020 to support the IMA’s Marketing Officer with guidance on making mathematical social media posts; and determine how we could connect with our membership during the pandemic. The role of the group continued and expanded in 2021, with new members joining to incorporate a more diverse input. We experienced high membership engagement this year during Women’s History Month 2021, Pride Month 2021 and Black History Month 2021. Further information on the work of the group is contained under “Membership Development”.

The IMA’s presence on social media has increased over the year. We have gained over 3,000 followers on Twitter, bringing our total to 20,190. Our LinkedIn company page has over 20,775 followers. Our Facebook page has over 1130 followers and Facebook group has over 4,500 members. Our newest channel, the IMA Instagram page now has over 470 followers.

Google estimates demographic information about its users which it partially shares with us via our Google Analytics account. This demographic information extends to age and gender. Demographic information provided by Google Analytics of the visitors to the IMA website has been informative: in 2021 more than half of the visitors to the IMA site have been under 34 years of age (57.91%); and the gender distribution of total visitors is around 56/44 split of male to female (in comparison to the current total IMA member split of 75/25 male to female).

Sessions to the IMA website are up this year. Each month of 2021 resulted in more site visits than in 2020, with 1-2k sessions more than the corresponding month in 2020. Visits to the IMA website are up 11 per cent on 2020.

IMA e16plus Newsletter

The e16plus Newsletter published six editions in 2021. It is designed to inspire and raise interest in mathematics amongst 16 to 19-year olds and has 1,515 subscribers. The regular puzzle feature continues to be popular with readers, and the links in the newsletter are designed to encourage engagement with MathsCareers and the IMA website.

Branches

Branches continue to be an important feature of the IMA, providing regional networking opportunities. They are run by committees of local members, with administrative support provided

by the Secretariat.

The six active branches have held varied programmes of events for their members during 2021 and plans for the 2022 programme of talks are underway. Branches continued to provide an interesting selection of talks online, which enabled members who might usually be unable to attend in-person meetings to engage with their local branch. Many talks were recorded and uploaded to the IMA Youtube channel. Making these videos available has increased our interactions threefold and such on-demand content will help us grow engagement in the future. The West Midlands branch held the first hybrid online / in-person talk during November.

Some areas of the UK remain unrepresented by branches; members are encouraged to consider establishing new branches (or reviving dormant ones) in these areas, for which Secretariat assistance continues to be a high priority.

Diversity and Inclusion

The IMA is a signatory of the Science Council Declaration on Diversity, Equality and Inclusion, and Council has appointed champions to lead the IMA in this important agenda. Dr Snezana Lawrence is thanked for her valuable contributions as Diversity Champion during 2021.

By identifying diversity as a cross-cutting theme in all IMA committee meetings many improvements have been identified and achieved. This is reflected in key events and programmes across our portfolio of activities which the IMA has led or partnered over the course of 2021 including:

- International Women's Day Maths Tea event in March 2021;
- Support to the LMS Women in Mathematics Committee through IMA representation;
- Conference Organising Committee Members always take gender equality into account when considering invited speakers, and in the formation of the committee;
- Black Heroes of Mathematics Conference October 2021;
- Black History Month articles in *Mathematics Today* in October 2021;
- Continued commitment to increasing engagement from underrepresented groups through the e16plus Newsletter, MathsCareers website and social media activities;
- Becoming a partner with the Levelling Up: Mathematics programme to provide extra Mathematics tuition for disadvantaged A-Level students.

Our second Membership Diversity Survey was carried out during August; and we thank those members who took the time to respond. This, along with the results of the D&I Progression Framework benchmarking exercise, led by the Science Council and Royal Academy of Engineering, will help shape our plans in this area of work for 2022 and beyond.

MEMBERSHIP and CHARTERED REGISTERS

The Membership Committee, chaired by Professor Paul Glaister, is delegated, by Council, to assess individual membership applications. The Membership Committee is made up of Chartered Mathematicians and Scientists who are Fellows of the Institute. They have a background in at least one of the following major areas of employment for mathematicians: academic research and teaching, schools and further education, industry, commerce, finance and IT.

In 2021 we have had the privilege to welcome over 800 new members and assist 104 existing members in transferring to a higher grade. We have also recruited 18 new Chartered Mathematicians and/or Chartered Scientists.

Membership figures at 31 December 2021:

Honorary Fellow	16
Fellow	1,437
Member	1,297
Associate Member	1,858
Affiliate	543
Student	537
Total	5688

Of the above memberships, 1,483 are registered as Chartered Mathematicians and 213 as Chartered Scientists.

The Institute has continued to support UK University Mathematics Departments by offering over 100 IMA Graduate Prize Memberships in 2021.

Chartered Mathematics Teachers

The Chartered Mathematics Teacher Registration Authority consists of representatives from IMA, Association of Teachers of Mathematics, Mathematical Association, and National Association of Numeracy and Mathematics in Colleges. Professor Paul Glaister, the chair of the Institute's Membership Committee, also chairs the Chartered Mathematics Teacher Registration Authority. At 31 December 2021, we had 43 registered Chartered Mathematics Teachers.

Membership Development

The onset of the pandemic in 2020 led to a switch in focus to ensuring that we maintained close connection with and provided support to our membership. This remained principal focus during 2021.

The IMA "Virtual Maths Teas" launched in 2020, and proved very successful, enabling members to join informal discussions on a range of topics. This continued in 2021 with a further six successful events. The Virtual Maths Tea on 8 March - "Women in Maths" - was so successful that we decided to run the event again on 12 May for Women in Mathematics Day. Due to ongoing popularity, these events will continue into 2022.

The Membership eBulletin continues to be issued every two months, alternating with *Mathematics Today*. The last edition of 2021 was issued in November. The eBulletin issued in early May 2021 contained the following message to members:

"It is now over a year since the first lockdown and we are very pleased to report that our membership numbers continue to be healthy. We have strived to maintain IMA services throughout and we would like to thank you, our members, for your stalwart support during this challenging year. It is very much appreciated by IMA Council, committee members and the staff. We look forward to seeing you at our online (and hopefully in-person) events during the coming year."

REPRESENTATION AND PUBLIC RELATIONS

The Institute co-operated with a wide range of mathematical and scientific bodies. The Institute responded to government and statutory body consultations and was involved in informal contacts with senior officials in these areas. The Institute provided information on career opportunities and

on other aspects of mathematical education and practice.

The IMA believes that mathematics is best served when a unified voice is presented to government and funders. Therefore, whenever possible the IMA promotes its message through the Council for the Mathematical Sciences (which is comprised of the IMA, the London Mathematical Society, the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society).

IMA and Government

Both in its own right and as a member of CMS, the IMA has been involved with a wide range of engagement activities in Parliament this year.

We continued to run the DfE Mathematics Teacher Training Scholarships scheme.

IMA Council members are in regular contact with DfE and UKRI.

In March a panel of CMS judges, chaired by Professor Helen Wilson, selected the Parliamentary and Scientific Committee STEM for Britain mathematics winners. Once again we are very grateful to the Clay Mathematics Institute and the Heilbronn Institute for their generous sponsorship of these prizes. STEM for Britain is the largest science event held in the Houses of Parliament on an annual basis and helps to strengthen our dialogue with Parliamentarians.

On 13 September, the Parliamentary and Scientific Committee held an IMA-sponsored meeting on Algorithms and Mathematical Modelling. Led by David Youdan and Dr Martine Barons, IMA Vice President Learned Society, the IMA assembled the following team of speakers: Dr Ellen Brooks-Pollock, Dr Nira Chamberlain (IMA President), Professor Hannah Fry and Dr Christian (Kit) Yates who each gave a 10-minute talk, followed by questions from the online audience. 220 people registered to attend this event.

Council for the Mathematical Sciences (CMS)

CMS is composed of IMA, LMS, RSS, EdMS, and ORS, and its leadership changed when Professor Alison Etheridge was appointed as the new chair in June 2021, succeeding Professor Sir Ian Diamond FBA. CMS provides an authoritative and objective body that exists to develop, influence and respond to UK policy issues that affect the mathematical sciences in higher education and research, and therefore the UK economy and society in general.

A number of activities that relate to education and research were advanced together with our sister societies within CMS.

CMS continues to receive briefings from Royal Society ACME, which is funded by the IMA and others.

CMS continued to promote the needs of mathematics to BEIS, DfE, UKRI, the House of Commons Science and Technology Committee, the House of Lords Science and Technology Committee, and the Scottish Funding Council.

The work of the CMS ‘Big Mathematics Initiative’ continued in 2021 with the focus now on the proposed Academy for the Mathematical Sciences and the associated Connected Centres Knowledge Exchange network. A Green Paper was produced at the end of the year to which responses were invited from members of all CMS member body societies. This work will continue into 2022.

London Mathematical Society (LMS)

Throughout 2021 we continued to work with the LMS in many areas including research, Mathematics Teacher Training Scholarships and mathematics promotion.

Together we also award the David Crighton Medal for Services to Mathematics and the Mathematics Community, and the Christopher Zeeman Medal for Mathematics Promotion. In 2021, Professor Caroline Series was awarded the David Crighton Medal, and the associated lecture in a joint programme with Professor Ken Brown, who was awarded the previous David Crighton Medal (2019), is planned for Spring 2022 as an in-person event. It is also hoped that the lecture event associated with Matt Parker's award of the 2020 Christopher Zeeman Medal will be held in 2022; these lectures have been postponed until COVID-19 distancing measures have been relaxed.

As documented in the Research Committee section of this report, a well-attended, fifth scientific meeting of the current IMA-LMS series, titled 'Maths in Human Society' took place online, on 30 September and 1 October.

The IMA continues to work closely with the LMS on a number of activities, from jointly recognizing and celebrating mathematical achievement, to supporting the next generation of mathematicians, in order to ensure the best use of available resources and individual strengths of each organisation.

Other UK Mathematics Organisations

We continue to work closely with the Association of Teachers of Mathematics, the Mathematical Association and NANAMIC in the management of the Chartered Mathematics Teacher Registration Authority.

We also work closely with many sister organisations, Royal Society ACME, NCETM, and the Joint Mathematical Council to promote and support mathematics whenever possible.

The IMA has a representative who is an invited observer to the HoDoMS meetings and activities. The IMA always seeks to develop its higher education strategy in agreement with HoDoMS and the LMS.

UK SET and Others

Science Council

The IMA is a member of Science Council and continues to work cooperatively with Science Council to promote science, including mathematics, to Government.

Throughout 2021 the Chartered Scientist designation has continued to be popular with members with 213 holding the designation.

International

SIAM

IMA members who live in the UK may receive a discounted SIAM membership fee under our reciprocity agreement. (A reciprocal arrangement exists for SIAM members who live in the US). We have joint promotional campaigns and co-operative activities with SIAM and SIAM UKIE.

European Mathematical Society

The IMA is a member of the European Mathematical Society. IMA members pay their discounted subscriptions directly to European Mathematical Society.

ICIAM

The IMA has continued its membership and support of the International Council for Industrial and Applied Mathematics.

FINANCE

The 2021 budget was a loss of £23,622. The result is an unrestricted surplus of £83,672.

In the following section all figures relate to the difference between budget and actual. The most significant reason for the changes was the COVID-19 pandemic. For example, there was a £32k saving in relation to meetings that were held remotely rather than face to face. There were savings in office costs of £25k, due to staff working from home. Lastly, there was a £32k saving in education and grants, due to university's not being at full capacity and lectures being held remotely.

At the end of 2021 the total assets less current liabilities is £1,478,154 of which £133,335 is in relation to restricted reserves. In 2020 the equivalent figure was £ 1,412,247, of which £151,100 was in relation to restricted reserves.

Funds were used to support our charitable aims. There is a clear public benefit in our activities to support education; to run educational conferences; to support mathematics to government; to regulate the profession of Chartered Mathematician; to contribute to the advancement of research initiatives; to be an influencing voice for the use of mathematics across STEM, industry and commerce; and to promote mathematics across media and society in the UK.

Members receive a membership publication. The revenue received from member subscription exceeds the value of direct membership services. The subscription surplus is spent on meeting our charitable objectives.

Finance Committee, which reports to Council, sets the pay and remuneration of the charity's personnel.

Policy on Reserves

'The Institute is a charitable organisation that promotes mathematics and its applications. It is a learned society and a professional body where income is principally based on subscriptions, and revenue from conferences and publications. The Institute requires adequate reserves to provide for any shortfall in immediate income and to allow remedial action in event of any long-term adverse change in circumstances. The Institute also requires financial reserves in order to respond to any major opportunities to develop and promote its objectives.

Council considers that reserves equivalent to one year's standard expenditure (excluding large projects which are not part of standard long-term activities) would be an appropriate level.

When Restricted Funds exist, for example the IMA Leslie Fox Fund, those funds will be used for the purpose for which they are restricted. Restricted reserves will not be counted when calculating the amount of reserves for general purposes.

Council continues to spend some of its reserves to boost future membership (e-16+ newsletter; postgraduate student initiative). The intention of this investment is to increase membership revenues that will recover the cost of development. Finance committee will monitor the effect of this investment on reserves.

Two months' operating expenses should be held as liquid reserves.'

At the end of 2021 the total assets less current liabilities is £1,478,154 (£1,412,247), which represents a coverage of 12-15 months of standard expenditure, and therefore is deemed to meet the policy.

Policy on Investments

‘The IMA holds reserves that are close to one year's standard expenditure (excluding large projects which are not part of standard long-term activities), with a requirement that two months' operating costs should be available at short notice.

The IMA Finance Committee recommends that reserve funds (above those required for operational purposes in the next two months) should be held in high interest deposit accounts, preferably those designed specifically for charities. Decisions on the accounts to be used will be based on interest rates and security. Decisions on the term of deposits will be based on the different interest rates available and the timing of any likely operational requirement for the funds to be deposited.

The amount to be held on deposit will be reviewed by the IMA's Finance Committee every meeting. The interest rates available will be reviewed by the Finance Committee. When time-limited accounts mature, the available options will be reviewed by the Executive Director and the Honorary Treasurer

A target of three months' (no more than six months') budget expenditure should be held with any one authorised financial institution or group.’

Policy on Risks

The Institute has had a regular income flow from subscriptions, publication sales and conference fees. While these may fluctuate on a year-to-year basis, the Institute has sufficient reserves to enable remedial action in event of any short- or medium-term decline. A review of the Institute's freehold property, Catherine Richards House, is conducted regularly to determine any repairs or refurbishment necessary.

Finance Committee agree a paper each year which sets out a range of perceived risks, together with assessments of probability (1-3), severity of consequence (1-3), rating (1-9), and a recovery strategy for each item. In the current risk analysis the highest rated risks and the recovery strategy for these risks are:

- Loss of Key personnel (rated 6)
- Decline in journals revenue (rated 6).

IMA Grant Policy

‘All IMA Grants are retrospectively reviewed at the end of the financial year by the IMA Council or Executive Board. All grant budgets are set by Council before the year begins. Grants are currently awarded by four routes: Small Grants to facilitate research activity; Education Grants; Undergraduate and Postgraduate Grants; and Other Grants. All Grants meet the stated Objectives and Mission of the Charity and produce Public Good.

Small Grants

The purpose of the Institute's Small Grant Scheme is to facilitate research activity in all areas of applicable mathematics. The Small Grant Committee normally awards grants to a value of £600. A higher ceiling figure of £1,200 can apply when the grant would enable a meeting/conference with a mathematical theme to take place.

Education Grants

Individuals in secondary schools, Colleges of Further Education (FE) and Higher Education Institutes (HEIs) in the United Kingdom can apply for a grant to help with the costs of running or attending an educational activity relating to mathematics. Grants to a value of £600 are awarded by the Education Grants Committee.

Undergraduate and Postgraduate Grants

Grants are available to University Mathematics Societies. The Secretariat award grants to a value of up to £400.

Other Grants

These grants are awarded at the discretion of Council or Executive Board to support organisations or activities that promote mathematics and its applications. The exact range of grants is not fixed, but typical examples of grants recipients include: the Council for the Mathematical Sciences; the Advisory Committee on Mathematics Education; the British Applied Mathematics Colloquium; journal prizes; and mathematical events or meetings.

Further details of all grants that can be applied for can be found on the IMA's website.

Going Concern

The Trustees have reviewed the assets, income and regular expenditure of the IMA and satisfied themselves that the Institute is in a good financial position. They are satisfied that the IMA is a Going Concern (as described in the Financial Reporting Council document – Going Concern and Liquidity Risk: Guidance for Directors of UK Companies 2009) and have prepared the Financial Statements on that basis.

FUTURE PLANS

The IMA remains in a secure financial position for 2022, and from this secure position we are continue to plan a phased return to 'the new norm', despite some ongoing uncertainties around Covid-19 and possible future impact on activities.

At the beginning of 2022, the staff team is moving to a structured return to the office, including flexible working, which will be reviewed at the end of the first Quarter of the year. Most services and activities are planned to be virtual for the first six months, however with some hybrid meetings and a tentative plan for in person events. This plan will be reviewed on a regular basis.

The 2022 budget was approved by Council in November 2021 with a planned deficit of -£23,622. This figure represents the first year of a dip in journal sales because of the effects of the pandemic. It is anticipated that this dip will return to normal levels in the next couple of years.

Since the IMA provided a full suite of services in 2020-2021 during the pandemic, it is in a good position to continue with virtual events, transitioning to face-to-face events when this is allowable, and exploring the introduction of hybrid events during 2022. Virtual working and virtual events provided additional benefits to mathematics and members by allowing activities to be available throughout the UK without the personal investment of considerable travel costs [both time and money]. There is also a clear positive impact on diversity, opening up participation levels for those who struggle to travel and/or attend external meetings and evening events. The Institute will continue to consider how to incorporate these benefits into its 'new norm' working. Similarly, services which were successfully introduced in 2020-21, such as the virtual 'Maths Teas' will be continued.

The effect of the pandemic on membership numbers and revenues will be monitored through 2022. September 2021 also marks the end of the current three-year term of the DfE grant to run the

Mathematics Teacher Training Scholarships scheme; this has since been extended for one year and we will learn whether the DfE wants this scheme to continue into 2023 and beyond in England.

The Membership Development Scheme that was an output from the Council Strategy Review of 2017 has now completed its three-year term. The benefits of this scheme will be continued into 2022 and built into normal IMA operations. These include an ongoing focus on attracting members and facilitating their journey to join and stay as members of the IMA through their careers, and the increased activities of promotion via communication, social media and a strong range of services will be maintained.

Several other membership growth initiatives will be continued:

- encouraging the use of the less complex entry mechanism for MIMA and FIMA for those from academia and Corporate Affiliates;
- continuing focus on transferring the eStudents to Student and Associate Members;
- Undergraduate and Postgraduate grants;
- e16plus Newsletter;
- IMA MathsCareers website, which increases branding exposure to a wide range of students of mathematics from age 11 to graduates, and achieved over 399,000 sessions in 2021;
- The liaison programme with undergraduate and postgraduate mathematics organisations will be continued and expanded where possible. Council considers that the support of students' networking, careers advice and mathematical aspirations, in addition to their formal coursework, is highly beneficial.

The IMA will also carry out a review the current qualifications landscape, including the impact of the Apprenticeship Levy on employer programmes for new and existing staff and the introduction of new Apprenticeship Standards which provide new entry routes into numerical careers. We will map these Standards across our current recognition frameworks to assess possibilities for alignment to, or routes into, our Chartered Mathematician Standard. This will also include our support for the work to advance the standards for the professionalisation of those mathematical scientists who work in the field of Data Science, which includes a focus on data ethics.

We will reintroduce our Employer Forums to understand employer needs for future skills development and professionalisation, in preparation for our next Strategic Review for which work will begin in 2022.

The IMA will review the support we provide to the mathematics community for primary school mathematics education and inspiration, both for teachers and pupils, as well as opportunities to highlight the exciting applications of mathematics, and resulting career paths to young people, identifying any gaps in provision for this age group and how these might be addressed. We will seek to return to exhibiting at external STEM engagement events, pandemic permitting, to share our materials and those of partners, and reignite interest in STEM subjects and mathematical careers among young people, teachers, parents and careers advisors.

The Education Small Grants will be allocated to promote mathematics education. Grants of up to £600 will be allocated up to a ceiling of £6,000.

The IMA will continue to run the Mathematics Teacher Training Scholarships scheme in the academic year 2021/2022.

The programme for Early Career Mathematicians will be supported and expanded.

The Institute's conference programme is run under the Learned Society brief. An initial programme of conferences to be run in 2022 is shown below:

- *Python for A-Level Mathematics and Beyond*, 21 and 22 January 2022, online;
- *3rd IMA Conference on Theoretical and Computational Discrete Mathematics*, 4-5 April 2022, online;
- *IMA Early Career Mathematicians' Conference*, 11 & 13 April 2022, Loughborough;
- *3rd IMA Conference on Inverse Problems from Theory to Application*, 3-5 May 2022, Edinburgh;
- *12th International Conference on Mathematics in Signal Processing*, 18-20 May 2022, Aston;
- *3rd IMA Conference on Mathematics in Finance and Climate Change*, 8-10 June 2022, Liverpool;
- *Python for A-Level Mathematics and Beyond*, 20-24 June 2022, online;
- *7th IMA Conference on Numerical Linear Algebra and Optimization*, 29 June- 1 July 2022, Birmingham;
- *IMA Mathematics in Music*, 13-15 July 2022, London;
- *4th Induction Course for New Lecturers*, (date tbc), Isaac Newton Institute, Cambridge;
- *IMA Early Career Mathematicians' Conference*, October/ November 2022 (date tbc), online;
- *4th IMA Conference on the Mathematical Challenges of Big Data*, October/ November 2022 (date tbc), Oxford.

SOURCES OF FUNDING

Key unrestricted revenue streams were:

- | | |
|----------------------------|----------|
| • Publications | £546,198 |
| • Membership Subscriptions | £334,168 |
| • Conference Income | £39,411 |

Some of our most significant charitable activities during the year were:

- | | |
|-------------------|----------|
| • Promoting Maths | £144,818 |
|-------------------|----------|

- Education £27,475
- Maths Today £185,512
- Conference Expenditure £80,171
- Grants £75,867

The expenditure of our incoming resources on these charitable activities was completely in line with our charitable objectives.

The non-current reserves of the Institute on 31/12/2021 were held with the following Finance Organisations: £206,369 is held at the Charity Bank, £209,307 at the Clydesdale Bank, £313,442 at Shawbrook Bank, and £623,735 at Lloyds; and £151,112 at Lloyds held on behalf of the Leslie Fox and QJMAM.

Prepared by Alan Peacock and Dave Lloyd

Approved by Honorary Treasurer, Professor Andrew Osbaldestin:

Date: 30 March 2022

Approved by President, Professor Paul Glendinning:

Date: 30 March 2022



Institute of
mathematics
& its applications

Incorporated by Royal Charter

Financial Statements

31 DECEMBER 2021

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2021. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 7 and 8 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and 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) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

PRINCIPAL ACTIVITIES

The principal activity of the Institute during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will revert to a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2021) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 6 shows a surplus in reserves of £65,907 for the year compared to a surplus of £231,234 in the previous year. During the year, income of a restricted nature amounting to £12 was received. Total unrestricted net assets at the year end amount to £1,344,819 (2020: £1,261,148). Restricted Net assets for 2021 were £133,335 (2020: £151,100).

COUNCIL

The constitution of the Council on 31 December 2021 was as follows:

PRESIDENT

Dr N Chamberlain (succeeded on 31 December 2021)
Professor P Glendinning (From 1 January 2022)

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Dr M Barons

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame C Hoyles

MEMBERS OF THE COUNCIL

Professor R Bearon	Dr F de Melo Virissimo	Professor G Niblo
Professor C Breward	Dr B Dias	Professor E Rothead
Dr E Campillo Funollet	Professor C Hobbs	Professor N Steele
Dr S Carr	Dr S Lawrence	Mr N Turner
Mr C Chipperton	Professor S Lombardo	

In addition the following served as members of the Council until their retirement during the year:
Dr S Plata Iturralde

The following completed their term of office as Councillors and Trustees at the end of 2021:
Mr A Apostolou Professor Dame C Hoyles

REPORT OF THE COUNCIL***TAX STATUS***

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors and a resolution to reappoint them as auditors will be put to the members at the Annual General Meeting.

By order of the Council

Dr R Pinch

30 March 2022

Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities 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 and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to 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 of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS**OPINION**

We have audited the financial statements of The Institute of Mathematics and its Applications (the 'charity') for the year ended 31 December 2021 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and the 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 Republic of 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 December 2021 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.

BASIS FOR OPINION

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

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue. Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

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 contained within the annual report. 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. 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 course of 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 this gives rise to a material misstatement in the financial statements themselves. 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 in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees Annual Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF TRUSTEES

Page 4

As explained more fully in the Statement of Trustees' responsibilities in the preparation of financial statement, the trustees, who are also the directors of the charity for the purposes of company law, 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 cease operations, or have no realistic alternative but to do so.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

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 the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

THE EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with applicable laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the charity, including the legal and regulatory framework that the charity operates in and how the charity is complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud; and
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are:

- FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice);
- The 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 (The FRS 102 Charities SORP);
- The Charities (Accounts and Reports) Regulations 2008; and
- The Charities Act 2011.

The audit engagement team identified the risks of transactions with unidentified related parties and management override of controls as the areas where the financial statements were most susceptible to material misstatement due to fraud.

Based on the results of our risk assessment we designed audit procedures to identify fraud or non-compliance with such laws and regulations identified above. The relevant audit procedures performed included but were not limited to:

- obtaining the trustees' register of interests and corroborating entries by reviewing entries on the Charities Commission website;
- inspecting minutes of Trustees' meetings;
- maintaining vigilance throughout the audit work to identify all related parties;
- identifying and reviewing unusual accounting transactions and journal entries;
- discussions with management including consideration of known or suspected instances of non-compliance with laws and regulations and fraud; and
- performing a detailed review of the completeness and accuracy of disclosures.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

James Robert Marchant FCCA (Senior Statutory Auditor)
For and on behalf of Croucher Needham (Essex) LLP

Date:

Chartered Certified Accountants
Statutory Auditor

Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ

**STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2021**

	Unrestricted Funds 2021 £	Restricted Funds 2021 £	Total Funds 2021 £	Total Funds 2020 £	Notes
Income and endowments from:					
<i>Donations and legacies</i>					
Appeal Fund, Donations and Bequests	15,055	0	15,055	250	
Gift Aid	0	0	0	0	
<i>Charitable activities</i>					
Member Entrance fees	3,949	0	3,949	2,804	
C. Math/C Math Teacher Member Entrance fees	709	0	709	709	
Member Subscription fees	334,168	0	334,168	328,752	
Conference and symposium fees	39,411	0	39,411	(3,226)	
Publications income and Institutional subscriptions	546,198	0	546,198	700,343	
Miscellaneous income	887	0	887	435	
Careers in Mathematics	0	0	0	0	
Scholarships	119,920	0	119,920	128,053	
Education	0	0	0	0	
<i>Investment Income</i>	4,758	12	4,770	8,523	16
Total	1,065,055	12	1,065,067	1,166,642	
Expenditure on:					
<i>Charitable Activities</i>					
Branches and groups	11,552	0	11,552	10,408	
Conferences	80,171	0	80,171	106,823	
Education	27,475	0	27,475	25,980	
Grants/Donations	75,867	0	75,867	56,325	1a
Promoting Mathematics	144,818	0	144,818	136,361	1c
Scholarships	112,153	0	112,153	114,265	1c
Mathematics Today	185,512	0	185,512	169,769	
Membership	137,577	0	137,577	117,867	
Professional development	43,018	0	43,018	53,883	
Other publications	41,694	17,777	59,471	36,500	
<i>Governance</i>	121,546	0	121,546	107,227	1d
Total	981,383	17,777	999,160	935,408	1a
Net movement in funds	83,672	(17,765)	65,907	231,234	
Reconciliation of funds					
Total Funds brought forward at 1 January 2021	1,261,147	151,100	1,412,247	1,181,014	
Total Funds carried forward at 31 December 2021	<u>1,344,819</u>	<u>133,335</u>	<u>1,478,154</u>	<u>1,412,247</u>	7

No separate Statement of Total Recognised Gains and Losses has been presented as all such gains and losses have been dealt with in the Statement of Financial Activities.

The net movement in funds arises from the charity's continuing operations.
The detailed Income and Expenditure Account (2021) is attached (Appendix 1a).

BALANCE SHEET AS AT 31 DECEMBER 2021

	2021 £	2020 £	Notes
FIXED ASSETS			
Intangible fixed assets	0	0	2
Tangible assets	<u>103,186</u>	<u>111,983</u>	3
	<u>103,186</u>	<u>111,983</u>	
CURRENT ASSETS			
Stock	4,843	1,485	4
Debtors unrestricted	339,217	348,788	5
Cash at bank and in hand restricted	133,335	151,100	
Cash at bank and in hand unrestricted	<u>1,370,707</u>	<u>1,227,501</u>	
	<u>1,848,102</u>	<u>1,728,874</u>	
LIABILITIES			
Amounts falling due within one year restricted	0	0	
Amounts falling due within one year unrestricted	<u>473,134</u>	<u>428,610</u>	
	<u>473,134</u>	<u>428,610</u>	6
NET CURRENT ASSETS	<u>1,374,968</u>	<u>1,300,265</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,478,154</u>	<u>1,412,247</u>	
FUNDS			
Restricted funds	133,335	151,101	
Unrestricted funds	<u>1,344,819</u>	<u>1,261,147</u>	
	<u>1,478,154</u>	<u>1,412,247</u>	7

The Financial Statements on page 6 to 16 together with the Trustees' Annual Report (2021) in Appendix 2 were approved and authorised for issue by the Council on 30 March 2022 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN

Honorary Treasurer

PROFESSOR PAUL GLENDINNING

President

**STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2021**

Notes

	2021 £	2020 £	
Net Cash (used in)/provided by operating activities	<u>124,674</u>	<u>(99,723)</u>	15
Cash flows from investing activities			
Investment income	4,770	8,523	16
Purchase of fixture and fittings & Equipment	(4,003)	(8,990)	
Net Cash (used in)/provided by investing activities	<u>767</u>	<u>(466)</u>	
Change in cash and cash equivalents in the year	125,441	(100,189)	
Cash and cash equivalent brought forward	1,378,601	1,478,791	
Cash and cash equivalents carried forward	<u><u>1,504,042</u></u>	<u><u>1,378,601</u></u>	

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021**ACCOUNTING POLICIES****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 in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102) update bulletin 1, and the Charities Act 2011 and applicable regulations.

TANGIBLE FIXED ASSETS

Fixed assets include properties valued by Chartered Surveyors on an existing use/open market basis. Other fixed assets are stated at historical cost. No fixed asset under £250 is capitalised.

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows:-

Freehold buildings	2%
Fixtures, fittings and equipment	15%
Computer equipment	33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

INTANGIBLE FIXED ASSETS

The cost of attaining the Royal Charter has been capitalised and has now been written off on a straight line basis over ten years.

STOCK

Stock is valued at the lower of cost and net realisable value. Net realisable value is based upon estimated selling price less further costs expected to be incurred to completion and disposal. Provision is made for obsolete and slow moving items.

FUNDS STRUCTURE

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

LEASED ASSETS AND OBLIGATIONS

All leases are "operating leases" and the annual rentals are charged to the Statement of Financial Activities on a straight line basis over the lease term.

PENSIONS

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions in the year.

BRANCHES

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity. There are no other related parties.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021**ACCOUNTING POLICIES****INCOMING RESOURCES**

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included when receivable;
- Incoming resources from publications and conferences are accounted for when earned;
- Subscriptions are recognised over the period to which the fees relate.
- Scholarship income is recognised when invoiced.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

RESOURCES EXPENDED

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

GOVERNMENT GRANTS

Incoming resources from grants are accounted for on an accruals basis for re-imburement of expenses incurred and entitlement to grant allocation in line with signed contracts.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**
1.Expenditure on:

a) Analysis of expenditure on	Support Costs £	2021 Direct Costs £	Staff Costs £	2021 Total £	2020 Total £	Notes
<u>Unrestricted funds</u>						
Operating activities in furtherance of Charity's objectives						
Branches and groups	1,635	1,748	8,169	11,552	10,408	
Conferences	11,888	8,903	59,380	80,171	106,823	
Education	4,026	3,341	20,107	27,475	25,980	
Grants/donations	3,774	53,242	18,851	75,867	56,325	
Promoting Mathematics	20,946	19,251	104,622	144,818	136,361	
Scholarships	11,196	45,033	55,924	112,153	114,265	
Mathematics Today	17,109	82,947	85,457	185,512	169,769	
Membership	21,323	9,747	106,507	137,577	117,867	
Professional development	6,667	3,048	33,303	43,018	53,883	
Other publications	3,460	20,955	17,280	41,694	30,211	
Governance	17,486	16,718	87,342	121,546	107,227	
Total unrestricted resources expended	119,512	264,932	596,940	981,383	929,119	1b
<u>Restricted funds</u>						
Operating activities in furtherance of Charity's objectives						
QJMAM	0	17,777	0	17,777	6,289	
Mathematics Today (Leslie Fox Prize Fund award)	0	0	0	0	0	
Total resources expended	119,512	282,709	596,940	999,160	935,408	
b) Analysis of Total Support Costs						
	Governance	Conferences	Education	Maths Today	Membership	Other
<u>Unrestricted funds</u>	£	£	£	£	£	£
DMH premises\18 Nelson Street	3,349	2,277	771	3,277	4,084	9,131
Communications & IT	3,754	2,552	864	3,673	4,578	10,237
Postage & printing	302	205	70	296	368	824
Financial costs	8,208	5,581	1,890	8,031	10,010	22,381
Depreciation	1,873	1,273	431	1,832	2,283	5,106
Total unrestricted	17,486	11,888	4,026	17,109	21,323	47,679
	£					
Governance	17,486					
Conferences	11,888					
Education	4,026					
Maths Today	17,109					
Membership	21,323					
Other	47,679					
	119,512					

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

c) Analysis of promoting mathematics costs

				2021	2020
	Support Costs	Direct Costs	Staff Costs	Total	Total
	£	£	£	£	£
Maths Careers	4,277	9,855	21,364	35,497	27,572
Maths Matters	0	0	0	0	51,290
Other	16,669	9,395	83,257	109,321	57,500
Total promoting mathematics costs	20,946	19,251	104,622	144,818	136,361
Scholarships	11,196	45,033	55,924	112,153	114,265
	<u>32,142</u>	<u>64,283</u>	<u>160,545</u>	<u>256,971</u>	<u>250,626</u>

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

				2021	2020
	Support Costs	Direct Costs	Staff Costs	Total	Total
	£	£	£	£	£
Audit fees - Audit of Financial Statements	0	9,135	0	9,135	8,735
Legal and professional	0	0	0	0	0
Irrecoverable VAT	8,311	0	0	8,311	13,377
Cost of AGM and Trustee travel etc.	0	8,725	0	8,725	1,840
Apportionment of staff costs	0	0	87,342	87,342	77,419
General overhead costs	8,033	0	0	8,033	5,856
Total governance costs	<u>16,344</u>	<u>17,860</u>	<u>87,342</u>	<u>121,546</u>	<u>107,227</u>

e) Analysis of grants expended

	2021	2020
	Total	Total
	£	£
Educational Grants	1,501	2,846
Small Grants	7,300	3,886
University Liaison Officer Grants	3,999	7,200
Donation/Sponsorship	3,050	1,138
CMS	23,338	14,529
HE Educational Grants	0	3,500
ACME	0	0
	<u>39,188</u>	<u>33,099</u>
Less: Allocated to development of membership growth £8,000.	0	0
	<u>39,188</u>	<u>33,099</u>

See notes 6, 8 and 10 in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants. The grants are payable to individuals £0 and institutions £13,000.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

2. INTANGIBLE FIXED ASSETS

	£
Cost: 1st January 2021 and as at 31st December 2021	<u>47,131</u>
Amortisation: as at 1st January 2021 and 31st December 2021	<u>47,131</u>
Net Book value as at 1st January 2021 and as at 31st December 2021	<u>0</u>

Intangible fixed assets represent legal costs incurred in 1992 in respect of the application for a Royal Charter.

3. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation:	£	£	£
Property 1 January 2021	189,750	164,260	354,010
Land 1 January 2021	40,250	0	40,250
Additions	0	4,003	4,003
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2021	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Representing assets stated at:			
Cost	0	168,263	168,263
Valuation	<u>230,000</u>	<u>0</u>	<u>230,000</u>
	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Depreciation			
1 January 2021	133,376	148,900	282,276
Charged in the year	4,600	8,197	12,797
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2021	<u>137,976</u>	<u>157,097</u>	<u>295,073</u>
Net book value:			
31 December 2021	<u>92,024</u>	<u>11,162</u>	<u>103,186</u>
31 December 2020	<u>96,624</u>	<u>15,359</u>	<u>111,983</u>

The freehold property was revalued at 31 December 1991 by Wheeldon and Deacon, Chartered Surveyors on an existing use open market basis.

The original cost of the freehold land & property was £219,074.

The Council considers that the current value of the property (Catherine Richards House) is to the best of the information available in excess of the 1991 revaluation.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**
4. STOCKS

	2021	2020
	£	£
Goods for resale	<u>4,843</u>	<u>1,485</u>

5. DEBTORS

	2021	2020
	£	£
Due within one year:		
Trade debtors	301,385	317,324
Prepayments and accrued income	<u>37,831</u>	<u>31,464</u>
	<u>339,217</u>	<u>348,788</u>

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid after taking account of any trade discounts due.

6. CREDITORS

	2021	2020
	£	£
Amounts falling due within one year:		
Trade creditors	19,290	3,642
Other taxation and social security costs	111,454	63,693
Accruals	27,084	26,123
Deferred income	<u>315,305</u>	<u>335,152</u>
	<u>473,134</u>	<u>428,610</u>

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

	2021	2020
	£	£
Deferred income b/fwd.	335,152	340,572
Amounts released	(335,152)	(340,572)
Deferred in year	<u>315,305</u>	<u>335,152</u>
Deferred income c/fwd	<u>315,305</u>	<u>335,152</u>

Deferred income mainly consists of publishing income relating to 2022 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

The transfer from the revaluation reserve represents the difference between the depreciation charge of the property on an historic cost basis compared to the depreciation charge based on the revalued cost.

	2021			Transfer	2020
		Incoming	Resources	between	
	£	resources	expended	funds	£
	£	£	£	£	£
Restricted reserves					
Leslie Fox Prize Fund	3,073	0	0	0	3,073
QJMAM	130,262	12	(17,777)	0	148,027
	<u>133,335</u>	<u>12</u>	<u>(17,777)</u>	<u>0</u>	<u>151,101</u>
Unrestricted funds					
Free reserve	1,287,119	1,060,297	(981,383)	0	1,208,205
Gains/(losses) on investment assets	57,699	4,758	0	0	52,942
Revaluation reserve	0	0	0	0	0
	<u>1,344,819</u>	<u>1,065,055</u>	<u>(981,383)</u>	<u>0</u>	<u>1,261,147</u>
Total restricted and unrestricted funds	<u>1,478,154</u>	<u>1,065,067</u>	<u>(999,160)</u>	<u>0</u>	<u>1,412,247</u>

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	103,186	1,241,633	1,344,818
Restricted funds	0	133,335	133,335
	<u>103,186</u>	<u>1,374,968</u>	<u>1,478,153</u>

9. COMMITMENTS UNDER OPERATING LEASES

At the reporting end date the charity had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall as follows:

	2021	2020
	£	£
Plant and machinery		
Within one year	3,210	3,210
Between two and five years	1,134	4,344
Building		
Within one year	5,000	5,000
Between two and five years	0	5,000
	<u>9,344</u>	<u>17,554</u>

10. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £59,937 (2020: £51,144).

11. EMPLOYEES

	2021	2020
	No.	No.
The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:		
Management:		
£80,001 - £90,000	0	1
£70,001 - £80,000	0	0
Below £60,000	2	1
Administration:	15	15
Scholarships	2	1
	<u>19</u>	<u>18</u>

	2021	2020
	£	£
Staff costs for the above persons:		
Salaries	500,015	472,754
Pension contributions	43,179	56,772
Social security costs	41,192	42,207
Other costs	12,553	2,859
	<u>596,940</u>	<u>574,592</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

There were no related party transactions during the year.

During the year payments were made to Dr Snezana Lawrence and Dr Sophie Carr (Bays Consulting) in relation to services provided as assessors for the mathematics teacher training scholarships amounting to £1,889, and £1,229 respectively (2020 £1,469 relating to services provided by Dr Snezana Lawrence as an assessor on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £1,661, 13 members re-imbursed (2020: £1,840, 11 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the scholarships would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission.

DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2018	194,543
2019	137,739
2020	128,053
2021	119,920

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2021	2020
	Total	Total
	£	£
Net movement in funds	65,907	231,234
Add back depreciation	12,798	11,756
Deduct investment income	(4,770)	(8,523)
Decrease/(increase) in stock	(3,358)	37
Decrease/(increase) in debtors	9,572	(302,973)
(Decrease)/increase in creditors	44,524	(31,255)
Net cash provided by/(used in) operating activities	<u>124,674</u>	<u>(99,723)</u>

16. INVESTMENT INCOME

	2021	2020
	Total	Total
	£	£
Interest on cash deposits	4,770	8,523

Investment income includes £12 (2020 £1) in respect of restricted funds.

**THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
INCOME AND EXPENDITURE ACCOUNT
FOR THE PERIOD 1st January - 31 December 2021**

Appendix 1a

	Unrestricted Funds 2021	Restricted Funds 2021	Total Funds 2021	Total Funds 2020
	£	£	£	£
Incoming resources				
Entrance/Transfer fees	4,658		4,658	3,513
Subscriptions	334,168		334,168	328,752
Publications	546,198		546,198	620,343
Miscellaneous Income	887		887	435
Appeal fund and bequests	15,055		15,055	250
Interest Received	4,758	12	4,770	8,524
Conference income	39,411		39,411	(3,226)
Careers in M & 50th Ann	0		0	0
Scholarships & HE STEM	119,920		119,920	128,053
	<u>1,065,055</u>	<u>12</u>	<u>1,065,067</u>	<u>1,086,643</u>
Resources expended				
Salaries, pension & NHI	584,386		584,386	571,733
Other staff expenses	12,553		12,553	2,859
Office overheads	17,959		17,959	23,640
Telephone	4,042		4,042	4,458
General printing, post. & stat.	2,065		2,065	6,649
Office equipment hire & maint.	5,656		5,656	4,515
Council and committee	6,961		6,961	10,159
Travel	3,570		3,570	
Branches and groups	1,000		1,000	1,000
Education	1,501		1,501	2,356
Publications (inc. Maths Today)	94,470		94,470	68,190
General expenses	8,284		8,284	3,247
Bank charges	6,377		6,377	1,831
Audit and accounts	54,629		54,629	50,800
Depreciation	12,798		12,798	8,702
Amortisation of property	0		0	3,066
Subscription to other bodies	14,789		14,789	20,577
Repairs and renewals	480		480	0
Web-site expenses	1,022		1,022	8,309
Presidential Address	2,750		2,750	2,309
Conference Direct Costs	3,469		3,469	3,518
Grants/Donations	51,517		51,517	34,302
Strategy Review Weekend	43		43	0
Information Technology	3,693		3,693	0
I. T. Consultancy	(34)		(34)	1,771
Careers in M & 50th Ann	7,900		7,900	6,634
Scholarships & HE STEM	39,915		39,915	42,192
Irrecoverable VAT	8,311		8,311	13,377
Bad Debt	0		0	0
De Morgan House Rental	11,148		11,148	13,449
De Morgan House Other	5,491		5,491	6,624
18 Nelson Street Rental	6,250		6,250	3,503
18 Nelson Street Other	3,750		3,750	2,102
Development - SRW	329		329	126
Development - Membership Growth	0		0	52
Development - Database & Web	4,310		4,310	4,285
Development - Services	0		0	2,784
	<u>981,383</u>	<u>0</u>	<u>981,383</u>	<u>929,119</u>
Unrestricted Surplus/(Deficit)	<u>83,671</u>	<u>12</u>	<u>83,684</u>	<u>157,525</u>
Incoming resources				
Publications	<u>0</u>	<u>0</u>	<u>0</u>	<u>80,000</u>
	0	0	0	80,000
Resources expended				
Publications	<u>0</u>	<u>17,777</u>	<u>17,777</u>	<u>6,289</u>
	0	17,777	17,777	6,289
Restricted Surplus/(Deficit)	<u>0</u>	<u>(17,776)</u>	<u>(17,776)</u>	<u>73,711</u>
Overall Surplus/(Deficit)	<u>83,671</u>	<u>(17,764)</u>	<u>65,907</u>	<u>231,236</u>

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
BALANCE SHEET AS AT 31 December 2021

Appendix 1b

	Unrestricted	31-Dec-21 Restricted	Total	31-Dec-20 Total	Total
	£	£	£	£	£
FIXED ASSETS					
Freehold Property	92,024			96,624	
Fixtures and equipment	<u>11,162</u>			<u>15,357</u>	
			103,186		111,981
CURRENT ASSETS					
Stocks	4,843			1,485	
Trade debtors	301,385			317,324	
Prepayments and accrued inc.	37,831			31,464	
Cash at bank and in hand	<u>1,370,707</u>	<u>133,335</u>		<u>1,378,603</u>	
	1,714,766	133,335	1,848,102	1,728,876	
CREDITORS due within 1 year	<u>473,134</u>		473,134	<u>428,610</u>	
NET CURRENT ASSETS/(LIABILITIES)			<u>1,374,968</u>		<u>1,300,266</u>
			<u>1,478,154</u>		<u>1,412,247</u>
CAPITAL AND RESERVES					
Income and expenditure account			1,344,818		1,261,149
Restricted income and expenditure account			<u>133,335</u>		<u>151,099</u>
			<u>1,478,154</u>		<u>1,412,247</u>
NOTES					
Creditors due within 1 year					
Trade creditors	19,290			3,642	
Social security and other taxes	111,454			63,693	
Accruals and deferred income	<u>342,390</u>			<u>361,275</u>	
	<u>473,134</u>			<u>428,610</u>	
INCOME AND EXPENDITURE ACCOUNT					
Balance as at 1st January 2021	1,261,147	151,100	1,412,247		
Surplus for the 12 months	<u>83,672</u>	<u>(17,765)</u>	<u>65,907</u>		
Balance as at 31 December 2021	<u>1,344,819</u>	<u>133,335</u>	<u>1,478,154</u>		



Institute of
mathematics
& its applications

Incorporated by Royal Charter

Financial Statements

31 DECEMBER 2021

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2021. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 7 and 8 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and 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) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

PRINCIPAL ACTIVITIES

The principal activity of the Institute during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will revert to a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2021) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 6 shows a surplus in reserves of £65,907 for the year compared to a surplus of £231,234 in the previous year. During the year, income of a restricted nature amounting to £12 was received. Total unrestricted net assets at the year end amount to £1,344,819 (2020: £1,261,148). Restricted Net assets for 2021 were £133,335 (2020: £151,100).

COUNCIL

The constitution of the Council on 31 December 2021 was as follows:

PRESIDENT

Dr N Chamberlain (succeeded on 31 December 2021)
Professor P Glendinning (From 1 January 2022)

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Dr M Barons

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame C Hoyles

MEMBERS OF THE COUNCIL

Professor R Bearon	Dr F de Melo Virissimo	Professor G Niblo
Professor C Beward	Dr B Dias	Professor E Rothead
Dr E Campillo Funollet	Professor C Hobbs	Professor N Steele
Dr S Carr	Dr S Lawrence	Mr N Turner
Mr C Chipperton	Professor S Lombardo	

In addition the following served as members of the Council until their retirement during the year:
Dr S Plata Iturralde

The following completed their term of office as Councillors and Trustees at the end of 2021:
Mr A Apostolou Professor Dame C Hoyles

REPORT OF THE COUNCIL***TAX STATUS***

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors and a resolution to reappoint them as auditors will be put to the members at the Annual General Meeting.

By order of the Council

Dr R Pinch

30 March 2022

Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities 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 and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to 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 of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS**OPINION**

We have audited the financial statements of The Institute of Mathematics and its Applications (the 'charity') for the year ended 31 December 2021 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and the 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 Republic of 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 December 2021 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.

BASIS FOR OPINION

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

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue. Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

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 contained within the annual report. 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. 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 course of 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 this gives rise to a material misstatement in the financial statements themselves. 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 in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees Annual Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF TRUSTEES

Page 4

As explained more fully in the Statement of Trustees' responsibilities in the preparation of financial statement, the trustees, who are also the directors of the charity for the purposes of company law, 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 cease operations, or have no realistic alternative but to do so.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

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 the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

THE EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with applicable laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the charity, including the legal and regulatory framework that the charity operates in and how the charity is complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud; and
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are:

- FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice);
- The 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 (The FRS 102 Charities SORP);
- The Charities (Accounts and Reports) Regulations 2008; and
- The Charities Act 2011.

The audit engagement team identified the risks of transactions with unidentified related parties and management override of controls as the areas where the financial statements were most susceptible to material misstatement due to fraud.

Based on the results of our risk assessment we designed audit procedures to identify fraud or non-compliance with such laws and regulations identified above. The relevant audit procedures performed included but were not limited to:

- obtaining the trustees' register of interests and corroborating entries by reviewing entries on the Charities Commission website;
- inspecting minutes of Trustees' meetings;
- maintaining vigilance throughout the audit work to identify all related parties;
- identifying and reviewing unusual accounting transactions and journal entries;
- discussions with management including consideration of known or suspected instances of non-compliance with laws and regulations and fraud; and
- performing a detailed review of the completeness and accuracy of disclosures.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

James Robert Marchant FCCA (Senior Statutory Auditor)
For and on behalf of Croucher Needham (Essex) LLP

Date:

Chartered Certified Accountants
Statutory Auditor

Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ