



# ANNUAL REPORT 2013-2014

MATHEMATICAL ASSOCIATION



supporting mathematics in education

## President's Report

Many thanks for reading this far! Not sure what to write or how many words to type, so I looked at three recent *President's Reports* and noticed they contained 1413, 1318 and 1064 words. Now, which statistic do I use: mode – no use, not enough data; median is 1318 and the mean is 1265, so let's aim at that as it is fewer words. Still procrastinating, but 1265 looks interesting as I can see that there are factors of 5 and 11. In fact it is  $5 \times 11 \times 23$  and if I arrange that like  $11 \times 23 \times 5$  the digits form the first five terms of the Fibonacci sequence. Is that what is meant by 'become fluent in the fundamentals of mathematics'? Only 1139 ( $= 17 \times 67$ ) words left now, so bear with me.

It has been a great pleasure and privilege to serve the mathematical community and The Mathematical Association as President and I can sincerely say that I have enjoyed nearly every moment. The ones that have not been enjoyed have been some (very) early morning get-ups to catch trains and deadlines that creep up on one when there is something more interesting to do.

It all started in September 2012 when Paul Andrews, the then President, rang me to invite me to be the President from Easter 2013 to Easter 2014. This would, in fact, start at Easter 2012 when I would be President Designate and continue afterwards as Immediate Past President until Easter 2015. This way it gives one time to get involved in a number of things and once the MA has hooked you and landed you then you are in its keep-net for a while! But I enjoy being a dab hand as a little fish.

I did my PGCE under the excellent guidance of Mike Cornelius at Durham University and started teaching at



Houghton-le-Spring in September 1977. I joined the MA (and ATM) in January 1980 as that is when I moved to my second school in Consett. Professional development was considered your own responsibility as a professional, not imposed on you, so I started reading the association journals and putting what I had read into practice in my teaching. The NEBMA (North East Branch of The Mathematical Association) was thriving and met about once a month during term time and I started to attend. Within a year I was on the local committee and then the branch rep was not available one Saturday to attend Branches Committee so I volunteered. (If you are still reading at this point, make sure you always

volunteer: you do not know what you are missing if you don't make the most of any mathematical opportunities that come your way), went down to London and had a great day! So the next year I became the branch rep, then treasurer of Branches Committee. Before too long I found myself on Council. Locally the NEBMA appointed me the branch secretary and, in my final year in the north-east, chair.

My first Annual Conference was at Dundee in 1985. By this time I was teaching at Prudhoe in Northumberland and my school and/or LEA were always happy to help financially with the MA annual conference or ICME. Two years later the MA were looking for a venue for the 1991 annual conference and so I had a word with the NEBMA and we decided to have it at Newcastle upon Tyne. Annual conferences at the time were organised by the local branch and there was a lead-in time of about 5 years. Hence there was much planning, letter writing and organising of the four-day conference that attracted about 400 people (residents and day visitors). This would not have been possible without all the volunteers who gave up their time and helped. Colin Dixon and Alec

Barrass had both been on the 1970 organising committee, so we had a wealth of experience, aided by Mary Walmsley (currently the MA Archivist) who was coordinating the 1990 Leicester conference. Four of us, Peter and Ruth Wallis, John Fauvel and I decided to put on an exhibition entitled 'Mathematical Tradition in the North of England'. This grew and grew, so we produced a 66-page A4 book to accompany the exhibition and this was given to everyone who attended and sales afterwards contributed to the branch finances.

We all moved to Hampshire just before January 1994 as I'd spent over ten years at Prudhoe and had decided I wanted to do something different. I had a contract with SMP to work on 'SMP Interact', which was written in conjunction with practising teachers. This meant many meetings on Friday evenings and Saturdays with the writing teams, then processing the material during the week. Although I was often in the trialling schools, there was no opportunity for teaching and so when I finished my contract I was pleased to return to teaching at The Mountbatten School in Romsey in January 1998.

I left The Mountbatten School at the end of August 2010 as my wife retired from teaching MFL at that point and I wanted to spend more time together. However rather than fully retire myself I decide to 'semi-retire' and go freelance. I now do some part-time work with Bath Spa University's School of Education PGCE on Secondary Mathematics and Secondary Physics with Mathematics courses and work with NQTs as part of The Prince's Teaching Institute. Being semi-retired gives me more time to give to the professional associations, to do more research and to attend conferences without having to worry about missing time with students in school. Currently I am on the Education Committee of the London Mathematical Society, membership secretary of the British Society for the History of Mathematics and a Fellow of the Institute of Mathematics and its Applications.

The last two years have been most enjoyable as I have had time to visit a number of MA and joint MA/ATM branches. I have spent time with the Hersee collection of old mathematics exercise books, aided and abetted by Mike Price and Mary Walmsley. Editing *SYMmetryplus* is a joy to do as the wide variety of material is always interesting. I still get plenty of teaching practice as well: I do mathematics masterclasses (sometimes with my elder daughter who is a primary school teacher) and am involved with the UKMT's Mathematical Circles. Dreaming up new questions for their mathematical challenges and producing the cross-numbers for the team challenges keeps me busy. It was lovely to see so many at the recent BCME conference in Nottingham and I hope to meet more at our conference at Keele next Easter. I owe a great deal of thanks to Council for all its support, in particular to Marcia Murray, Bill Richardson and Adam McBride for all their support and guidance over the years and in particular my Presidential one!

Now with about 200 words left I ought to do a plenary. The past few years have been host to many changes in

mathematical education and it has been fantastic to see all the work done by Teaching Committee and other dedicated teachers of both the MA and ATM in responses to consultations in providing advice. I have observed many mathematics teachers on the first step of becoming good and outstanding teachers as well as talking with more experienced teachers and I am convinced that the future of mathematical education in the UK is in the ascendency.

Finally I wish Lynne McClure all the very best for her Presidential year: already I see some great changes ahead under her leadership!

May the MA be with you.

**Peter Ransom (President 2013-2014)**

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### **Chair's Report from Council**

Council meets quarterly on Saturdays at MA Headquarters. The normal pattern for a Council meeting is to start at 10.30 and finish at 15.30 with a lunch break of roughly 30 minutes. Five hours is about the limit for intense discussion as thereafter fatigue sets in. During that time a huge amount of business has to be transacted. Major items come at the top of the agenda. Later on in the meeting, some reports from committees might be accepted without debate when there are no major issues. In between each Council meeting there is a meeting of Standing Committee which again typically lasts for about five hours. Each such meeting reviews the outcome of the previous Council meeting and prepares the ground for the next. The emphasis tends to be on matters of strategy rather than on the fine detail of reports from committees. Standing Committee has the power to act on Council's behalf if an issue arises which has to be handled quickly but it has to report to the next Council meeting on the action it has taken.

Council addressed a number of major issues during the year. In particular, attention was given to various aspects of governance. There was a feeling that Council was too large and a motion was presented to, and passed at, the 2014 AGM reducing the size of Council from 22 to 19. Work has continued to rationalise the Association's various governing documents. Currently in existence are the Rules and the Regulations, both of which have been in operation for many years, and the Memorandum and the Articles of Association, which are the result of the MA becoming a Company Limited by Guarantee. In some instances the documents are inconsistent. The aim is to abolish the Rules by incorporating each Rule into the Memorandum and Articles, or into the Regulations, if of lesser importance. Changes to Regulations do not require a General Meeting while changes to the Rules and Memorandum and Articles of Association do. Considerable progress has been made and the work will be completed in the coming year so that appropriate motions can be presented to the 2015 AGM.

Standing Committee has scrutinised a number of documents relating to staff, and updates to the Employee

Handbook, Pay Policy and Job Descriptions are in the process of being finalised.

Council has considered how to benefit from the use of modern technology. The importance of retaining face-to-face meetings was recognised but on three occasions Skype was used when the physical presence of individuals was not possible at a meeting, and this worked reasonably well.

Still on matters related to governance, Council has examined its committee structure and a motion was passed at the 2014 AGM to set up a new committee called Publicity and Media to cover all aspects of publicity, including the use of the website and social media to communicate with members and non-members alike.

The continuing decline in membership remains a major cause for concern. Council has considered how new members are to be attracted, particularly young people who can take forward the work of the current stalwarts. It was agreed to hold a 2-day meeting in June 2014 to focus on all aspects of membership. Each committee was to be asked to consider how its activities could be used to reverse the decline in membership and the corresponding loss of income.

An important ingredient in the membership drive will be the new website. Because of unforeseen circumstances, development work has taken much longer than intended. It is envisaged that, after in-house testing, the new site will be launched in the autumn of 2014. It will automate a lot of the mundane tasks currently performed by HQ staff for membership, publications and events but this means that databases need to be integrated and function correctly. For instance, shop sales will be linked to the membership database so that members can benefit from discounts, where applicable.

The accounts for the year ended 31 December 2013 showed a loss of around £25,000. In addition to aiming to increase income by attracting new members, Council has been examining other possible income streams. One pleasing aspect is the income from publications, notably the GCSE Revision Cards which have proved very popular. There has been an exciting development concerning *The Mathematical Gazette* and Cambridge University Press (CUP). The view was expressed by CUP that the *Gazette* was a great asset from which the MA was not deriving maximum benefit. Discussions have taken place as to how CUP could assist with the marketing while the MA would retain the editorial control. It is the intention to sign a 5-year contract with CUP starting from January 2015. Based on CUP's financial predictions, this link-up could prove to be very lucrative for the MA.

The MA continues to work with the ATM and a small committee has been established to discuss possible joint activities. The initial focus will be the possibility of a joint conference in 2016.

The MA's Wittgenstein archive continues to be held at Trinity College, Cambridge. When the loan was last

renewed, it was agreed that Trinity should digitise the material at its expense and this has now been completed. We have also been informed that two eminent Wittgenstein Scholars are to visit Cambridge to study all the material Trinity holds, including our material which is felt to be of considerable significance.

We have a category of membership called Honorary Members. Dr Mary Walmsley, MA Archivist, maintains the list. Sadly most on the list are no longer extant, particularly those elected in 1852! Council felt it appropriate to add another eminent mathematician to the list and extended an invitation to Professor Ian Stewart of Warwick University. Professor Stewart was delighted to accept.

The various committees are the backbone of the MA. Reports on their activities can be found later in this Annual Report and so I shall not duplicate details. However, I should like to make a few remarks. As Chair of Branches, Dave Pountney has been doing an admirable job of trying to reinvigorate the various branches. An Exeter branch has been set up by Sue Waring, and in Cambridge a joint MA/ATM branch, led by Lynne McClure *et al*, has held its first meeting. Julia Brown has been the Acting Chair of the Professional Development Committee and has been proactive in seeking PD opportunities, including possible links with branches. Teaching Committee carries by far the heaviest load of all committees. The deluge of consultations has continued unabated. We are fortunate to have a group of people who are able to mould a wide range of opinions into coherent and cogent responses and position papers. Although it might seem invidious to mention individuals, I should like to acknowledge the major contributions from Rachael Horsman, Sue Forrest, David Miles and Chris Pritchard. Many of the fruits of their labours can be found on the *We Say* section of the website. That Teaching Committee operates so effectively is a tribute to the huge amount of work carried out by Rachael as Chair and Sue as Secretary.

The 2014 Annual General Meeting took place on 15 April 2014 during the BCME8 Conference in Nottingham. At each AGM, various members of Council come to the end of their terms of office. Those stepping down this time included three Members without Office, Alison Clark-Wilson, David Crawford and Tony Gardiner. Marcus du Sautoy completed his year as Immediate Past President and Catherine Farmer stood down as Secretary after several years in post. Of course, there is always one other person standing down at each AGM, namely the retiring President. Peter Ransom took a very lively interest in MA affairs during his presidential year and we are grateful for his many and varied contributions. He represented the MA at a plethora of events all over the country and gave talks at a number of branch meetings (some in fancy dress). He also wrote many letters, ranging from communications with the Government and DfE to simple letters of thanks to colleagues, always greatly appreciated. He is succeeded as President by Lynne McClure.

In conclusion, I should like to thank all members of Council as well as members of all the committees and sub-committees who give up a great deal of their own time preparing for, travelling to and attending meetings and generally furthering the aims of the Association. The membership at large owes them a huge debt of gratitude.

**Adam McBride (Chair of Council)**

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### Branches Committee

The Branches Committee met twice during the year, once in October 2013 at HQ and also immediately after the MA Conference at Loughborough in April 2013.

At the October meeting, the morning was spent covering usual 'Branches business'. Individual Branch programmes of events for the academic year were presented; Branch finances confirmed; Committee officers were elected; reports from other MA committees were received. The afternoon session was spent discussing individual Branch events and issues. It became clear from the discussion that even some existing Branches are experiencing difficulties in maintaining levels of activity and that 'new blood with fresh ideas' would be welcome both locally and at Branches committee. Future plans must target this.

The April meeting reported on the year so far. It was noted that Branch events were similar in number to 2011-12 and audience figures quoted were generally encouraging, particularly for teacher-oriented events. The meeting discussed how advertising of branch events could be better coordinated between *MA News*, MA website and targeted emails to MA members living locally to events. The whole issue of advertising, publicity and the impact of social media such as Facebook and Twitter on Branches and branch events will be examined.

Encouraging news about the formation of a new Exeter Branch was received and their first event was successful. Their programme for 2013-14 was unveiled. Similar good news was the report of a new joint MA/ATM Cambridge Branch with its first event due in late March 2014. Less encouraging is the news from London and Yorkshire Branches of low attendances at events. Contacts with the U3A were made and the possibility of closer links via articles in MA journals will be considered. Youth activities by Branches were highlighted in a report published in *MA News*.

Pressures on Branch activity continue to mount. For example, some institutions are now charging for room use; some local Branch committees are struggling for members with the effect of an increasing workload on the few; teacher members appear to be under an ever-increasing pressure of work; many branch committees need 'reinforcing' with younger colleagues. Despite these issues, 2013-14 has seen a good number of examples of well-run events, with many teachers and their students responding very positively about the benefits of such events. Local Branch officers remain enthusiastic about what they do. As ever, the Branches Committee will do everything it can to maintain and expand the activities of its Branches in the coming years.

**Dave Pountney (Chair of Branches)**

### Annual Conference 2014

In 2014 the MA Conference formed part of BCME8. This joint conference of many UK Mathematical Associations was held from Monday 14th to Thursday 17th April on the main campus of the University of Nottingham. It began at midday on the Monday and ended shortly after noon on the Thursday. So residents had the pleasure of three nights in an extremely pleasant setting. Most delegates were accommodated in three of the nearby University Halls (Rutland, Cavendish and Ancaster) and the majority of the sessions took place in the East Midlands Conference Centre. Some delegates chose to stay in the newly opened Orchard Hotel. The subtitle of the event was *Building bridges - Making connections*.

The programme was built around three plenary sessions and Peter Ransom's Presidential Address. The opening plenary was given by Lord Robert Winston. His talk was called *Scientific Literacy* and in it he covered a huge range of learning activities in many worldwide situations. During the conference, some delegates did challenge the relevance of building bridges across African gorges to the challenges of classroom mathematics. In my view, such challenges indicated a lack of awareness of the common threads of learning across life. I found the ideas expressed by such a consummate communicator to be extremely stimulating and thought-provoking.

The plenary on the second day was given by Professor Jill Adler of the University of Witwatersrand who is also on the staff of King's College at the University of London. Her title was *Connections matter: reflections on mathematical teacher education and professional development across contexts*. She covered the difficulties faced by trainee teachers in South Africa. Perhaps the trials and tribulations are not typical of everyday classroom problems in the UK but they provided a reminder that, even in the UK, education was not freely available and was something that had to be worked very hard for. Perhaps our students take the current free education system for granted!

On Wednesday, Peter Ransom gave his Presidential Address. His title was *Triumphs and Tribulations in Teaching* in which he gave a rapid and entertaining description of the impact that mathematics in schools had had on him. He raced through a vast number of ideas in a very short space of time and the audience needed to be very alert to keep up with him! For those who fell behind or who were not present, there is a written version in the November issue of *The Mathematical Gazette*.

The closing plenary was given by Professor Malcolm Swan of the University of Nottingham. His title was *Learning to make connections*. He described a number of examples of mathematical thinking and how they had an impact on thinking.

As well as the plenary sessions there were about 250 standard sessions and 50 research papers given. The former ranged from semi-formal lectures to very much hands-on activities. The latter were coordinated by

BSRLM (British Society for Research into Learning Mathematics).

The Conference Dinner was well attended. As well as good food and good company, Mike Askew provided an uproarious after-dinner speech!

The 2015 MA Annual Conference will be held at the University of Keele and there will be another BCME in 2018.

**Bill Richardson (Holding Chair of Conference)**

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### Professional Development Committee

The Professional Development Committee met three times during the year 2013-14. The main function of the Committee continues to be concerned with the organisation and close monitoring of its professional development events, aimed both at members of the MA and at the wider teaching workforce in line with the principal objective of the Association which is 'to promote and support the professional development of teachers'.

Following a very successful monitoring visit to our High Wycombe Primary Maths Conference in 2012 by the NCETM we are now re-accrediting with them so that all our Professional Development Days and events can be advertised with the NCETM standard.

In the autumn term we contributed to the final draft of the ACME Report 'Empowering teachers: success for learners' which was launched on 28 November. Peter Ransom and Lynne McClure attended the launch on behalf of the MA and we are very grateful to Rachael Horsman, Chair of our Teaching Committee, who delivered an excellent session at the event.

We were also involved in the planning stage of two linked CPD days on 'Working with the new curriculum'. These were masterminded by Lynne McClure and delivered as a joint venture with ATM, NRich, NCETM and NAMA, endorsed by the DfE. The first two events were held in London and Cambridge and these have been successfully repeated in other regions of England.

The committee oversaw two one-day events for teachers of mathematics. Bill Richardson once again led and organised the highly successful Annual Scottish One-day Conference for Teachers of Secondary Mathematics at the University of Stirling on Saturday 14 September 2013. There were 151 delegates who gave very positive feedback on the day. Peter Ransom delivered the opening plenary and Rachael Horsman led a highly rated workshop. On Saturday 9 November we ran our second primary conference at High Wycombe, 'Dig deep to build high', and attracted 54 delegates, an increase of 23 on the previous event. These numbers enabled a choice of workshops to be offered. The day was planned and organised by Peter Ransom and Julia Brown. Jennie Golding delivered the opening session on 'Raising the bar: developing able young mathematicians' and again the feedback on the day was very positive.

We are very grateful to Alison Clark-Wilson for her time and energy in leading the Professional Development Committee until a permanent Chair could be appointed. I would also like to offer my sincere appreciation and thanks to the many members of the MA who continue to give their time so willingly to support these events.

**Julia Brown (Acting Chair of Professional Development)**

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### Publications Committee

The Committee consisted of me, Michael Fox, Paul Harris, Mary Ledwick, Cherri Moseley, Chris Pritchard, Bill Richardson and Sue Waring.

Our task is simply described:

*"to publish, at a profit, innovative and exciting publications that further the aims of the Association."*

The year certainly was profitable; we were able to make a substantial contribution to support other activities of the Association. We achieved this through a combination of previous years' publications, including the very successful

*GCSE Revision Cards* (Higher and Foundation Tier): Mary Ledwick;

and through new titles which included:

*Padlock Challenges: Statistics and Probability (KS 3)*: Rachael Horsman;

*GCSE Posters*: Mary Ledwick;

*MA Calendar*: Teaching Committee.

We continue to build our presence on-line, and sales through Amazon continue to grow. The surprise is that they are additional sales – existing sales through other channels have remained stable. Looking in detail at the distribution of total sales has revealed a very interesting statistic: roughly 75% of our sales are to non-members. This provides us with a major opportunity to recruit new members and we will be working closely with the Chair of the Membership Committee (Cherri Moseley) to exploit it over the coming year.

We look forward to another year of continuing success, finding new ideas and the people to develop them through to publication. We welcome all ideas.

Again I give my thanks to the Committee for all their dedicated hard work over the last year, and to all the others who give their time and expertise in preparing resources for publication.

**Barry Lewis (Chair of Publications)**

[barry@mathscounts.org](mailto:barry@mathscounts.org)

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### Editorial Board

First, I would like to express my gratitude to the editorial and production teams who so such a brilliant job of producing the journals for the Association. In particular I would like to thank the following for their tireless work:

### Editors:

Jenni Back	<i>Primary Mathematics</i>
John Berry	<i>Mathematics in School</i>
Ray Gibbons	<i>Equals</i>
Ray Huntley	<i>Primary Mathematics</i>
Gerry Leversha	<i>The Mathematical Gazette</i>
Cherri Moseley	<i>Primary Mathematics</i>
Chris Pritchard	<i>Mathematics in School</i>
Peter Ransom	<i>Symmetry Plus</i>
Wil Ransome	<i>Mathematical Pie</i> , and
Erik Gooding	<i>Mathematical Pie Notes</i>
Sue Waring	<i>MA News</i>

### Production Teams

Helen Morris	<i>Mathematics in School</i>
Bill Richardson	<i>The Mathematical Gazette</i>
Tina Webb	<i>Mathematics in School</i>

### Advertising

Janet Powell

Without the hard work of the above, and many others who do tasks such as the proof reading and editing the reviews, the Association would not have such a wide range of excellent journals. I would also like to thank the staff at HQ for all the assistance that they give to the editors and production teams.

The comparative review of the workloads for the editors was completed at the end of 2013, and a new structure for the honoraria paid to the editors was approved at the December council meeting. The review of the production work is still underway.

Once again I would like to thank the editorial and production teams for their hard work, and I look forward to working with them in 2014-15 so that we may continue to produce the high quality journals that the Association can be proud of.

***Paul Harris (Editor-in-Chief)***

### Primary Mathematics Challenge

This year there was an increase in the number of schools participating in PMC. There were 2100 schools which participated, with 77,000 pupils sitting the paper. We would like to increase the number of schools participating to the giddy heights of 2004-05.

Last year's paper was a little easier than usual, so we tried to increase the level of challenge and might have overdone it. This year's paper was much harder and so we invited pupils who had scored 21 and over to take part in the Bonus Round.

We received a large number of entries at the last minute this year, probably as a result of the reminders sent out. This put a great deal of pressure on the staff at MA Headquarters to process the orders and ensure that nobody was disappointed.

As ever, the feedback about the administration of PMC was almost exclusively positive. There were a few packs

which got lost in the post but, luckily for us, the planned strike was called off, so we had fewer problems than usual concerning deliveries.

The mark distribution for the November paper is shown below:

• Marks	0-5	6-10	11-15	16-20	21-25
• 100%	10	39	36	12	1

### Schools participating 2013-14

Total	Eng	Scot	Wales	N Ire	Eire	Other
2100	1941	54	35	47	3	20

The February Bonus Round took place on Wednesday 5<sup>th</sup> February. 526 pupils were invited to take part, from 253 schools. We were very pleased with the paper. As perhaps we might expect at this level, 97% of the entrants scored 10 or more. The paper discriminated well at the top end and allowed a good level of success for the entrants. We awarded 39 Gold medals, 76 silver and 143 bronze.

We are hoping that the updating of the website will allow more schools to enrol on-line and pay on-line, streamlining the processes. In the next round we intend to mail all packs out using the Royal Mail tracking system in an attempt to minimise the mislaid packages and the need to re-send packages.

Alex Voice took over the 'typesetting' this year and the transfer was successful. The committee extended its thanks to Bill Richardson for all his sterling work in the past.

The balance sheet for 2013-14 shows a healthy surplus of £38,500 at present.

The management committee of PMC feels there is a need to increase advertising for PMC. Discussions have taken place about the insertion of PMC adverts into MA in-house publications, but we also intend to advertise in publications which reach beyond MA members.

***Lesley Jones (Chair of PMC Management Team)***

### Library Committee

#### Wittgenstein Archive of Francis Skinner:

The Library Committee's recommendations for no sale and digitisation by Trinity have both been accepted by Council and the loan agreement renewed on this basis to April 2014. Professor Gibson has delivered a manuscript for a complete published edition of the Archive but progress here towards a major publication has run into difficulties. The entire Archive has been digitised by Trinity College and new interest in the Archive has come from the USA, notably from Professor David Stern, a highly acclaimed Wittgenstein scholar. He is using the digital images for his research and plans to publish selectively on the Archive, always acknowledging the MA's ownership and support.

#### Hersee Manuscript Collection:

Around fifty uncatalogued mathematics exercise or copy books held at MA HQ have been processed and transferred to the Special Collection in the David Wilson Library. The detailed cataloguing work has been undertaken by the MA President, Peter Ransom, who has a specialist interest and personal collection of such manuscripts. In addition, around fifty non-mathematical exercise books have been processed by the MA Librarian and the MA Archivist, Dr Mary Walmsley, and transferred to the Special Collection. The searchable pdf for the collection – on the University Library’s website – has been extended to 150 pages, including forty illustrations produced by Dr Walmsley. The total collection of three hundred exercise books is now securely accommodated in 49 conservation boxes. It is very probably the finest collection of its kind in the world!

#### **Storage and Cataloguing:**

The review and transfer of books pre-1850 from the MA’s open shelves to the Special Collection or External Store has been completed and full catalogue entries for 150 additional SC items are being prepared. Dr Walmsley has produced a single spreadsheet file – on the MA website - for the whole of the MA Special Collection of books which now runs to over 850 titles. Around 500 titles have been added since the MA published a printed listing in 2005. The file on the MA website for the older mathematical serials has also been updated.

#### **Copac:**

The union of library catalogues now includes all the books in the MA Library alongside around seventy other academic and specialist libraries. This addition to Copac provides worldwide publicity and access for the MA’s collection of books. The bulk of around 700 MA periodical titles will also be transferred to Copac’s own catalogue after all the MA PER records have been suitably updated by the University Library catalogue department.

#### **New Donations:**

Just over a hundred books from the library of the late John Thurston have been donated by his widow and around sixty new titles added to the MA Library, each with a catalogue record acknowledging this gift. The entire mathematical library of the late Dr Roger Wheeler – who passed away on 29 March 2014 – has been donated to the MA Library in two stages. In 2013, 250 donated books yielded over a hundred new titles for the MA Library, and similarly, in 2014, 230 more books again yielded over a hundred more new titles. Cataloguing for the second stage donation, including suitable acknowledgement, has still to be completed.

**Mike Price (Librarian and Chair of Library Committee)**

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## **Teaching Committee**

Teaching Committee

tc-chair@m-a.org.uk

*Acting Chair* Rachael Horsman  
Rachael.horsman.maths@gmail.com

*Secretary* Sue Forrest



In my first year as (Acting) Chair the rate of change within education has been considerable. It is only now as Acting Chair that I fully comprehend the huge debt of gratitude we owe to Chris Pritchard for his massive contribution to The Mathematical Association’s work. Personally I would like to thank him for his support whilst I have been finding my feet in this challenging position and for agreeing to continue to be a part of the Committee contributing through its Advisory Group.

Teaching Committee, together with its three age-and-stage subcommittees, has been pressed to meet the challenges presented. Since the summer, we have produced numerous responses, letters and position papers which can now be found at the *We Say* section of The Mathematical Association website. They include:

- National Curriculum review: new programmes of study and attainment targets from September 2014 (Aug, 2013); a joint submission with the ATM
- Reformed GCSE subject content consultation (Aug, 2013)
- GCSE Reform Consultation by Ofqual (Aug, 2013)
- Letter to Michael Gove and statement: Converging Views on the issue of early and repeated entry for GCSE mathematics (Oct, 2013)
- Statement in response to the publication of the new KS4 mathematics content (Oct, 2013)
- 16-19 Accountability (Nov, 2013); joint submission with ATM, IMA, NAMA and NANAMIC
- Letter to Michael Gove in response to the DfE subject content consultation on the new A levels (Dec, 2013)
- KS4 programmes of study consultation (Jan, 2014)
- MESH statement (Feb, 2014)

My thanks to all those who contributed to the construction of these documents, whether from the greater TC family or from Council. Our input to consultations is essential and only made possible by active members supporting the work of TC.

We have continued to work closely with various bodies including the DfE. Members of TC and its advisory groups have met several times with Stefano Pozzi and others to discuss the KS3 and KS4 programmes of study.

Stefano has now changed roles at the DfE and has been replaced by Nicola Edwards. Members of TC met with Nicola and Ofqual representatives in August to discuss the new KS4 curriculum. We were pleased to see that many of our comments were taken on board in the latest draft.

Over the next year we are hoping that we will be involved with the new Maths Hubs overseen by the NCETM. These hubs based around the country will provide schools with a central support network, targeted CPD and enrichment opportunities for students and staff.

There have been changes to our membership. Our Primary Subcommittee, which forms part of a substantial, joint MA/ATM Primary Group, has a new Chair in the person of Fran Watson. This group is especially strong and increasingly influential. The 11-16 Subcommittee has had another fine year and now has two new Chairs, Steve Edwards and Oliver Thompson. Meanwhile, the Post-16 Subcommittee is now permanently led by Tom Button. If you would like to be involved with any of our groups, please speak to the respective Chair or to Sue Forrest as TC Secretary. You will be made most welcome, especially if you're keen to roll up your sleeves. There remains much to do, and at pace.

My thanks go to the subcommittee Chairs and their members, to our small Advisory Group and to Council. TC members have worked tirelessly to meet the challenges we have faced and the contributions of Chris Pritchard, Peter Thomas, Sue Forrest and David Miles have been noteworthy.

**Rachael Horsman**  
**(Acting Chair of Teaching Committee)**



Primary Subcommittee

tc-121@m-a.org.uk

Chair Fran Watson

The joint MA/ATM primary group currently has a mailing list of 70 and each term a core group of up to 20 of these members meet face to face.

In the past 12 months the group responded to the consultations on:

- both drafts of the National Curriculum for Primary Mathematics (deadlines in April and July 2013)
- Primary Assessment and Accountability (deadline October 2013)

Ray Huntley, David Miles, Sue Pope and Tony Cotton met with Liz Truss on 30<sup>th</sup> April 2013 to discuss primary mathematics issues.

The 2013 MA Primary day conference was held in November in High Wycombe. 60+ delegates attended and workshops were given by members of the group: Viv Townsend, Cherri Moseley, Ray Huntley, Alan Parr and Bubbly the Maths Clown.

Members spoke at the New Curriculum Days being jointly badged by ATM, MA, NAMA, NCETM and NRICH. These 2-day programmes have been extremely well attended with

further events scheduled in Sheffield and Brighton later this year. Gemma Richardson had an article about calculators published in the journals of both associations.

The joint working of the group is as rewarding as always and we continue to try and make progress in the area of jointly badging publications and events to promote the cohesive support which both associations collectively bring to the teaching and education professions. We are careful to balance welcoming members to attend meetings with a responsible approach to expenses and would hope to continue the combined efforts thus far and develop new ways of maximising the effectiveness of the joint group as a sub-set of both associations.

**Fran Watson**  
**(Chair of Primary Sub-committee)**



11-16 Subcommittee

Chairs Steve Edwards and

Oliver Thompson

tc-132@m-a.org.uk

The 11-16 Subcommittee continues to be very well attended, with representation from the private and state sectors, retired and numeracy consultant members. The group has had three meetings at MA Headquarters in Leicester during the year, each a full and lively day of discussions and production of papers, responses and resources.

With constant changes to KS3 and KS4 courses and qualifications this has been another busy year. The group has grown in number and has seen a change in chair. Following Rachael's move to acting chair of Teaching Committee, Steve Edwards (Sidney Stringer Academy) and Oliver Thompson (Ashford School) jointly took on the role as chair. We're certain that with the breadth of experience these two have the sub-committee will continue to work successfully.

The sub-committee has taken an active role in helping produce responses to KS4 consultations, and supported several other MA statements. Members of the group, led by Mary Ledwick and Rhys Jeremiah, have produced The Mathematical Association's calendar which has sold successfully. Plans are afoot for the next version and the sub-committee welcomes offers of mathematical photos via the email above. The group has also proof-read the next *Padlock Challenges* book written by Rachael, which should be available to purchase at BCME.

Other members of the group have also been involved in further publications and articles for *Mathematics in School*, spoken at the Stirling Conference and will be active during BCME.

Looking to the year ahead the subcommittee is continuing to develop more 'pull out' resources and articles for *Mathematics in School*. We will also be collecting ideas



and offering support in preparation for the new KS3 and KS4 programmes of study.

If you would like to add your opinions to our responses to any consultation, or join the subcommittee, please get in touch. We look forward to another productive year!

**Steve Edwards and Oliver Thompson**  
**(Chairs of 11-16 Sub-committee)**

Post-16 Subcommittee

Chair Tom Button  
[tc-129@m-a.org.uk](mailto:tc-129@m-a.org.uk)



The post-16 subcommittee has met termly in London this year where we have devoted our time to discussing materials produced for teachers, and proposals and reports relating to post-16 mathematics. We have been joined by some new members this year as well as welcoming back some members who haven't been able to join us for a while. The subcommittee currently has 9 members.

We have responded to a number of consultations and reports recently relating to post-16 mathematics, such as 16-19 accountability arrangements and A level regulatory requirements. The majority of this work is done over email. We have been able to submit joint responses with ATM and IMA and it is to be hoped that this situation can continue as the number of consultations is not likely to reduce in the near future.

There is a consensus across the subcommittee that whilst it is important that we respond to consultations, the best use of our skills and experience is to support post-16 teachers through advice and guidance about teaching. To do this we are going to complete the work on the 'Hooks' for A level: single visual images that can be used by teachers to provoke discussion and investigation. We are also intending to start work on small case studies of resources we have found useful in the classroom, to be disseminated via the website. We are also looking forward to the post-16 Special issue of *Mathematics in School* that we have contributed to and which will be released later this year.

We do represent a good range of Post-16 environments, but are always interested in any prospective new members. We would like to represent as wide a range as possible so as to strengthen our responses to any consultations and reports and we would welcome anyone who felt they had something to contribute.

**Tom Button**  
**(Chair of Post-16 Sub-committee)**

#### **Publicity & Membership**

The Publicity and Membership committee continues to work hard to ensure that those who are interested in mathematics and mathematics teaching are fully aware of the benefits of membership and find the process of

joining the MA both straightforward and reasonably priced.

We recognise that there is much to be done to publicize The Mathematical Association to encourage new members to join us and to develop communications across the association and with the wider community. What we offer in terms of membership needs to be constantly under review to ensure that we retain existing members and encourage new members to join us. Although there is much overlap between these two aspects, it can also be a difficult workload to juggle. With this in mind, the Publicity and Membership committee with therefore split at the AGM in April to create two new committees. These will be Publicity and Media with Fiona Allen as Chair and Membership with Cherri Moseley as Chair. New committees need new members, so do get in touch if you feel you could help.

Every year we contact all the various universities and groups which offer mathematics at degree level and teacher training to invite those who are studying mathematics or aiming to teach it to join us. We also target Teaching Schools and will liaise with the Maths Hubs. We regularly advertise The Mathematical Association and our publications and competitions in magazines such as Teach Primary and Teach Secondary and work closely with other mathematics organisations, keeping in touch and supporting each other as well as working together on specific projects. We are also working with Mango Marketing to look at what else we can do to grow and develop membership of the association in these challenging times.

We continue to work on developing communications through social networking. Our Facebook page <https://www.facebook.com/groups/136275943093334/> helps to keep people update with mathematics related news. Council members and others also regularly tweet and there is now a Twitter link on the website. Both are helping to raise the profile of The Mathematical Association and help members and others interested in mathematics to keep in touch with each other and what is happening in the wider world of mathematics. We hope to launch an e-newsletter next year. In addition, the work on a more up to date website with increased functionality, including perhaps a member's only area, continues.

I am grateful to the Publicity and Membership committee for their continued support over the last year.

**Cherri Moseley (Chair of Publicity and Membership)**

#### **United Kingdom Mathematics Trust (UKMT)**

The numbers of students entered for the Mathematics Challenges this year were as follows: Junior 283,520; Intermediate 245,760; Senior 98,560. There was a record number of entries to the Senior Challenge, and entries to both the Intermediate and Junior Challenges were also up compared to 2012. 1,647 teams entered the Team Mathematics Challenge, and 1,100 teams entered the Senior Team Mathematics Challenge, both these numbers up on the previous year. In addition, eight teacher

meetings took place in the early summer 2013, in Cardiff, Cambridge, Glasgow, Greenwich, Liverpool, Southampton, Warwick and York, and students continue to benefit from the mentoring scheme. There is an increasing list of mathematical books published by UKMT.

In July 2013, the International Mathematical Olympiad was held in Colombia, and the UK team came back with 2 Gold, 3 Silver and 1 Bronze medal, and came 9th out of almost 100 participating countries. The 55th IMO will be held in South Africa, in July 2014. The second European Girls' Mathematical Olympiad was held in Luxembourg in April 2013. The UK team was awarded 1 silver and 1 bronze medals and 2 honourable mentions, and came 11th out of 22 participating countries. EGMO 2014 will be held in Turkey. A UK team was to have competed in the Romanian Master of Mathematics in February 2014, but the event was cancelled.

The UKMT continued to run activities introduced last year. More students were invited to participate in the Senior Kangaroo (which was introduced last year as a new follow-on round to the Senior Challenge), and a new set of Primary Team Mathematics Resources was launched in January 2014. This set of materials was once again produced with the aim of providing secondary schools with materials to run mathematical events for their feeder primary schools. The teacher notes accompanying these resources refer teachers to further relevant materials including the Primary Mathematics Challenge, and links to the MA website.

The Mathematical Circles trialled last year were expanded from April 2013 thanks to new funding from the DfE. The DfE is also providing funding to expand the Summer School programme. This is in addition to the new Summer School for Girls supported by numerous colleges at Oxford University in August 2013.

The UKMT hosted a highly successful international meeting of the Association Kangourou sans Frontières in Edinburgh in October 2013.

The dates for the challenges in 2013-14 were: Junior Challenge (ages 11-13): Thursday 1 May 2014; Intermediate Challenge (ages 13-16): Thursday 6 February 2014; Senior Challenge (ages 16-18): Thursday 7 November 2013. In addition to these three challenges, students who do well are invited to take part in the follow-on rounds, the Junior, Intermediate and British Mathematical Olympiads and the Kangaroos.

The UKMT recently set up a money giving page and welcomes donations regardless of size. Further information can be found at [www.donate.ukmt.org.uk](http://www.donate.ukmt.org.uk).

UKMT is always looking for more helpers, whether to submit questions or to help at events. There is a form for volunteers at: <http://www.getting-involved.ukmt.org.uk/>

*John Silvester (MA representative)*

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### The British Mathematical Olympiad Committee

Santa Barbara in Colombia was the setting for the International Mathematical Olympiad in July 2013. It was

a good year for the UK, with every member of the team again winning a medal: two gold, three silver and one bronze, giving a national ranking of ninth out of 97 participating countries. Andrew Carlotti has now achieved a bronze and three gold medals, the best ever tally for a UK participant. The celebration of their achievement at the Royal Society in September included a lecture by Professor Kevin Buzzard on "Solving Equations Using Geometry".

At the Balkan Mathematical Olympiad in Cyprus a little earlier the UK team of six came away with one gold, three silver and one bronze medal, placing them fifth.

The selection process for the next year began in September with the UK Mathematical Olympiad for Girls, designed to introduce girls to Olympiad-style problems, and in December and January with the two rounds of the British Mathematical Olympiad. The Christopher Bradley Elegance Prize (funded in his memory) was awarded for the first time this year; it went to Edward Kirkby (Alton College) and Linden Ralph (Hills Road Sixth Form College) for solutions to BMO2 question 4.

The Romanian Master of Mathematics, scheduled for February 2014, was cancelled because of funding problems. In Turkey in April 2014 the UK's team of four for the European Girls Mathematical Olympiad won two silver medals and came eighth out of 29 countries.

The bottom of the training pyramid was strengthened, with funding from DfE, by two additional Summer Schools in Oxford, each catering for 40 pupils from Years 11 and 10. With the two Leeds Summer Schools (formerly Birmingham), another for girls and one at The Queen's College, Oxford, this brings the total to six. Training camps were held as usual during the year at Oxford, Hungary, Cambridge and Oundle.

James Cranch has taken over the leadership of the Mentoring scheme.

*Philip Coggins (MA Representative)*

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### Headquarters

During 2013-14, the Headquarters Team was:-

Senior Administrator - Marcia Murray  
Finance Officer - Linda Medhurst  
Membership Officer - Charnjit Sehra  
Administrative Assistant - Lisa O'Donnell  
Clerical Assistant - Emma de Riso (to June 2013)  
Clerical Assistant - Alice Hall (from July 2013)

*Marcia Murray (Senior Administrator)*

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### Association Regulations

Regulations can be viewed at:  
<http://www.m-a.org.uk/jsp/index.jsp?Ink=850>

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**The Council from April 2013**Presidents

President	Peter Ransom
Immediate Past President	Marcus du Sautoy
President Elect	Lynne McClure

Officers

Chair of Council	Adam McBride
Secretary	Catherine Farmar
Treasurer	Bill Richardson

Chairs of Committees

Branches	David Pountney
Conferences	Vacant

Editor-in-Chief	Paul Harris
Professional Development	Julia Brown (acting)
Publications	Barry Lewis
Publicity and Membership	Cherri Moseley
Teaching Committee	Rachael Horsman (acting)

Members-without-Office

Fiona Allan	Paul Metcalf
Alison Clark-Wilson	Chris Pritchard
David Crawford	Charlie Stripp
Tony Gardiner	

The Company SecretaryMr Bill Richardson

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**BALANCE SHEET****YEAR ENDED 31 DECEMBER 2013**

	Note	£	2013 £	£	2012 £
<b>FIXED ASSETS</b>					
Tangible	6		297,132		292,725
<b>CURRENT ASSETS</b>					
Stocks		14,035		17,970	
Debtors	7	15,000		15,212	
Cash at bank		284,847		299,114	
		<b>313,882</b>		<b>332,296</b>	
<b>CREDITORS: amounts falling due</b>					
within one year	8	(83,211)		(72,023)	
<b>NET CURRENT ASSETS</b>			<b>230,671</b>		<b>260,273</b>
<b>TOTAL ASSETS LESS CURRENT</b>					
<b>LIABILITIES</b>			<b>527,803</b>		<b>552,998</b>
<b>REPRESENTED BY</b>					
Revaluation reserve	10		138,000		141,000
Restricted funds	10		6,500		-
Unrestricted funds	10		383,303		411,998
			<b>527,803</b>		<b>552,998</b>

The financial statements have been prepared in accordance with the special provisions of Part 15 of the Companies Act 2006 relating to small companies and in accordance with the Financial Reporting Standard for Smaller Entities (effective April 2008).

The financial statements were approved and authorised for issue by the Council and were signed on its behalf on 14 April 2014.