

JMC**Joint Mathematical Council
of the United Kingdom****Minutes of the JMC Council meeting
held at the Royal Statistical Society
on Tuesday 26 February 2013****Present***Officers*

Tim Rowland	Chair
Gerald Goodall	Honorary Secretary
Paul Harris	Honorary Treasurer

Executive Secretary

David Martin	Executive Secretary
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Representatives of Participating Societies

Jenni Back	Association of Mathematics Education Teachers
Sue Pope	Association of Teachers of Mathematics
June Barrow-Green	British Society for the History of Mathematics
Cathy Smith	British Society for Research into Learning Mathematics
---	Conference of Heads of Departments of Mathematical Sciences
Colin Campbell	Edinburgh Mathematical Society
Nigel Steele	Institute of Mathematics and its Applications
Alice Rogers	London Mathematical Society
Alison Clark-Wilson	Mathematical Association
Charlie Stripp	Mathematics in Education and Industry
Sally Barton	National Association for Numeracy and Mathematics in Colleges
Alice Onion	National Association of Mathematics Advisers
Steve Hewson	NRICH representing the Millennium Mathematics Project
Lydia Showan	National STEM Centre
Louise Orpin	Operational Research Society
Roeland Beerten	Royal Statistical Society
Stephen Williamson	Wales Institute of Mathematical and Computational Sciences

Co-opted members

--- JMC International Representative
--- International Commission on Mathematical Instruction
--- Immediate Past Chair

Observers

Lynne McClure Advisory Committee on Mathematics Education [also Rosalind Mist as
ACME Head of Secretariat]
--- Adults Learning Mathematics
--- Department for Education
--- Department for Education and Skills [Wales]
Nick Todd Department of Education [Northern Ireland]
Fiona Robertson Education Scotland
--- Higher Education Academy
Celia Hoyles National Centre for Excellence in the Teaching of Mathematics
--- Office of Qualifications and Examinations Regulation
Jane Jones Office for Standards in Education
Rosalind Mist Royal Society
--- School Mathematics Project
John Harris Sector Skills Council for science, engineering and manufacturing
technologies in the UK
James O'Donoghue Teaching Agency
Bill Richardson United Kingdom Mathematics Trust

Also present

Thomas Man, Royal Academy of Engineering, initially as a guest (see Minutes 2 and 6).
Lynn Churchman, National Numeracy, as a guest (see Minutes 2 and 6).

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- 1 Apologies** John Monaghan (BSRLM), David Arrowsmith (HoDoMS), Chris Sangwin (IMA), Ros Sutherland (JMC International Representative), Duncan Lawson (Immediate Past Chair), Jeff Evans (ALM), Dylan Jones (DfES (Wales)), Mary McAlinden (HEA), Yasmin Hossain (RS), Paul Scruton (SMP).
- 2 Welcome to new representatives, alternates and others attending** New representatives: Alice Rogers (LMS), Alice Onion (NAMA).
Alternates: Cathy Smith (BSRLM), Nigel Steele (IMA), Steve Hewson (NRICH), Rosalind Mist (RS).
Guests: Thomas Man (RAEng), Lynn Churchman (National Numeracy). The

RAEng was admitted to JMC as a Participating Society later (see Minute 6).

In addition, Stefano Pozzi and Nicola Edwards (DFE) were welcomed for the discussion on current developments.

- 3 Appreciation of departing representatives** Tony Gardiner (LMS), Lynn Churchman (NAMA).
Noted also that Martin Smith was soon to leave the Royal Society after several years distinguished service to the mathematics community. [**Secretarial note.** Honorary Secretary subsequently sent Martin Smith an email of appreciation and good wishes on behalf of JMC and received a very pleasant reply.]
- 4 Minutes of the meeting of Tuesday 6 November 2012** *Paper JMC-2012-Nov-Minutes*
Accepted.
- 5 Consideration of any matters arising from the Minutes that do not appear on the main agenda** There were no matters arising under this agenda item.
- 6 To consider any formal propositions for organisations to be admitted as Participating Societies or Observing Societies**
- 6.1 Preliminaries**
- Chair announced that there were two applications for admission as Participating Societies to be considered, from the Royal Academy of Engineering and from National Numeracy. Both had provided one-page applications according to the current procedures, and these had been considered in detail by Executive. Copies were displayed to Council using the data projector, but members expressed the view that, in general, it would be better for the applications themselves to be circulated with the agenda papers so that there would be opportunity to consider them in advance. Chair accepted this point. Members nevertheless agreed to consider and decide on the present applications.
- Representatives of both organisations were present as guests. Each representative withdrew in turn while the other representative answered questions about that organisation. Both representatives withdrew while votes were taken.
- 6.2 Royal Academy of Engineering**
- Thomas Man of RAEng was present as a guest. He explained briefly that RAEng was a membership body whose members were leading engineers from across the wide range of engineering disciplines. The body was governed by its Council, which had around 20 to 30 members. There was a wide range of Committees, including an

Education and Training Committee, and a secretariat of more than 50 professional and administrative staff. The Academy recognised the importance of mathematics, as a subject in its own right but also as a key part of engineering, and was keen to work with JMC to identify practical activities that could be delivered in partnership. It was currently collaborating with a number of JMC organisations. He then withdrew.

Chair informed Council that it was the recommendation of JMC Executive that the application be accepted. Council was also reminded that RAEng had been explicitly identified in the JMC Strategy document, approved at the 2011 AGM, as an organisation being invited to seek Participating Society status. General discussion ensued; while several supportive remarks were made, there were also comments and questions concerning the widening scope of JMC participation in recent years beyond the core mathematics community.

A vote was taken and the Royal Academy of Engineering was **admitted** as a Participating Society (17 in favour, 1 against, 1 abstention).

6.3. National Numeracy

Lynn Churchman of NN was present as a guest. She explained that NN was a charity with 12 trustees, some of whom were individuals serving as such in their own right, while others were representatives of other bodies, particularly funding bodies. These included Nationwide Building Society, the Rayne Foundation and John Lyon's Charity. NN was as yet lean in committee structure, functioning more as an overall working group. NN had been founded less than a year ago and had begun to work towards its many worthwhile aspirations. Lynn Churchman then withdrew.

Chair informed Council that Executive had no particular recommendation to make.

While there was general agreement that NN was pursuing a worthy cause, some members were of the view that an application for Participating Society status at this early stage in the organisation's life was premature. JMC would certainly wish to encourage it, would hope that it would wish to work with JMC organisations, and might welcome a further presentation on its work in a few years' time, following on from the presentation in June 2012. But Participating Society status was not yet appropriate. However, the view was also expressed that a good way for JMC and NN to work together would be for NN to be a Participating Society.

Comment was made that there were similarities with the situation of the Mathematics Museum Project, on which JMC had received a presentation in February 2012. Noting that there might be many other projects of a broadly similar nature, there was some concern that JMC

might receive many such applications for admission. On the other hand, it was noted that this could legitimately be seen as part of a wider mood for a change in culture of how mathematics, broadly defined, was thought about, which should be welcomed.

There were many comments about the helpful and informative NN website.

A vote was taken and National Numeracy was **not admitted** as a Participating Society (1 in favour of admission, 8 against, 10 abstentions).

6.4 Teaching Agency

Honorary Secretary informed Council that the Teaching Agency and the National College for School Leadership would be merging by the end of March 2013 and that JMC Executive recommended that the new merged agency should continue to hold the Observer status currently enjoyed by the TA. This was **accepted**.

7 Reports from JMC Executive

Paper JMC-2013-Feb-Election_of_Hon_Secretary

Paper JMC-2013-Feb-JMC_Handbook

i. Chair

7(i).1 Membership of Nominations Committee

Reported by Chair that JMC Executive recommended that the Nominations Committee should consist of Sally Barton (as Chair), David Arrowsmith, Alison Clark-Wilson and Sue Pope, and this was **formally ratified** by Council.

7(i).2 50th Anniversary of JMC in 2013

Reported that a sub-committee to plan a suitable event to celebrate the 50th anniversary, on the same day as the 2013 AGM, had been set up, consisting of Margaret Brown, Chris Robson and Bernard Silverman. They had commenced email discussion but sought some guidance on the sort of event that was in mind, and this was being taken forward. See also Minute 7(v).1.

ii. Honorary Secretary

7(ii).1 In accordance with Item 8.4 of the JMC Constitution, **notice given** of the election of the JMC Honorary Secretary in 2013. The accompanying paper was a copy of Section 8 of the Constitution which set out all the procedures for the election, which would take

place at the meeting to be held on 13 June. The current Honorary Secretary stated that, although he was eligible to seek a second term, he would not do so as he considered it important that JMC should have turnover among its Honorary Officers.

- 7(ii).2 **Reported** by Honorary Secretary that he expected to be absent abroad for about a month from mid-March, visiting family and on holiday. Attention to JMC business would be very difficult due to limited access to email and no access to his PC filestore. To ensure timely conduct of JMC business, it would be arranged that the secretary@jmc.org.uk email address would be an alias also of Executive Secretary for the period until Easter (Easter Sunday is 1 April 2013) but, as he might not be able to provide cover easily afterwards, it would then also become an alias of Sally Barton.

iii. Honorary Treasurer

Honorary Treasurer had provided a report which had been circulated to all representatives and which is attached as **Appendix 1** to these Minutes. Honorary Treasurer commented briefly, saying that the financial situation was essentially as expected at this stage of the year and appeared stable. He stated that the ACME grant had now been received (after he had prepared the report). He also stated that one further subscription had been received and he would be pursuing the remainder.

iv. Executive Secretary

Members **welcomed** the latest version of the JMC Handbook as prepared by Executive Secretary, who stated that he would update it on a regular basis.

[**Post-meeting note.** Executive Secretary prepared a further update immediately after the meeting. This has been circulated to all JMC representatives. This updated version, clearly labelled as such, has replaced the version circulated for the meeting in the JMC Council Documents archive.]

v. Chair of Nominations Committee

- 7(v).1 Sally Barton confirmed the membership of the sub-committee to plan a suitable event to celebrate the 50th anniversary, as set out in Minute 7(i).2. Comments and suggestions from members would be welcome and should be sent to her (sally.barton@brunel.ac.uk). The event would take place at the November 2013 meeting, replacing the usual afternoon discussion item.
- 7(v).2 A JMC representative was sought for the BCME Planning Committee. There would be three more meetings of this committee, two of which had already been arranged: 19 June and 29 October 2013.

- 8 **JMC International Representative** A full report by Ros Sutherland on ICME 12 had been circulated to all JMC representatives, elaborating on the short report received at the previous meeting.
- 9 **UK Representative to ICMI**
- 9.1 In the absence of Chris Budd, there was no report.
- 9.2 **Reported** by Chair that JMC had been asked by LMS to consider a slight change to the previously agreed procedure for appointing the UK Representative to ICMI, so as to reflect what had actually happened in 2012. This change would be that IAC (International Affairs Committee) of LMS would initially suggest some names and put these to JMC for consideration, rather than vice versa.
- Recommended** by JMC Executive that this be agreed to.
- Resolved** to agree to this request, and that Executive Secretary should officially inform LMS accordingly. [**Post-meeting note.** This has been done, and LMS has acknowledged with thanks.]
- 10 **BCME 8 (to be held 14-17 April 2014)** *Paper JMC-2013-Feb-BCME*
- The paper was accepted. There was little comment, due to the comprehensive nature of the report. Vigorous promotion of BCME 8 was looked forward to.
- Early consideration of possible venues for BCME 9 in 2018 was noted. This was strictly a task for the next BCME committee which would be appointed by JMC in due course.
- 11 **Primary Working Group** There was no formal report. It was accepted that the best conclusion for the project was now to ensure that key material from its findings should be transferred to ACME. Jenni Back confirmed that she had been in contact with Rosalind Mist accordingly.
- 12 **Mathematics Teacher Training Scholarships** **Noted** that the TA had announced a scheme, under the leadership of IMA and backed by LMS and RSS, for the award of Scholarships in 2013. Details had been circulated to all JMC representatives.
- Nigel Steele explained that the first stage of the application process had started and finished. Of 70 applicants, 46 were at present proceeding to the next stage. The first stage had included some internet-based tests, and there may be some fine-tuning of these for future use.
- James O'Donoghue referred to the shortfall of mathematics recruitment to initial teacher education courses as set out in the Teaching Agency report (see Minute 16(iii)). It was important that the new scheme helped redress this.
- In response to questions, it was explained that applicants who had been successful in being awarded scholarships would not receive them unless they were also admitted to ITE. The money would then be received in stages. It

would not be possible to recover money from anyone who did not take up a teaching career.

13 Reports received from JMC Organisations

i. Association of Mathematics Education Teachers

Paper JMC-2013-Feb-AMET

The paper was received.

Jenni Back particularly emphasised points 1 and 3 in the report, referring to potential problems with the Schools Direct route for ITE and to the likely loss of mathematics education expertise, perhaps even to the extent of closure of departments, in HEIs. James O'Donoghue added that the Schools Direct route was indeed a matter of concern to the TA, which was working on methods of supporting the schools.

ii. Mathematical Association

Paper JMC-2013-Feb-MA

The paper was received.

iii. Mathematics in Education and Industry

Paper JMC-2013-Feb-MEI

The paper was received.

Printed copies of the final report of the Integrating Mathematical Problem Solving project, funded by the Clothworkers' Foundation, were circulated. A link to the electronic version of this report had been included in the MEI paper and is repeated here for convenience:

http://www.mei.org.uk/files/pdf/Integrating_Mathematical_Problem_Solving_End_of_Project_Report.pdf

iv. NRICH representing the Millennium Mathematics Project

Paper JMC-2013-Feb-NRICH

The paper was received.

Steve Hewson particularly highlighted the Cambridge Mathematics Education project. Part of the work of this project was innovative web delivery. Comments would be welcome. It was suggested that this might well be suitable for a presentation to JMC.

v. A report was also received from **National Association of Mathematics Advisers**, paper *JMC-2013-Post_agenda_Feb-NAMA*.

- 14 **Report from ACME** A paper was received, *JMC-2013-Post_agenda-Feb-ACME*

Rosalind Mist and Lynne McClure highlighted a number of issues, particularly: the current Open Call for new members of ACME; procedures for developing consultation responses; forthcoming new work on policy coherence; and that the RS was itself recruiting for the ACME secretariat.

Mention was also specially made of next steps in regard of the intention that A-level review be led by the Russell Group. Honorary Secretary added that an email had been received from David Arrowsmith (HoDoMS representative) also expressing concern and agreeing that a wider input was needed, especially in view of the widespread use of mathematics to support other disciplines. Charlie Stripp added that he had recently analysed some UCAS data which clearly showed the large extent to which A-level mathematics pervaded other disciplines in HE.

- 15 **Report from NCETM** *Paper JMC-2013-Feb-NCETM*

The paper was received.

- 16 **Update on current developments**

i. Northern Ireland

Paper JMC-2013-Feb-NI

The paper was received. Nick Todd added that there may have been an element of careful preparation for the tests that contributed to NI's substantial success in the TIMSS survey.

ii. Ofsted

Paper JMC-2013-Feb-Ofsted

The paper was received.

Jane Jones added that the support material for schools that had been a commitment in the *Made to measure* report, referred to in her paper, had been taking a long time to prepare but would soon be available from the Ofsted website.

She also undertook to forward the link to the new guidance mentioned at the end of the paper.

[Post-meeting note. This link was forwarded soon after the meeting and is repeated here for convenience:

<http://www.ofsted.gov.uk/resources/20100015.>]

iii. Teaching Agency

Paper JMC-2013-Feb-TA

The report was received. Some discussion on aspects of it had occurred earlier in the meeting (see Minute 12).

17 Reports from meetings

17.1 A further meeting of the OCR Mathematics Consultative Forum had been held on 21 February 2013 "focusing on the mathematical and statistical needs of other subjects". Many JMC organisations had been represented, as was JMC corporately in the person of Executive Secretary who would circulate the Minutes of the meeting when they were received. In the meantime, he reported briefly that there had been around 40 delegates present, largely from other subject areas. There had been much discussion. A key point was to consider what could be offered in mathematics post-GCSE to those who did not want, or need, to take A-level Mathematics.

17.2 Chair reported that he had attended a meeting of the Joint BIS/DfE STEM Ministerial Advisory Group on 4 February 2013, chaired by David Willetts and Elizabeth Truss. There had been much discussion on post-16 matters, drawing heavily on recent ACME and Nuffield work.

[**Secretarial note.** Printed copies of two ACME reports from December 2012, *Post-16 Mathematics: Planning for success* and *Raising the bar: developing able young mathematicians* were circulated. These are available from the ACME website. Exact web addresses are

http://www.acme-uk.org/media/10523/20121217acme_post_16_planning.pdf

and

http://www.acme-uk.org/media/10498/20121212_acme_raising_the_bar.pdf.pdf

respectively.]

17.3 There was nothing further to report.

18 Any other business

None.

19 Dates of future meetings

All meetings will be at the Royal Statistical Society, 11 00 start, unless and until there is an announcement to the contrary.

Thursday 13 June 2013

Tuesday 5 November 2013 (immediately following the JMC AGM)

Tuesday 25 February 2014 (to be confirmed, subject to availability of Chair)

DISCUSSION ITEMS

Presentation and discussion on the National Centre for Excellence in the Teaching of Mathematics, led by Celia Hoyles and Charlie Stripp: looking back and looking forwards

Celia opened the presentation by thanking NCETM support staff for their work in helping to prepare it.

Through a sequence of PowerPoint slides including several fascinating photographs, Celia summarised the background to the initial set-up of NCETM, noting that the concept of interaction through a web portal was revolutionary at the time it was introduced. She proceeded to highlight some of NCETM's work, especially through the many major conferences it had organised. After a difficult period in 2011, when the original contract had ended, a new contract had been gained to secure the work of NCETM, albeit on reduced funding, to 2015. Much work was still being carried out, including the implementation of new work. The number of registered users of the portal was nearly 100,000 (as of the day before the meeting), a number that was undreamt of in the early days.

Charlie Stripp went on to consider the current challenges, noting that professional development of the teaching force was central to everything and that NCETM should have a key role in supporting this. It was important to be clear what NCETM was for and how mathematics education in general could benefit from it. He felt that NCETM should continue to be the key interface between teachers, schools, CPD providers and other organisations including government; that it provides a structure to help the overall system meet its many challenges; that it supports CPD providers and other mathematics organisations but should not be seen as threatening them; and that quality in all its work is vital. Challenges were indeed great, but so were the opportunities to bring about major improvement in mathematics education, and NCETM had a vital role in this.

The presentation was received with acclamation.

In an extended discussion, David Martin asked whether there were any specific recommendations regarding how NCETM, ACME and other mathematics community organisations should be mutually supportive; Charlie emphasised that communication was vital, and Celia added that NCETM should try to be, in some sense, the "voice of the teacher" in consultation responses, including encouraging teachers to respond individually. Cathy Smith enquired whether NCETM was able to provide critiques of new structures; Charlie replied that NCETM had to work within whatever structures existed, but could certainly influence how the curriculum was implemented. Stephen Williamson asked whether there were any connections between NCETM and the Welsh Government; the formal answer was no because all the funding came from England, but the web portal was open free to all! There had been some limited contact with other jurisdictions and an attempt to increase this might be worthwhile. Nick Todd pointed out that parents were important stakeholders, so the portal ought to be user-friendly for them too.

Celia enquired how NCETM and JMC could best continue to communicate well. Tim Rowland emphasised that good interaction by NCETM continuing to be an Observer with a representative at JMC was a necessary initial position, but there should be scope for further support and interaction beyond that. Alison Clark-Wilson commented that many JMC organisations are of course very active with schools in any case.

Celia further pointed out that at some stage it would be necessary to consider how the work of NCETM could best be carried forward beyond the end of the present contract in 2015.

Discussion on current developments led by Stefano Pozzi with Nicola Edwards (DfE)

Stefano Pozzi talked to a summary set of PowerPoint slides that were subsequently circulated. A copy is held in the JMC archive as *JMC-2013-Feb-Stefano_Pozzi_presentation*.

He focused on major announcements from DfE on 7 February 2013. These had already been sent to JMC by email. They referred to the National Curriculum consultation, to reform of GCSEs and to a consultation on substantial changes in secondary accountability. More details of all of these are included in the PowerPoint slides. It was immediately acknowledged that they all had implications for professional development for teachers.

The statutory National Curriculum consultation would close on 16 April 2013. In the case of Mathematics, the statutory consultation only covered Key Stages 1 to 3, but comments on Key Stage 4 would be *welcome* as part of responses (the KS4 information had been published for information). The consultation on secondary accountability would close on 1 May 2013. Proposals for primary accountability and assessment would be published shortly.

Important features of the GCSE reform that differed from what was set out in the consultation document were that the "market reform" to having just a single Awarding Body in each subject was not being implemented and that the title GCSE was being maintained.

Key dates for the next few years were as follows.

- **September 2013** – Final National Curriculum published
- **September 2014** – First teaching of National Curriculum
- **September 2015** – First teaching of new English, mathematics, sciences GCSEs
- **May 2016** – First Key Stage 1 and 2 assessment
- **September 2016** – First teaching of other new GCSEs

Discussion of a number of matters ensued. A particular point of concern from ATM and NAMA was that the new primary testing regimes from 2016 would be starting from a new baseline with no direct comparison with their predecessors; there might well be scope for some form of sample testing within cohorts crossing this boundary. Stefano said he would follow up on points raised on this matter with STA and Ofqual, as requested. He also flagged the introduction of "APU style" sample testing in KS4 for mathematics (as well as English and science).

Stefano ended with a request to JMC members who are considering responding to the secondary mathematics element of the National Curriculum consultation that they (i) consider Key Stage 3 and Key Stage 4 in the round, even if the statutory consultation relates to Key Stage 3 only, and (ii) if possible, give early indication of their thinking – around mid-March if at all possible. Early indication regarding primary mathematics would also be very helpful.

Stefano and Nicola were thanked for again coming to JMC for this important update.

APPENDIX 1

Honorary Treasurer's report

Income and Expenditure since 1/10/12

Income	Budget	Actual		Expenditure	Budget	Actual
Subscriptions	7,536.00	6,375.00		Exec Sec	8,000.00	1,905.50
ACME Grant	7,000.00	0.00		Officer Exp	880.00	266.39
Interest	0.00	0.96		Meetings	5,000.00	1,388.88
				Working Groups	650.00	0.00
ICME		2,400.00		ICME		600.00
TOTAL	14,536.00	8,775.96		TOTAL	14,530.00	4,160.77

The accounts so far for 2012/13 are presented above.

At the time of writing (19 Feb 2013) the above table shows the income and expenditure for the year 2012-2013. The ACME grant of £7,000 for this financial year has not yet been received, although ACME has been invoiced and the payment is being processed. In addition, at the time of writing four member societies have not paid their subscriptions and seven observer societies/organisations have not paid their subscriptions. I will be sending out reminder notices after the meeting.

The cheque sent to Trinity College for the refund of unused ICME funds has not been presented for payment.

Note that there is no budget for the ICME funds as these represents transactions left over from last year, and when combined with last year's ICME financial activity these will show a zero balance.

Bank Account Balances:	Current Account	£5,840.65
	Deposit Account	£5,736.41