

# HoDoMS

## HEADS OF DEPARTMENTS OF MATHEMATICAL SCIENCES IN THE UK

**Minutes of the Committee Meeting held at 11.30am on Friday  
14 September 2012 at De Morgan House.**

**Present:**

David Arrowsmith	Chair
Charles Taylor	Vice Chair
Toby O'Neil	Secretary
Peter Clarkson	
Erik Burman	
Kevin Parrott	
Mary McAlinden	
Dugald Duncan	
Tony Wickstead	

**In attendance:**

Nigel Steele	IMA
Martin Hylund	LMS

**Chair**

Prof. David K. Arrowsmith  
School of Mathematical Sciences  
Queen Mary,  
University of London  
Mile End Road,  
London  
E1 4NS,

T: 020 7882 5464  
F: 020 8981 9587  
E: D.K.Arrowsmith@qmul.ac.uk

**Vice-Chair**

Prof. Charles C Taylor  
Department of Statistics  
University of Leeds  
Leeds  
West Yorkshire  
LS2 9JT

T: 0113 343 5168,  
F: 0113 343 5090  
E: charles@maths.leeds.ac.uk

**Secretary**

Dr Toby O'Neil  
Department of Mathematics and  
Statistics  
The Open University  
Walton Hall  
Milton Keynes  
MK7 6AA

T: 01908 652136  
F:  
E: t.c.oneil@open.ac.uk

**Treasurer**

Prof. Anthony W. Wickstead  
Pure Mathematics Research  
Centre,  
Queen's University Belfast,  
University Road,  
Belfast,  
BT7 1NN

T: 028 9097 6004  
F: 028 9097 6060  
E: A.Wickstead@qub.ac.uk

		ACTION
	<b>In Memorium:</b>	
	DA reported the sad news of the death of Anne Bennett on Thursday 6 <sup>th</sup> September. DA will be attending her funeral on behalf of HoDoMS.	
<b>1.</b>	<b>Apologies</b>	
	Jeremy Levesley, Jeff Griffiths, Pargat Calay, Cathy Hobbs, Alison Hooper.	
<b>2.</b>	<b>Updates related to minutes of 13<sup>th</sup> April 2012 meeting</b>	
	<i>A level reform</i> (see also KPs report on OfQual under item 8.)	
	Meetings have taken place and information has been exchanged within the community. DA represented HoDoMS at some of these meetings and our views have been taken on board. ACME responded and HEdSA (IMA) in some detail. DAs letter (on behalf of HoDoMS) in response to consultation to be uploaded to website.	<b>TCON</b>
	Not sure whether to write to education select committee chair	<b>DA to consider</b>
	<i>Outstanding from conference:</i> 'slide' on maths impact.	
	<b>MH:</b> really just a watching brief for HoDoMS – make sure opportunities to press impact of discipline are not missed and full breadth of subject is represented.	
	<b>Noted:</b> need to improve breadth of attendance at conference. Earlier targeting of potential participants by Chairman.	
<b>3.</b>	<b>Matters arising from previous minutes</b>	
	None apart from those noted in 2.	
<b>4.</b>	<b>Correspondence / Chair's communications</b>	
	DA said: 'The Conference 2012 seemed to go down well. I didn't hear any criticism, only views which were positive. I would like to think that the people were being truthful – so I think we can assume that we got the content about right. What wasn't so good was the lack of a good spectrum of universities at the conference. The heads of departments of the Russell group and 1994 group were relatively thin on the ground.	
	We need to do more to get wider group of heads. I will attempt to do earlier cold calling of heads for 2013 to ensure that we have better numbers next year.	
	We had a late arranged item in the conference on the issues of A level standards. The original intention was to write to Minister Gove, but there was a variety of follow-up meetings involving ACME, JMC and others. During these meetings I saw nothing which convinced that anyone had a grip on the situation. I received the distinct impression at the Spring meeting of the JMC that the presentations from the DfE representatives thought that transfer of responsibility of syllabuses and overseeing of examinations would not be difficult.	

	<p>The official request for information on <i>A-level reform</i> came from OfQual and the deadline for response was 10th September, 2012.</p> <p>I was aware of the rather detailed nature of responses by the HEdSA committee and ACME and felt that it did not need to be repeated. I thought it better to set out the key points around the concerns expressed at the HoDoMS <i>Annual Conference 2012</i>.</p> <p>A response was sent to Ofqual and it is available on the HoDoMS web site.</p> <p>We now have a new web site and it is gradually being populated- although there are still technical hitches. We did make a contribution to the LMS for the web development work, but we are very grateful to LMS for helping with the construction of new site (and hosting the cache).</p> <p>Conference was, I believe, a success. Seen to be busy with plenty of interaction. I am particularly grateful to IMA for their efforts in delivering the STEM interactive exhibits –it was a pleasant diversion. Representation of universities is still patchy. The number of attendees as Heads is circa 25. The net number excluding the committee is approximately 15 members. In particular, the Russell Group is under represented.'</p> <p>A level: <b>DA</b> is concerned that there is too much discussion with no clear decision making. Also concerned that DfE is not being realistic: they thought the transfer to universities of exam setting/quality assurance would be straightforward. JMC/ACME are putting a lot of effort into this and there seems to be no need for us to duplicate their views – we just need to be supportive and make clear our key points. . HoDoMS response to OfQual reflects this.</p>	
5.	<p><b>Programme for 2013 Conference, 4-5 April 2013 at Birmingham Conference Centre</b></p>	
	<p><i>Ideas for speakers/topics/content.</i></p> <ol style="list-style-type: none"> <li>1. <b>REF2014</b> Prof John Toland</li> <li>2. <b>Civil service view:</b> Graeme Reid (BIS) gave an interesting presentation in 2012: is there available another angle and speaker?</li> <li>3. <b>Politics:</b> Elizabeth Truss MP interested in mathematical sciences and could be a possible speaker.</li> <li>4. <b>A levels:</b> possible representation from OfQual, Edexcel, OCR. Perhaps a panel discussion? Could also invite representative(s) from ACME.</li> <li>5. <b>Service teaching:</b> <b>MM</b> has set up a group to survey service teaching provision to other disciplines within mathematical sciences – should be able to report by conference 2013. Important as both income and politically useful. Need to update at January meeting to see whether this is viable. <b>MM</b> wants HoDoMS to support (mass mailing etc.) Departments that have lost/gained service teaching – lessons to learn. <b>NS:</b> to send in thoughts on service teaching/ how to debate.</li> <li>6. <b>Mathematics Education:</b> relationship between maths and maths education departments. (Compare with US view.) Possible speaker: Anne Watson.</li> <li>7. <b>EPSRC:</b> This year better than last but presentations repeating web content. Could consider inviting different funding body – Leverhulme/Nuffield.</li> <li>8. <b>Outreach:</b> Matt Parker as possible after dinner speaker (<a href="http://standupmaths.com/">http://standupmaths.com/</a>)</li> </ol>	<p><b>MM</b></p>

	<p>9. <b>Employability: MM</b> what are employers' views on necessary graduate attributes and do maths-related degrees take them seriously. Could ask someone from CBI.  <b>KP:</b> Greenwich had employers involved last year and it was very effective in motivating students. <b>Action:MM</b> to send ideas to <b>DA</b>.</p> <p>10. <b>Reserve (NS):</b> B'ham set up centre for maths – something about that?</p> <p>11. <b>GPS/Athena Swan:</b> GPS survey outcome and Athena Swan representative to talk about Athena Swan process from department perspective.</p> <p>12. <b>Open access publishing DA:</b> goal to have draft programme and put out (to committee) for comment in next couple of weeks.</p>	<p><b>MM</b></p> <p><b>NS</b></p> <p><b>DA</b></p>
<b>6.</b>	<b>Subscriptions</b>	
	<p>Membership is currently £120 and we currently have about 45 – 50 subscriptions.</p> <p>In a typical year spend exceeds income by about £1k due to the regular occurrence of 'one-off' exceptional items. This year the situation is slightly better due to (as yet) no one-off items.</p> <p>It was suggested that for small discrete administrative/web projects, paid interns could provide the required support avoiding the need to increase fees significantly to fund permanent administrative support.</p> <p><b>TW</b> asked whether we would be able to take web payments. <b>DA</b> to investigate.</p> <p><b>Agreed:</b> To raise subscriptions to £125.</p>	<p><b>DA</b></p> <p><b>TW</b></p>
<b>7.</b>	<b>Committee Elections in 2013</b>	
	<p>Following <b>EBs</b> move to UCL, he is no longer a HoD and will consider stepping down from committee.</p> <p><b>DD</b> has expressed an interest in replacing <b>AW</b> as treasurer. Constitution prevents him being formally confirmed until the AGM but he will start shadowing <b>AW</b> from January so that handover is smooth.</p> <p>Need to confirm with current committee members that records (on terms of office etc are correct). There appears to be several potential vacancies next year.</p> <p>Consider using mailing list for a recruitment drive (before Christmas).</p> <p>Important to ensure that all necessary information on HoDoMS website is present.</p>	<p><b>TCON</b></p> <p><b>DA/TCON</b></p> <p><b>DA/TCON</b></p>
<b>8.</b>	<b>OFQUAL: Call for evidence - report</b>	
	<p><b>KP</b> spoke to a tabled report on the meetings he'd attended, report below.</p> <p><i>ACME meeting notes</i></p> <p>There was a lot of mention of HE involvement by OfQual but no structure provided for it. There are moves by some Exam bodies to directly sign up individual academics. (This is consistent with the Ofqual consultation which does not envisage anything structured although they do specify Russell group.) . Very few academics are experts on A level content so directly approaching individuals is likely to produce a highly varied set of responses.</p> <p>OfQual do not appear to understand the AS/Alevel/FM structure currently in place. It is</p>	

potentially at risk in their proposals however the consensus was that the status quo could be preserved under Option 3. Everyone thought that AS maths was an essential stepping stone to full A level and should be retained. Removing January exams was not seen as a problem. Most people wanted to keep the range of module choices. There was no enthusiasm to change core content.

There was a common view that maths should not be in the first swathe of these new A levels.

There was a willingness to see more problem solving questions in the exams (and hence begin to change the teaching style). This seems to be a welcome move but everyone wanted it to be undertaken gradually. The A\* grade was not popular and not deemed reliable.

Jeremy Levesley noted the HODOMs conference position that the questions should be made harder. This could happen if there was more problem solving style questions.

Suggested Summary:

1. The A\* grade and the AEA (Advanced Extension Award) have a useful role as preparation for mathematics undergraduates and in some university admissions processes, and should be retained.
2. The current A-Level assessment should have additional problem solving questions in a less structured format.
3. The A-Level syllabus is designed to meet a broad range of requirements and so should not be changed substantially.

#### August 2012 results

Subject	Gender	Number	Cumulative percentages by Grade						
			A*	A	B	C	D	E	U
Mathematics	M	51413	18	43.7	65.2	80.8	91.6	97.4	100
	F	34301	16.6	44.2	67	82.9	92.8	98.1	100
	M & F	85714	17.4	43.9	65.9	81.6	92.1	97.7	100
Mathematics	M	9251	28.5	56.8	77.6	88.7	95.4	98.1	100
(Further)	F	3972	29	59	80.3	90.9	95.8	98.7	100
	M & F	13223	28.6	57.4	78.4	89.4	95.5	98.3	100

One extra comment made by **KP** in meeting: The advanced extension award (AEA) may be a better route for students to qualify for maths degrees, since shares syllabus with A level mathematics (rather than Further) and so easier for more schools to teach.

Combine with **DA** documents and decide whether we need to say more.

Structure seems to be key issue.

#### 9. LMS Good Practice Scheme for Mathematical Sciences - report

A survey was sent out to mathematics departments in June. The deadline for their return is

	<p>September. The intention is for an analysis of the data to be reported at the Mary Cartwright Lecture in February 2013.</p> <p>Peter Clarkson agreed to be HoDoMS rep on LMS Women in Mathematics Committee, subject to Jeremy Levesley's agreement.</p> <p><b>ACTION:</b> Reminder to be sent around HoDoMS mailing list in the next couple of days.</p>	<p><b>TCON/DA</b></p> <p><b>PC</b></p>																																
<b>10.</b>	<b>Watching briefs/external organisation representation</b>																																	
	<p>Current Brief distribution:</p> <table border="1" data-bbox="261 533 1257 1227"> <thead> <tr> <th>Agency</th> <th></th> </tr> </thead> <tbody> <tr> <td>JMC</td> <td>David Arrowsmith</td> </tr> <tr> <td>ACME</td> <td>Kevin Parrott</td> </tr> <tr> <td>CMS</td> <td>David Arrowsmith</td> </tr> <tr> <td>NCETM HE</td> <td>Pargat Calay</td> </tr> <tr> <td>HEA MSOR Network</td> <td>Mary McAlinden</td> </tr> <tr> <td>STEM (incl WP)</td> <td>Alison Hooper</td> </tr> <tr> <td>EPSRC</td> <td>Dugald Duncan</td> </tr> <tr> <td>IMA</td> <td>Nigel Steele</td> </tr> <tr> <td>LMS</td> <td>Martin Hyland</td> </tr> <tr> <td>RSS</td> <td>Charles Taylor</td> </tr> <tr> <td>ORSOC</td> <td>Jeff Griffiths</td> </tr> <tr> <td>TDA</td> <td>Jeremy Levesley</td> </tr> <tr> <td>UUK</td> <td>Toby O'Neil</td> </tr> <tr> <td>Bologna International Affairs</td> <td>Charles Taylor</td> </tr> <tr> <td>Engineering Professors Council maths working group</td> <td>Cathy Hobbs (to be nominated by us)</td> </tr> </tbody> </table> <p>Email them in if there is something to report.</p> <p><b>LMS (MH)</b> Unfocused concern around open access publishing. Problem with disentangling Society's own financial interests and that of mathematicians having to pay to publish and where the funding for this will come from. (NS: IMA has similar concerns.)</p> <p><b>Council for Mathematical Sciences (DA)</b> CMS continued to protest loudly at the decisions of the EPSRC, particularly with respect to Research Fellowships being restricted to Statistics and Probability. CMS now has effectively 2 representatives on the Strategy Advisory Team for Mathematics (Professors Sir John Ball and David Abrahams). CMS has not noted any activity on its website since the last meeting.</p> <p><b>EPSRC (DD)</b> Noted that maths was being used as a pilot for the new DTG scheme.</p> <p><b>Joint Mathematical Council June Meeting (DA)</b> It was the first of these meetings that DA had attended. A very large membership - over 40 representatives. The meeting was well led and organized, but nevertheless showed up the</p>	Agency		JMC	David Arrowsmith	ACME	Kevin Parrott	CMS	David Arrowsmith	NCETM HE	Pargat Calay	HEA MSOR Network	Mary McAlinden	STEM (incl WP)	Alison Hooper	EPSRC	Dugald Duncan	IMA	Nigel Steele	LMS	Martin Hyland	RSS	Charles Taylor	ORSOC	Jeff Griffiths	TDA	Jeremy Levesley	UUK	Toby O'Neil	Bologna International Affairs	Charles Taylor	Engineering Professors Council maths working group	Cathy Hobbs (to be nominated by us)	
Agency																																		
JMC	David Arrowsmith																																	
ACME	Kevin Parrott																																	
CMS	David Arrowsmith																																	
NCETM HE	Pargat Calay																																	
HEA MSOR Network	Mary McAlinden																																	
STEM (incl WP)	Alison Hooper																																	
EPSRC	Dugald Duncan																																	
IMA	Nigel Steele																																	
LMS	Martin Hyland																																	
RSS	Charles Taylor																																	
ORSOC	Jeff Griffiths																																	
TDA	Jeremy Levesley																																	
UUK	Toby O'Neil																																	
Bologna International Affairs	Charles Taylor																																	
Engineering Professors Council maths working group	Cathy Hobbs (to be nominated by us)																																	

	<p>severe problems of such a diverse group coming up with clear strategic decisions/outcomes and leadership.</p> <p>A major item was the discussion of how the mathematics community might progress with Mathematics Teaching Scholarships – decisions were deferred to a follow-up meeting, details of which are yet to be published.</p> <p>There was also a discussion on the new primary curriculum for mathematics. DfE representatives argued that previously they had been too prescriptive and now they were going to leave it to teachers to interpret the new curriculum/syllabus. <b>DA</b> advised that even for specialist mathematicians, interpretation of a syllabus could provide a wide spectrum of outcomes for students. This problem could be even greater in the more generalist environment of primary schools. Basically the DfE were told that they were oscillating from one extreme position to another - over-prescription of learning outcomes to under-prescription . This was not good if standards were to be meaningful and comparable across schools.</p> <p><b>Operational Research Society (JG)</b>  Geoff Royston took up the Presidency of the Society at the beginning of this year (two year term of office). Geoff was Head of OR at the Department of Health prior to his retirement last year.</p> <p>The Beale Medal for 2011 was awarded to Professor Frank Kelly (Master of Christ’s College, Cambridge) at the Royal Society in November 2011.</p> <p>The 2011 Blakett Lecture was delivered at the Royal Society by Professor Rolf H. Möhring, Fakultät II - Mathematik und Naturwissenschaften, Institut für Mathematik, Sekr. MA 5-1, Technische Universität, Berlin. His talk was entitled “Dynamic Network Routing – Meeting the Challenge of Complex Traffic and Transportation Tasks”.</p> <p>The Society has continued to make its views known on matters of national importance through their membership of CMS. (People pipeline, EPSRC Postdoctoral Fellowships, Open Access, etc.).</p> <p>The Society currently has a portfolio of seven journals. With the anticipated advent of Open Access publishing, the Society has made contingency plans to cope with any short-term problems which may arise during the transition period.</p>	
<b>12</b>	<b>Date of next meeting</b>	
	Friday 4 <sup>th</sup> January @11.30 @ De Morgan House.	<b>TCON</b>
<b>11.</b>	<b>Any other business</b>	
	<p><b>KP</b> raised the issue of London Met and the withdrawal of its ability to recruit international students.</p> <p><b>Agreed:</b> To write letter to David Willets noting HoDoMS concern about the situation and the appalling consequences for international students studying there and pointing out the substantial benefits of international students studying in the UK.</p>	<b>DA/KP</b>

**Minutes approved: .....**

TC O'Neil – Hon Sec.

DK Arrowsmith – Chair

2<sup>nd</sup> Oct 2012