

**Minutes of the first meeting of the
Directors of Studies in Mathematics
for 2008/2009**

**Held on Tuesday 18th November 2008 at 2pm
in the Old Library, Pembroke College**

Present: Nilanjana Datta (Pembroke, Chairwoman), Dennis Barden (Pembroke, Minutes), Stephen Siklos (Jesus), Nikos Nikiforakis (Selwyn), Bobby Gramacy (Jesus), Richard Samworth (St John's), Mark Spivack (Emmanuel), Orsola Rath Spivack (Lucy Cavendish), Christopher Brookes (Corpus Christi), Jonathan Evans (Gonville & Caius), Jan Saxl (Gonville & Caius), Julius Ross (Sidney Sussex), Tadashi Tokieda (Trinity Hall), Irena Borzym (St Catherine's), Alexei Kovalev (Fitzwilliam), Matthew Wingate (Fitzwilliam), Houshang Ardavan (Murray Edwards), Stuart Martin (Magdalene), Christopher Tout (Churchill), Annamaria Sinkovics (Newnham), Maciej Dunajski (Clare), Hugh Osborne (Trinity), Ross Lawther (Girton), Julia Gogg (Queens'), Robert Hunt (Christ's) and Adriana Pesci (downing). Stephen Cowley attended for item 3(iv) and Tom Körner for item 5.

1. Apologies

Apologies for absence were received from Matthias Dörrzapf (St John's), Jack Button (Selwyn), Simon Wadsley (Homerton) and Chris Warner (Robinson).

2. Minutes of the meeting held on 13th November 2007

The minutes were accepted and signed as a correct record.

3. Tripos, Parts IA, IB and II

(i) Teaching Committee Report

The report to the Faculty Board of the Teaching Committee was received and noted.
In Particular

- (1) Item 2.6. Classification Criteria: there were approximately 10% of candidates receiv-

ing thirds and below in accord with the faculty guidelines; this year the quantitative guidelines ('merit marks') will be the primary determinant for class boundaries.

- (2) Item 3.2. Education Tripos: in view of the generally weak (low third class) performance of Education Tripos candidates taking mathematics papers it was proposed and agreed, *nem. con.*, that the Faculty of Mathematics recommend that the relevant Faculties should ask such students, intending to take mathematics papers, to satisfy a S.T.E.P. condition when applying for admission. Dr Siklos agreed to report this to the Faculty Board.

(ii) Changes

The following changes to Part IA of the Tripos were noted:

- (1) Newtonian Dynamics given a revised syllabus and new name: Dynamics and Relativity
- (2) A new course, Variational Principles, would be lectured in the coming Easter Term and examined in 2010.

(iii) Transcripts

It was strongly felt that the proposed Cambridge Transcript was unsuitable for mathematics. It was proposed and unanimously agreed to ask the Faculty Board to press for a special transcript for Mathematics.

(iv) Computational Projects

After summarising the problems with running CATAM, primarily the difficulty in teaching programming and the variability of college support, Dr Cowley said that, subsequent to the Faculty Board's agreement to the change of the supported language to Matlab, the immediate problems to be addressed were how to teach the students to use Matlab, particularly in view of the extreme range of their previous programming experience, and how to teach them to write up their projects. He suggested having an introductory project, as is done in the Engineering Faculty. This would be handed in, possibly as early as the start of the Michaelmas Term, and returned in full to the students. It should carry few, if any, marks so that constraints on the help that supervisors should give could be relaxed.

During the ensuing discussion it was generally agreed that the students did need help and guidance, particularly in programming and essay writing, though it was not clear what proportion of this should come from the Faculty and what from the Colleges. The importance of a level playing field, helping everyone equally, was stressed. Explicit suggestions included a worked example project as part of the lectures and the provision of 'model' solutions online for selected projects that were not being set in the current year.

In a vote on the proposed introductory project there voted 10 for and 8 against with 8 abstentions.

4. Admissions

(i) Statistics

Applications for Mathematics had increased from 2007 to 2008 by a relatively insignificant 2.9%. It was suggested that in future E.U. data should be separated from the 'Overseas' figures. Dr Siklos agreed to ensure this.

(ii) Moderation

It was agreed that Directors of Studies would circulate data on borderline candidates in addition to that on those pooled.

(iii) Pool

An account of the procedure for the selection of candidates at the Winter Pool in January 2008 was received. It was generally agreed that it worked satisfactorily except that it was suggested that the denominator in the formula was inappropriate for mathematics: it should be the number of places, which is what P+F would represent in other subjects.

5. Tripos Part III

Professor Körner explained that Part III had irretrievably lost its special status among L.E.A.s. largely on account of the E.L.Q. regulations. Proposals were now well advanced that internal students intending to take Part III should not graduate at the end of their third year but graduate with M.Math with B.A. after four years. Those who had not been Cambridge undergraduates should get an M.A.Studies, and this should be retrospective for those that wished it.

Professor Körner outlined the various arguments for and against the proposals, after which it was unanimously agreed to authorise the chairwoman to express the complete support for them by the Directors of Studies in any Senate House discussion.

6. STEP 2008 Coordinator's Report

A report from Dr Siklos was received and welcomed. It was felt that Paper 2 had been easier this year than previously, and also noted that there had been a significant increase in numbers taking the S.T.E.P. papers in the last two years. It was strongly felt that, in these circumstances, the 'S' and '1' grades should remain absolute, or they would join 'A'-levels in being relatively useless in the selection of undergraduates to read Mathematics. Dr Siklos reassured the meeting that the grades have remained, and would remain, absolute.

Dr Siklos informed the meeting that the Sutton Trust would not be funding the STEP Easter School after next year. Approximately 16,000 pounds would need to be found to support the 70 participants. Several Directors of Studies confirmed that their students who had attended the School had benefitted from it.

7. Induction Meeting

A report by Dr Siklos noted that there had been an attendance figure of around 80%. It was agreed that the session should be repeated next year in a similar format. The notice of the meeting should be sent to admission tutors for inclusion in the information packs sent to candidates for admission.

8. Any other business

Dr Siklos reported on the two Faculty Open Days for sixth-formers as well as Oxbridge Conferences, held in football stadia and a racecourse, and University Open Days.

The Faculty Open Days are relatively inexpensive, show the Faculty at its best and provide a good advertisement for Cambridge Mathematics. It is proposed to hold two in 2009, on Saturdays 25th April and 2nd May.

9. Date of next meeting

The date of the next meeting was set for Tuesday 28th April at 11.15 in Pembroke College.