

## Chris Budd: Election Statement

As I am up for re-election as education secretary I would like to give some idea of my visions for the future role of the LMS in education, both in schools and in HE in these very challenging and fast moving times with drastic changes possible on the horizon.

I am passionately committed to promoting both mathematics research, mathematics education and also the broader appreciation and popularisation of mathematics at all levels, from school to HE and beyond. In recent years the Education Ctee has addressed all of these areas. As an active research mathematician, I also believe strongly that good mathematics research and good mathematics teaching are mutually supporting and intimately connected, and that both are vital for the health of UK mathematics. This certainly means that we must both have a robust attitude towards promoting excellence in education at HE and also to have a strong and vibrant dialogue between schools and HE with close engagement between the two on both delivery and on curriculum design. I have done my best to promote this, both in terms of direct support, and also in lobbying for mathematics, with a much broader focus on education than just HE matters.

In terms of what I believe and hope to achieve. Firstly, I believe that we should have a schools and HE programme of teaching maths which really engages, stimulates and challenges ALL of our students so that we can produce the next generation of both mathematicians and also mathematically rich disciplines. And must lobby government for the support to do this. At HE level this means supporting lecturing staff (both in training, curriculum and in delivery), so that they can teach maths effectively and well without unnecessary interference from those who are unaware of the special issues related to mathematics teaching. This was the motivation for the issuing of the LMS Teaching Statement the year and the work of the LMS on the Maths benchmarking statement.

At a school level This certainly means that we must have challenging mathematics A levels (Maths and Further Maths) which engage a good number of students and adequately prepares them for the rigours of doing a mathematically demanding degree. I also believe that GCSE should stretch and challenge the best students whilst still engaging all students. I will continue to champion high and improving standards at all school levels. I am also very concerned that far too many students in the UK drop maths post 16. This means that almost uniquely in the industrialised nations we do not teach maths to all students up to the age of 18. I do not believe that this is healthy for the future of the nation and I support the Pathways approach, outlined in the 2004 Smith Report (to which the LMS Education Ctee contributed) in which different mathematical courses are designed to meet different needs of the students. I hope that we can seek a world in which all school leavers are mathematically literate and I will endeavour to make this possible.

I recognise clearly that in a world of limited resource (both in money and in trained teachers) that there are tensions (and potential dangers) between supporting a demanding A level for the good mathematicians and also ensuring that more students study maths post 16. To address these tensions I strongly support lobbying for more funds in general and also initiatives to both encourage and guide the students and teachers on these courses so that we can both make maximum use of available resource and can lobby for more resource. For example I am a strong supporter of the Further Maths Support Programme, Undergraduate Ambassador Schemes and also the development of on-line and electronic resources for schools. I also believe that the LMS members should be engaged in writing excellent text

books and developing new educational resources for this age group. The Education Committee has been actively involved in a number of initiatives to directly link HE Mathematicians with schools (such as More Maths Grads, Maths Careers, HE-STEM) and I firmly believe that the LMS and its members should play an active role in developing more such initiatives in the future.

The Education Ctee has been heavily involved in a close dialogue on maths teaching with CMS, ACME, JMC, HODOMS and various learned societies, and I firmly believe that this should continue. I also support vigorous efforts to support, recruit, retain, train, develop and enthuse excellent maths teachers at ALL levels. We can only have good maths teaching if we have good maths teachers. The LMS Education Ctee has worked closely with the NCETM and strongly supports initiatives to develop CPD for maths teachers linked with HE. I also believe strongly that we should encourage as many good students as possible to go into maths teaching and support initiatives such as the UAS which gives such students the opportunity to act as ambassadors between HE and schools.

Finally I firmly believe that to convince the powers that be to fund maths we must continue to make the case for the beauty, power, relevance and importance of ALL branches of mathematics to everyones lives. To this end the Education Ctee supports a number of initiatives to popularise mathematics including the popular and Gresham lectures, the Holgate scheme with schools, the small educational grants, the Royal Society Summer Exhibition and the British Science Festival. I passionately hope that the LMS and its members will continue to support, and get involved with, this work. As a research mathematician I feel a great responsibility for educational and public engagement activities to explain what our research is about, to motivate and enrich our teaching and to ensure continuing support for research.

I look forward to the challenges of the future of mathematics education, and very much hope that all of the LMS Membership can be involved in making the teaching of mathematics in the UK as good and challenging as it can possibly be.