PROTECT <PURE> MATHS

The Rt Hon Jeremy Hunt MP
The Chancellor of the Exchequer
HM Treasury
Horse Guards Road
London SW1A 2HQ

24 February 2023

Dear Chancellor

We are writing regarding your recent visit to McLaren Technology Centre to welcome your comments on the role of the mathematical sciences in the automotive and engineering industries, and their wider contribution to the UK economy.

As you noted, strong mathematical skills are central to building the kinds of pioneering technologies that McLaren is famous for, and improving knowledge of mathematics is essential if we are to meet your Government's aspirations for the UK as a science superpower.

However, we are concerned that some of the decisions made across Government, and by individual universities, risk undermining the commitment to maths from you and the Prime Minister, and our ability to foster a pipeline of talented mathematicians and economists who have the potential to contribute to social, economic and technical advances in the century ahead.

For example, universities face ever greater financial pressure from high inflation and real terms decline in the value of the maximum domestic tuition fee. This is compounded by problems in recruiting cohorts of students that put some departments under threat.

The larger mathematics departments at Russell Group universities continue to thrive and grow, but this is leading to the mathematical sciences becoming an almost exclusively high-tariff degree with far fewer lower-tariff, non-traditional options available for those who wish to continue to study beyond A level. Where the tariffs tend to be lower, we risk seeing the emergence of "maths deserts" – swathes of the country with no opportunities to study the mathematical sciences beyond A Level. It is often the low tariff institutions that are at the forefront of producing the next generation of much needed maths teachers.

Worryingly, this is already happening at institutions across the country. Leicester University cut its mathematics provision back in 2021, and Birkbeck recently announced significant cuts to university teaching staff of mathematics and statistics while Brighton stopped recruiting to all its maths courses. Importantly, these universities also provide non-traditional routes to mathematics in higher education and any closure will further set back efforts to improve diversity in the discipline.

Furthermore, research in mathematical sciences is key for the advancement of all areas of science and technology, and it is a vital area of science in itself. The mathematical community is therefore extremely concerned that the Government has reneged on its additional funding commitments made to mathematics research.

In January 2020, the Government announced that it would invest £300m of additional funding into the mathematical sciences. £124m of this funding has been spent on projects of national importance, including on institutes, small and large research grants, fellowships, doctoral studentships and postdoctoral awards. However, £176m of this additional investment was not allocated and we have been advised by BEIS that "*the UKRI Board took the difficult decision to advise BEIS Ministers not to hypothecate a further uplift for the mathematical sciences at this stage.*"

As you know, despite the difficult economic situation, it is false economy and short-termism to disinvest in the mathematical sciences which underpin so many technological advancements that have contributed so significantly to the UK's economic growth.

We are therefore concerned that mixed messages are being presented to the mathematical community and the industry and businesses that rely on mathematics supported by the Government.

We urge you to work with your colleagues across Government, not only to reinstate the promised funding, but to put in place a cross-departmental strategy for maths that supports the research and mathematics pipeline that is critical to future UK success in fields as diverse as AI, life sciences, quantum, fintech, and green technology. This should include working with the Secretary of State for Education to underline the importance of safeguarding mathematics departments across the country, particularly if we want the geographical clusters of innovation promoted by the Science Minister to become a reality. It should also involve working with the newly created Department of Science, Technology and Innovation to ensure adequate research funding, as well as the ability for business to draw on R&D support and tax credits.

Without this commitment, we will not be able to provide the next generation of skilled mathematicians for major UK companies like McLaren.

We urge you to take this into account in your Spring Budget. We are very keen to discuss this with you and your team at the earliest opportunity and would be delighted to meet to do so. Please contact us via Claudia Toma at puremaths@connectpa.co.uk if you would like to arrange this.

Yours sincerely,

Protect Pure Maths

**Professor Ulrike Tillmann, President of the London Mathematical Society**

**Professor Paul Glendinning, President of the Institute of Mathematics and its Applications**

**Professor Iain Gordon, Vice President of the London Mathematical Society**