

A detailed description of the steps toward the creation of The National Academy for the Mathematical Sciences

“We live in the era of mathematics. Its influence permeates economic and social activity and its influence and impact are profound. Yet its role is not well understood, we are not using it as well as we could and should, and we are investing too little [...] There can be fewer more productive, creative and exciting investments than investing in mathematics.”

From Lord Stern’s Preface to The Bond Review

In 2018, Professor Philip Bond launched his [Independent Review into Knowledge Exchange in the Mathematical Sciences](#) at the House of Lords, which set out twenty-six recommendations around the themes of Governance, Skills, National Resource & Infrastructure, Regional Support, and Government.

A key recommendation was that:

An Academy for the Mathematical Sciences should be established in order to facilitate links between academia, government and industry. The Academy should act as the focal point and coordinating centre for the community and draw on the deep expertise of the existing learned societies.

The [Council for the Mathematical Sciences](#) (CMS) welcomed the review and its recommendations. In response, it commissioned the Big Mathematics Initiative (BMI), a two-tier committee structure led by Dr Claire Craig and Sir Bernard Silverman, to develop proposals identified in the Bond Review.

The BMI reported its [recommendations](#) in June 2020. It recognised the important role that the existing organisations play and proposed the case for an Academy that would work with them, bringing together the subject’s diverse fields and advocating for the whole of the mathematical sciences in all regions of the UK.

Although the UK has a number of specialist professional and learned societies, our community lacks a clearly-identified, authoritative and effective body to represent our discipline externally....Disembodied, our discipline has failed to be recognised nationally for its research excellence, its utility and its transformative power....As a result, our discipline has not harnessed opportunities that would have a profound effect on research, the wider economy and society as a whole, as well as ensuring its long-term health in the UK.

The Academy must and will act as an enabler, not a competitor, to enhance the work of individual learned societies and other mathematical sciences organisations: each has its own history, strengths and constituency, all of which are critical to the fabric of UK mathematical sciences. The Academy would develop the mathematical sciences brand within the UK, demonstrating the power and ubiquity of mathematics in society.

Stemming from the BMI's broad recommendations it was agreed with CMS that Professor David Abrahams, then Director of the [Isaac Newton Institute](#) (INI), would establish a small working group to develop this vision for a National Academy for Mathematical Sciences. The December 2021 [Green Paper](#) produced by this working group set down the narrative for such an academy, and laid out a roadmap for how it might be created and operate. It was produced for consultation and response and was aimed at all stakeholders, both within the broad mathematical sciences community and outside.

In summary, the Green Paper asserted that "The Academy will bring together the subjects' diverse voices from pure mathematics through industrial and applied mathematics to statistics and operational research, from academic scholars and teachers of mathematics to practitioners outside academia who use mathematics in their work. [It] will provide a single voice, with opportunities for interaction and parity of recognition afforded to all."

The Green paper identified "core functions" of the proposed Academy including policy affairs, EDI, practitioner affairs, educational affairs and academic affairs. It outlined a proposed structure for the Academy including a Fellowship of excellence, a Council including a CEO, an external Chair, and a President selected from the Fellowship. It confirmed that funding should be sought from both government and philanthropy and envisaged that in the region of £5m per year would be required to fund a suitable professional secretariat and headquarters, as well as the various activities of a national academy. It proposed an initial set-up phase with modest support from the Isaac Newton Institute and International Centre for the Mathematical Sciences through its "Additional Funding for Mathematical Sciences" grant.

With the support of Professor Andrew Noyes (Chair of the [Joint Mathematical Council of the UK](#)) (JMC), CMS consulted the mathematical sciences community on the Green Paper's proposal for a National Academy and on the creation of a Connected Centres Network. The consultation period, which closed on 21 January 2022, included a virtual Town Hall meeting, hosted by ICMS on 11 January 2022: the recording of this event can be accessed [here](#). Following its consultation of the mathematical sciences community, CMS convened a "Task and Finish Group" (TAFG) to consider the feedback received, and propose next steps bearing in mind the available funding. TAFG produced a [Next Steps](#) paper that envisaged employing a senior administrator to serve as Executive Director and setting up a focused Executive Committee of a "proto-Academy". These roles were advertised on the CMS website and shared more widely, including through the five learned societies, JMC and [HoDoMs](#) (Heads of [University] Departments of Mathematical Sciences).

The appointed Executive Committee and Executive Director for this set-up phase, assisted by an Advisory Board, have been tasked with developing a detailed, actionable plan for the Academy, securing sources of funding, setting up a governance and fellowship structure, and incorporating and registering the organisation ready for the creation of a full Academy in early 2025.

In advance of March 2025, the end date for INI's "Additional Funding for Mathematical Sciences" grant, a go/no-go decision for the Academy would be taken based on whether the

key design issues have been addressed, whether longer-term funding is in place, and whether a strong operational and business plan is ready. TAFG recommended that the Executive Committee be appointed initially for the setup phase, with the anticipation that, should the decision be taken to proceed with the academy at the end of this phase, to ensure continuity, some members would become trustees of the new Academy in its first years of independent operation.

In July 2022, CMS issued a Call for Nominations for the Chair of the Executive Committee of the Academy during this set up period and also for Executive Committee Members. Concurrently it advertised the role of the Executive Director. CMS noted its determination that the academy would be inclusive in at least four ways:

- It will cover all mathematical sciences, including mathematics (pure and applied), statistics and operational research.
- It will involve and include practitioners, academics and educators.
- It will have equality, diversity and inclusion at its heart.
- The internal structures of the Academy must allow room for a diversity of views and use this creative tension to its advantage.

A Nominations Committee proposed by the CMS Board sifted the (about 80) nominations for the Executive Committee and on 5 /October 2022, CMS announced the names of the Executive Committee, including Executive Chair, Nigel Campbell, and Executive Director, Dr Christie Marr.