

Re: UNCG MATH GRAD PROGRAM

Philip Maini <Philip.Maini@maths.ox.ac.uk>

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To:Ratnasingham Shivaji <R_SHIVAJ@uncg.edu>;Stephen Tate <srtate@uncg.edu>

Dear Professor Tate,

In a response to an email I received from Shivaji Ratnasingham, I would like you to please forward the message below to the Chancellor.

Thank you.

Yours sincerely,

Philip Maini

To: Dr Franklin D. Gilliam, Jr
Chancellor, University of North Carolina at Greensboro

Dear Chancellor,

The proposal to terminate the doctoral program in computational mathematics and the MA in Mathematics, at the Dept of Mathematics and Statistics at UNC Greensboro, has been brought to my attention.

My name is Philip K. Maini, and I am the Inaugural Statutory Professor of Mathematical Biology, and Director of the Wolfson Centre for Mathematical Biology, Mathematical Institute, University of Oxford, United Kingdom. I am a Fellow of the Royal Society (FRS), Fellow of the Academy of Medical Sciences (FMedSci), Fellow of the Society for Industrial and Applied Mathematics (SIAM), Inaugural Fellow of the Society for Mathematical Biology (SMB) and Fellow of the American Association for the Advancement of Science (FAAAS). I have been awarded the Winfree Prize from the SMB, the Naylor Prize from the London Mathematical Society (LMS) and the Institute of Mathematics and its Applications (IMA) Gold Medal. I have supervised over 70 doctoral graduate students and published over 500 research articles.

This doctoral program has been very successful at the UNCG, ranking 6th out of 30 doctoral programs at the university. It has already awarded an impressive number of degrees.

As you know, the huge advances in technology (most recently, Machine Learning and AI) are all founded on mathematical principles and research, and then translated into use via computational advances. In my own field of mathematical biology, the enormous amount of data now being generated by labs across the world requires significant advances in software development, mathematical modelling and computational methods, if we are to fully capitalise on these data and unearth their full potential. Indeed, the FDA now uses mathematical models as part of their assessment for certain drugs, while mathematically informed

insights are being translated into the clinic in cancer treatment. These are just two examples of the enormous impact mathematics and computation are having in my own field, and, of course, they have huge impact in other fields.

In these circumstances, it is very hard to understand a decision to discontinue research in these areas, as the world is in need for highly trained experts in these areas and young people are increasingly seeking this expertise. I understand that a reason given for this move is to focus on undergraduate training in mathematics. I think that for undergraduate students to receive training in a field that is rapidly changing, it is important that they are exposed to those changes, and how those changes are affecting the world we live in. That comes from having teaching faculty who are heavily engaged in this research and a vibrant graduate program that creates visibility.

I very much hope that the university does not proceed with this decision as I feel that it will be very damaging to the university.

Yours sincerely,

Philip K. Maini

Professor Philip K. Maini FRS FMedSci FNA FRSB FIMA FEurASc FAAAS
SIAM Fellow, Inaugural SMB Fellow
Inaugural Statutory Professor of Mathematical Biology (2005-)
Director, Wolfson Centre for Mathematical Biology (1998-)
Professorial Fellow, St John's College, Oxford (2005-).