Nomination for Pilkington Teaching Prize 2023/24
Faculty of Mathematics

With the enthusiastic support of both Professor Ivan Smith, Head of the Department of Pure Mathematics & Mathematical Statistics, and Professor Colm-cille Caulfield, Head of the Department of Applied Mathematics & Theoretical Physics, I would like to nominate **Professor Julia Wolf** for the Pilkington Teaching Prize 2023/24.

Citation

Professor Julia Wolf is an inspiring educator and transformational leader in her various pedagogic roles within the Faculty. She has served as the Director of Taught Postgraduate Education for the past five years, where she has been a hands-on manager of the Part III course. With her deep commitment to both the mathematical education and the overall wellbeing our students, she has been instrumental in reforming the structure of the course to ensure that all our students, with their diversity of backgrounds and interests, have the most positive and fulfilling experience possible during their time in Cambridge. During the COVID pandemic, Professor Wolf worked heroically to protect the quality of the Cambridge education experience, tirelessly coordinating the online provision of lectures, examples classes and office hours, as well as with ensuring that the examinations (both online and in-person) were rigorous and fair. She liaised extensively with all stakeholders across the collegiate university to establish consistency and consensus. On top of all this, she is an exceptionally well-regarded lecturer across all years of the Tripos, with one IA student describing her as an "absolute academic weapon," and all praising the clarity and structure of her presentation.

Michael Tehranchi
Director of Undergraduate Education
Faculty of Mathematics

Supporting Comments

1. Management of Part III Mathematics

Professor Wolf has served as the Director of Taught Postgraduate Education from 2018 until this past September, where she has managed the joint Master of Mathematics and Master of Advanced Studies in Mathematics (Part III) course. Since October, she is continuing with her central involvement in the running of the course, now as the Chair of the Part III Committee.

Part III is a very large course, with close to 300 students (about half returning from Part II and the other half graduates from other institutions around the world) offered around 80 different lecture courses (far exceeding the undergraduate course offering in Parts IA, IB and II combined). With so many moving pieces, management of the course is an enormous job, a job that Professor Wolf has done with great energy, attention to detail and remarkable care for the educational outcomes of our students.

Her focus has been on the quality of the educational experience of the entire cohort of Part III students, with their diversity of backgrounds and interests. Within these past five years Professor Wolf has made many positive changes to how the Faculty runs Part III. She has been instrumental in introducing a number of new policies to ensure that all our students have the most positive and fulfilling experience possible during their time in Cambridge. Some examples are listed below.

As an initiative championed by Professor Wolf, Part III essays will become compulsory from next year. As a major change to the examination system, she liaised extensively with the various stakeholders across the University. In its feedback to the Faculty approving the change, the central University administration specifically praised the manner in which student consultations were conducted, considered and reported, forming a model of good practice.

Under Professor Wolf's leadership, the Faculty now centrally organises examples classes to supplement lectures (replacing an ad hoc system where provision of examples classes varied by individual lecturer). With this new system, students have clearer expectations of structure of the course and more consistent academic support in each area of mathematics.

She has closely monitored the quality of lecturing to maintain the world-class standards expected of Cambridge Mathematics. She has also worked closely with the University administration, for instance, the Accessibility and Accessibility and Disability Services, to formulate and implement a comprehensive policy on the recording of lecturers. She has recently revised the Faculty's policy on academic misconduct, especially timely in light of the sudden rise of AI-powered chatbots.

2. Response to COVID

Professor Wolf showed exceptional leadership during the pandemic, ensuring that our provision of postgraduate mathematics education remained at the very highest standards during this incredibly challenging period.

Given the unprecedented set of circumstances, she played a central role in ensuring that our examinations were rigorous. It was decided that online examinations could not be used to fairly classify Part III candidates. Therefore, the 2020 cohort sat Pass/Fail exams remotely, with the option to take full exams for classification when restrictions were loosened. This policy was unquestionably the correct response to the situation for the sake of the welfare of our students

and the credibility of our exam system. Nevertheless, the implementation of the policy was enormously complicated. Indeed, just overseeing the creation of around 80 new Pass/Fail exam papers involved the formidable task of setting up a new secure online system for colleagues to submit their own and to check each other's questions.

She supported lecturers in remotely leading and recording revision classes lectures during the very early days of the pandemic. As the pandemic progressed, she developed guidelines for lecturers for remotely recording lectures and leading remote examples classes. She also introduced a policy that lecturers hold remote "office hours" to maintain the high quality of the educational provision as much as possible.

3. Excellence in Teaching

Professor Wolf is an inspirational lecturer and supervisor who contributes enormously to the educational delivery within the Faculty. She has a long track-record of excellence in teaching in all parts of the Mathematical Tripos. For example, student feedback on Professor Wolf's Part IA lectures on Numbers & Sets include the following comments:

- Amazing course, really well presented
- An excellent introduction to the world of pure mathematics, and the series of lectures felt structured almost like a story from beginning to end
- 10/10, I absolutely loved the course!!
- Fantastic, without faults
- Excellently lectured
- Perfectly done. Engaging, perfect pace
- Fantastic exposition, and a wonderful introduction to mathematics at Cambridge
- Presented the motivation behind theorems well, thus the course and lectures flowed nicely
- Thank you for adding the additional nonexaminable part, it was really interesting!
- The extra lecture she gave us was awesome.

Clearly, our students appreciate her clear and engaging lecturing style. Furthermore, the last two comments highlight her skill in motivating and enticing students with wonderful mathematics, not for the sake of answering exam questions, but for its own inherent interest and beauty.

In further evidence of her strong commitment to the educational experience of our students, Professor Wolf has recently taken on the new role of the Equality, Diversity and Inclusion Champion for the Faculty of Mathematics, supporting the Faculty in creating a welcoming and inclusive environment and where students (and staff) can fulfil their potential. The Faculty has created this new role, in part, to provide a platform for several initiatives that had already coalesced thanks directly to her efforts, in particular ongoing fundraising for EDI-related scholarships for undergraduates.

In summary, for her outstanding contributions to education in the Faculty of Mathematics, as an excellent teacher, as an energetic and hands-on Director of Taught Postgraduate Education, and as a key leader in the Faculty's emergency response to COVID, Professor Wolf is immensely deserving of the Pilkington Prize.