



What is the CMP Programme?

The **Cambridge Mathematics Placements (CMP)** programme provides research opportunities for students studying for undergraduate or Master's degrees in Mathematics. CMP enables students to find summer research placements in industry, the public sector, and other University departments. Students develop transferable skills and gain experience doing innovative mathematical research in an external setting, while hosts engage a talented mathematician to tackle research questions they face. In 2018, the programme facilitated 16 academic and 20 industry placements.

University departments and labs looking to engage a student with a background in mathematics can submit their projects to CMP. We will advertise the projects on our website and through our series of lunchtime seminars in January and February. Although we cannot promise a suitable student, we will do our best to help you find one. Projects are generally open to students in Parts IB, II and III, but the project host can specify precisely what background and skills they require.

Benefits for Hosts

Direct engagement with Cambridge Mathematics Masters and undergraduate students

- Pitch projects at the CMP lunchtime seminar series and select students for summer placements. There is a high degree of freedom to propose both well-developed and speculative projects.

Involvement with a growing knowledge exchange community

- Interact with a maths-focussed research community comprising the Mathematics Faculty, other departments, public sector organisations and industrial partners.
- Develop relationships that may lead to collaborations.
- Attend CMP Presentation Day to hear other host/student placement experiences and approaches, followed by dinner at a Cambridge college.
- Participate in the CMP Annual General Meeting to review the programme and suggest improvements.

Progression of research objectives

- Projects tackle research challenges in a diverse range of areas, and provide new approaches to solving problems.
- Placements bridge gaps in mathematical expertise.

2019 Programme Dates

December to 18 January 2019: Project proposals accepted and listed on the CMP website.

28 January to 20 February 2019: CMP lunchtime seminar series takes place on Mondays and Wednesdays. At each session, 5-6 hosts give short talks, followed by informal discussions with the students. Hosts may display a poster describing their project in the week prior to their presentation.

22 February 2019: Recommended deadline for students to express interest in projects.

22 February to 8 March 2019: Recommended period for organisations to review applications, interview, and make offers to students.

8 March 2019: For reasons of fairness, we ask that no student be required to respond to an offer before this date.

15 March 2019: Bursary applications must be received by this date for consideration in the first round of funding. Decisions will be announced in late April.

7 May 2019: Deadline for bursary applications for consideration in the final round of funding. Decisions announced in late May/early June.

June to September 2019: CMP projects take place, with exact dates agreed between student and host.

August 2019: CMP Presentation Day and Dinner.

September 2019: Reports and project feedback due.

A note on the bursary fund

We have a small bursary fund for academic projects, but we ask all students and all host labs and departments to do their utmost to find complementary funds from their own sources. Bursaries are meant to cover living expenses, and to complement other support. We hope that departments and labs that have had CMP students in the past and will contribute at least half of the student's living expenses.

Bursaries are made possible thanks to the generosity of a number of individual donors and to members of our CMP Supporters Club, a new initiative in 2018-19. Supporters Club members are generally industrial partners, but we welcome public sector and academic hosts to join. To find out more, please write to us at CMP@maths.cam.ac.uk.

What our hosts are saying...

"I hosted two students this year, each working on different projects. It is hard to overstate just how valuable these students and their projects have been to our work: they have both accomplished things that simply would not be done without their work. Their accomplishments in their respective projects are incredibly valuable and contribute to tools that will be used for many years to come on a daily basis. Both students worked incredibly efficiently and quickly, allowing us to accomplish more than I ever expected to be possible when I wrote the project advertisements. They also integrated really well into our research group and were a great addition to our lab. I really cannot praise the CMP programme enough."

- Benno Simmons, Department of Zoology

"Ryan has brought excellent insights, engaged well with colleagues and has been very productive right from day one."

- Mike Kemp, Iconal

"CMP provides an excellent opportunity to Seungbeom as he has learnt and experienced the biomedical challenges in the real world. Through his project, he acquired not only new knowledge in the biomedical domain, but also better understanding of how mathematical approaches can tackle scientific questions. Seungbeom has put great effort and conducted the research really well. He is a fast learner and more importantly a good thinker. I expect that he would expand his research career to explore his scientific curiosity."

- Namshik Han, Milner Therapeutics Institute

"The project is about the design and proof of principle of robust deconvolution on lightsheet microscopy images. It is a challenging problem and a highly multi-disciplinary project with many potentially new theoretical and practical results. I was impressed by the high academic quality, enthusiasm and efficiency Heiner brought to the project and I believe that the cross-pollination of ideas enriched all the participants in the project. I will work towards the continuation of this collaboration to fully develop the solution (at which point publication is definitely a goal). A fully developed solution would have a very significant impact for the users of the technology in CAIC and in the community at large."

- Leila Muresan, Cambridge Advanced Imaging Centre

"The student has come up with some extremely interesting ideas to tackle the problem set in ways we would have not previously thought of and is making good progress."

- David Hilton, GSK

90% of hosts providing feedback on CMP projects in 2018 say that their student made an extremely valuable or valuable contribution to their research.

91% of students providing feedback on CMP projects in 2018 say that they had a fantastic or rewarding experience which will help to bolster their CV.

Become a CMP Host

Think your group or lab has a good project for a Cambridge Maths student?

Propose a CMP project for 2019

<https://www.maths.cam.ac.uk/project-proposal-form>

To learn more about the programme and view past project proposals visit

<http://www.maths.cam.ac.uk/opportunities/careers-for-mathematicians/summer-research-mathematics>

Still have questions or want to talk about other ways to get involved? Write to us at CMP@maths.cam.ac.uk