



The **Cambridge Mathematics Placements (CMP)** programme provides opportunities for students studying for undergraduate or Master's degrees in Mathematics 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.

Despite the challenges of the global health crisis in 2020, the programme facilitated 11 academic and 13 industry placements. Our hosts report many successes: new projects were kickstarted, numerous publications are in the works, and new software was developed. With lessons learned and time to prepare, we expect that the summer 2021 program will be an even better experience for hosts and students alike.

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 online seminar series in 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, and the project host can specify precisely what background and skills they require.

Benefits for Hosts

Direct engagement with Cambridge Mathematics Master's and undergraduate students

- Pitch projects at the CMP seminar series and select students for summer placements. Hosts can 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. 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.

2021 Programme Dates

Late November to 22 January 2021: Project proposals accepted and listed on the CMP website.

February 2021: CMP seminar series takes place online. Hosts can give live or pre-recorded talks, followed by informal discussions with the students.

26 February 2021: Recommended deadline for students to express interest in projects.

26 February to 12 March 2021: Recommended period for organisations to review applications, interview, and make offers to students.

12 March 2021: For reasons of fairness, we ask that no student be required to respond to an offer before this date.

19 March 2021: Bursary applications must be received by this date for consideration in the first round of funding. Decisions will be announced in early May.

11 May 2021: Deadline for bursary applications for consideration in the final round of funding. Decisions announced in late May/early June.

June to September 2021 CMP projects take place, with exact dates agreed between student and host.

August 2021: CMP Presentation Day and Dinner (TBC).

September 2021: Reports and project feedback due.

A note on financial support

We have a small fund for academic projects, but we ask all students and hosts to do their utmost to find complementary funds from their own sources. Changes to University policy mean we can no longer provide direct bursaries, and that CMP students will be employed by either the host department or the Faculty of Mathematics. CMP can facilitate this process, but the projected cost of placements has gone up significantly, to between £2200 and £3000 depending on project length. Due to this increase, we ask that academic hosts (especially returning ones) make an extra effort to find funds within their department to help cover costs, ideally of at least half of the project.

Bursaries are made possible thanks to the generosity of individual donors and members of our CMP Supporters Club, which we welcome you to join. To find out more, please write to us at CMP@maths.cam.ac.uk.

What our hosts are saying...

2020 CMP Hosts

AIG

BlueCove Ltd

British Isles DBT Training

Cambridge Advanced Imaging
Centre

Cantab Capital Partners

Computer Laboratory

Department of Engineering

Department of Geography

Department of Veterinary
Medicine

EMBL-EBI

GSK

Health Data Insight

Met Office

Queen Mary University London

Silvaco Europe

Symmetry Investments

2020 Supporters Club Members

BP

CCIMI

Centrica

Riverlane

Silvaco Europe

"It's my third year as a host and I've been delighted on every occasion. Not only were the students highly skilled, their behaviour, commitment and communication skills showed great maturity and professionalism. Our student this year was able to quickly solve technical problems we had not anticipated, and produced results of excellent quality within a short time frame."

- Olivier Restif, Department of Veterinary Medicine

"For the second year running we had a fantastic project. [The student] was able to complete a project that will be implemented into our business practices and have lasting impact on us. Additionally, there was time to explore different potential data analysis methods that would profoundly affect how decisions are made at GSK."

- Will Stebbeds, GSK

"[The student] made excellent contributions that we expect to result in a journal paper in arguably the leading journal of the field as well as a conference paper over the next 6 months."

- Cyrus Mostajeran, Department of Engineering

"As for previous CMP students, this student did some fantastic work and we hope the resulting approach will be published and will be a key component of future projects."

- Andrew Friend, Department of Geography

100% of hosts providing feedback on CMP projects in 2020 say that their student made an extremely or very valuable contribution.

More than 90% of students had a rewarding experience and felt their background as a mathematician enabled them to see problems in a different and creative way.

100% of both hosts and students would recommend the programme to others.

Become a CMP Host

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

To propose a CMP project for 2021, visit:

<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