# Cambridge Mathematics Placements Programme 2021
## FAQs for Industrial Hosts

### How is the CMP programme different from other workplace schemes?

Ideally, a CMP project will focus on a specific company problem or challenge to which a mathematical approach can be applied. Placements are not assessed and are not part of a degree course, and can thus be used to explore speculative or tricky problems which may benefit from a fresh mathematical perspective. This type of troubleshooting may provide an alternative pathway, resolve problems, or identify ones that are intractable. If you have a project which might benefit from the input of a highly trained mathematician, we encourage you to advertise through CMP. More general internship schemes and work experience opportunities can be advertised through the appropriate Maths Faculty careers mailing list or through the Cambridge University Careers Service.

### What are the elements of a successful CMP project?

Successful projects are fuelled by a good match between the mathematicians' expectations and the project requirements. The project description should highlight the main purpose of the project and what key skills might be required (e.g. coding/data science). When presenting their project to students in the seminar series, hosts should not try to cram in too much background information but focus on what the mathematician will actually do day to day as well as how supervision will work. This is particularly important this year, as we expect that projects will be run remotely. Hosts should consider how best to get the mathematician up to speed in their research field at the start of the project and plan for some flexibility in the project which allows for adaptations depending on the skills, ingenuity and interests of the mathematician. A realistic project plan is important - if things go well the outcomes will then exceed the expectations of both parties.

### Should I plan for my project to take place remotely?

Yes. Due to the challenges posed by COVID-19, we expect that research projects in summer 2021 will be carried out remotely. Hosts should plan for a remote project, and may choose to build in flexibility for an in-person component or experience should circumstances allow.

### How should I plan for a remote project?

In addition to the logistical considerations relating to the student not being physically present in the host's space, the ideal situation will limit the possibility of intellectual isolation. Our concern is that students are more likely to feel isolated due to the remote format. Strategies that have worked to prevent this in analogous contexts are having weekly coffee breaks, inviting to the student to research presentations that may be related to their work, and organising regular meetings between the student and the host or active members of the host's group. We envision that this may be especially important in the early phase of the project, when the student is getting up to speed with the background material.

### Is a CMP Supporters Club membership required for a project to be listed?

While there is no charge for submitting a project or participating in CMP, we are asking all our partners and hosts to join us in creating a sustainable funding model for the programme by joining the CMP Supporters Club. We expect that companies who have had a successful project experience in the past and are returning to the programme will join. The growth of the programme over the last few years has meant a corresponding growth in running and administrative costs, which we hope our partners will contribute towards. We suggest annual contributions of £4,000 for large companies, £2,000 for SMEs and £500-£1,000 for start-ups, small companies and non-industry partners, but other amounts are gratefully received. Donations may be directed towards specific programme resources or bursary-funded CMP projects if desired.

**May we advertise our regular competitive internship opportunities (that are more widely advertised) through the CMP programme?**

Yes. An internship opportunity is within scope, provided that the work to be done is on a specified project that will use the student's mathematical skills and training. Fill out the online form in the usual way, including a link to your webpage and application procedure. Make sure your application deadline is listed.

**For security reasons, we cannot allow CMP students to have full IT access. Can students retain computing facilities through Cambridge University?**

Students who are doing CMP projects continue to have basic IT and mathematics library privileges through the end of September, even if their course has finished (e.g. Masters students). This does not give them access to extensive technical computing resources, which should be provided by the company if needed.

**Is it possible to arrange joint supervision with a member of staff at Cambridge?**

Possibly. We do not offer to broker such joint projects, but we have had successful projects where students have worked for an external company supervised by a member of staff, and we will help students to find suitable supervision within the CMS.

**I hear there is a bursary fund. Are CMP students working in industry eligible for bursary funding?**

There would need to be very good reasons why the host organisation cannot provide an appropriate stipend to the student (e.g. if they are a charity or NGO). If this is the case, the student should fill in the bursary funding application form for academic projects, and submit it together with a note explaining these reasons by the 19 March deadline.

**What are the employment requirements for CMP students, and what about Intellectual Property and Non-Disclosure?**

The company will be employing the student and can therefore require that the student meets all the terms and conditions of employment, including IP and NDA arrangements. It is understood that some companies require security checks or have restrictions on employing overseas students, but it is up to the companies themselves to make those conditions known and carry out any checks when the student applies.

**Can international students undertake a CMP project, and what are their visa requirements and restrictions?**

International students requiring visas are generally issued with Tier 4 visas to study in the UK. The sponsor for Tier 4 purposes is the University of Cambridge. A Tier 4 visa allows students to work full-time during official vacation periods, including the summer. Hosts and students should see this guidance from the University for full information, but in summary, undergraduate and Masters students on Tier 4 visas are eligible to work full-time from after the end of their exams until before the start of the next term, or until their visa expires, whichever is sooner. Since a Tier 4 visa does not allow for self-employment, students should be given a formal document by the employer such as a 'contract of employment' or a 'worker's agreement' confirming their employment status.

**Still have questions?**

Write to us at CMP@maths.cam.ac.uk

To propose a 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

Many thanks for considering the CMP programme. We look forward to receiving your projects.