Call for collaborative research proposal submissions
Michigan-Cambridge Research Initiative (MCRI)

Introductory remarks
The University of Cambridge is in the initial stages of developing a long-term and mutually beneficial strategic partnership with the University of Michigan, with a particular focus upon Engineering, Entrepreneurship and Computer Science and Technology. The University of Michigan is a leading public institution in the United States which shares with Cambridge a fundamental commitment to research excellence. This partnership will enable both institutions to meet their research needs by sharing their complementary expertise in different areas.

In the context of an increasingly challenging climate for higher education, this collaboration with the University of Michigan will expand our funding environment by providing opportunities to diversify our research bids outside Europe; access will be enabled to key US funders such as the NSF via significantly strengthened bids submitted jointly with Michigan academics. This partnership will also enable both institutions to meet diverse research needs by allowing access to their differing areas of expertise.

The partnership will involve complementary academic collaborations which will be focused upon fostering organic growth stemming from PI-PI level interests. In order to facilitate these collaborations, we are calling for submissions of initial research proposals from research staff at all levels.

Aim of call
The aim of the call is to fund proposals that will bring academics at Cambridge and Michigan together in research that represents an exciting new direction for the collaborators.

Research collaborations may include, but are not limited to, the following domains:

- Computer architecture (including cyber security and internet of things);
- Robotics;
- Manufacturing;
- Smart Cities;
- Complex, Resilient and Intelligent Systems;
- Bioengineering;
- Materials; and
- Environmental Sustainability.

Eligibility
MCRI grants are open to academic staff in Cambridge University's Department of Engineering and in the University of Michigan's College of Engineering. The proposed research must involve collaboration with academic staff at both institutions.

Funds available
Grants are available for up to £5k (CU) and $15k (UM) per year for teams at each institution. There are few restrictions on these funds. It is envisaged that grants might be used for:

- Student exchange
- Joint field research
- Summer faculty exchange
- Co-advising of PhD students
- Participation and/or organization of technical meetings and symposia
- Travel support to meet existing or potential collaborators
University of Michigan details

The University of Michigan has a wide range of research interests, representing a rich pool of possible collaborations. The College of Engineering has about 400 tenure-track plus 200 research faculty members within 11 Departments covering all the major traditional disciplines of Aerospace Engineering, Biomedical Engineering, Chemical Engineering, Civil & Environmental Engineering, Climate & Space Sciences & Engineering, Electrical Engineering & Computer Sciences, Industrial & Operations Engineering, Materials Science & Engineering, Mechanical Engineering, Naval Architecture & Marine Engineering, Nuclear Engineering & Radiological Sciences. There are also major cross-departmental programs including Integrative Systems and Design, Robotics, Manufacturing, Automotive Research, Autonomous Vehicles, Energy, Sustainability, Ultrafast Optical Science, Wireless Microsensing, Plasma Science, and a Data Science Initiative. Further information can be found on the College of Engineering website at https://www.engin.umich.edu/.

Application process

Applications should be no more than two sides of A4 and should include the following:

a) Articulate the project vision, emphasising the value of a collaborative effort between the Universities of Michigan and Cambridge.
b) Detail how the funds will be used to promote and enhance collaboration.
c) Provide a budget for how the requested funds will be spent and details of what other sources of funding support (including funding for PhD students) you have secured for this research.
d) If initially successful, discuss the next steps for moving the effort forward with external support.

Applications should list Cambridge and Michigan expenditure separately, to be funded by the respective institutions. Applications may have expenditure associated with just one institution. In the case where funding from both institutions is requested, bids up to the maximum for each institution are allowed.

Applications should be signed by both the Cambridge and Michigan collaborators and sent by the closing date by email to Prof. Michael Sutcliffe (mpfs@eng.cam.ac.uk) and Prof. Steve Ceccio (ceccio@umich.edu).

Informal enquiries about potential applications are welcome either to Prof. Michael Sutcliffe (mpfs@eng.cam.ac.uk) or Prof. Michael Thouless (thouless@umich.edu).

Evaluation Criteria:

- How will this enhance Michigan’s and Cambridge’s joint ability to develop or maintain leadership in emerging areas of research that aligns with the vision, mission and values of both institutions?
- Do the researchers have a strong potential and expertise to conduct the proposed research program?
- Have the researchers articulated a clear research plan with a defined path toward goals?
- If the collaborative activity is supported and successful, is there a reasonable chance for follow-on external support?
- Is this proposal aligned with the goals of the UM-Cambridge partnership?

Note: MCRI grants are meant to create a foundation for potential future/follow-on support. Follow-on support may include sources such as NSF and EPSRC grants; Royal Academy or Royal Society
funding; private foundation or personal philanthropy/fundraising efforts; and corporate sponsored research.

**Important dates**
- Early February, 2018 – Initial Call Issued
- February 22, 2018 – Information session at UM (Ceccio, Thouless)
- February 27, 2018 – Information session at Cambridge (Sutcliffe, Ceccio)
- April 1, 2018 – Proposals due
- May 1, 2018 – Awards Announced

**Reporting**
A brief report of no more than one side of A4 will be required at the end of the project, with a particular emphasis on the likelihood of follow on work or funding.

**MCRI grant committee**

Funding decisions will be made by the MCRI grant committee, consisting of:

- **Michael Sutcliffe**  Department of Engineering, Cambridge University
- **Michael Thouless**  Department of Mechanical Engineering, University of Michigan
- **Philip Guildford**  Director of Research, Department of Engineering, Cambridge University
- **Steven Ceccio**  Associate Dean of Research, College of Engineering, University of Michigan