The Alan Turing Institute

THEORY & METHODS CHALLENGE FORTNIGHTS

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Call for Theory & Methods Challenge Fortnights

We are seeking research proposals from across the Turing research community to establish our new 'Theory & Methods Challenge Fortnights in Data Science and Artificial Intelligence' event series (abbreviated as TMCF). There will be two events per academic year and each event will last between 8 and 14 days. They can be held at locations across the Turing university partner network or at the Turing's offices in London.

The Theory & Methods Challenge Fortnights will bring together experts from the Turing and other institutions to join forces for a multi-day research event on a specific theoretical or methodological challenge. These theoretical and methodological challenges can be drawn from any discipline in the remit of data science and Artificial Intelligence. We expect that the theoretical and methodological contributions stemming from the challenge, impact or have the potential to impact, Data Science and Artificial Intelligence or at least one of the associated disciplines in a fundamental way.

The successful proposals will receive sufficient funding to fully cover travel, subsistence, accommodation (and daycare costs as necessary) for the challenge team for a maximum of 2 weeks.

Application Process

The Turing research community (including Turing Fellows, Turing Research Fellows, Research Engineering Group and Post-Doctoral Research Associates and Turing PhD students) are invited to contribute proposals which present one modern theoretical and/or methodological challenge and a plan on how to tackle it. Because of the time commitment involved in proposing and organising a Turing Fortnight Challenge, Turing PhD students must obtain an explicit permission by their PhD advisor(s) for their proposal to be considered in the application process. For maximising the chances of success (see Evaluation Process), the proposers are recommended to formulate proposals that meet the following criteria:

1. The results are of wide theoretical and methodological importance (a justification and the appropriate supporting literature should be referenced within the proposal) in at least one discipline in the remit of data science and Artificial Intelligence

2. The proposal identifies potential collaborators from the Turing network and selected external experts (**at most 6, including the lead proposer(s)** upon application).

3. The challenge should benefit from cross-disciplinary group work, potentially combining methodological expertise across Data Science and Artificial Intelligence;

4. The results should have clear importance in application areas and can be developed further to deliver impact in applied streams of work in Turing (e.g. linking with the Data Study Groups, Special Interest Groups, etc) or elsewhere.

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Applications can be submitted via the Turing's flexigrant portal (http://ati.flexigrant.com). Researchers not formally affiliated with The Alan Turing Institute can also submit proposals. They will need to have a Turing affiliate as a Co-I and register with Turing's flexigrant portal (at https://ati.flexigrant.com/register.aspx).

Evaluation process

The proposed challenges will be collated into a list that will be send back to the Turing research community. There will be then the opportunity for the Turing research community to vote on up to two challenges that should be tackled, and to indicate interest in participating in the team tackling it.

Theory & Methods Challenge Fortnights

The lead proposers of the two successful challenges should confirm the location and the dates of the event (see Key Dates), and have the responsibility to set up a challenge team of **up to 12 individuals,** including themselves, along with internal and external experts they identified in the proposal and others who expressed interest during the voting stage. The lead proposer must also provide justification for their six or more additional team members. The team can include only up to **one** PhD student.

At the end of each Theory & Methods Challenge Fortnights, the challenge teams will present their findings at an open event. This will also be an opportunity for a wider discussion of next steps and follow-on projects.

Software

If the teams plan to produce open-source software, along with the theory and methods, they should consider including in their teams a member from the Turing Research Engineering Group or its equivalent in one of the universities of the Turing university partner network.

Daycare costs

To ensure participation from a broad section of our research community, a contribution to daycare costs will be provided on application.

Key dates

Call for proposals	on	03 Jun 2019
Proposal submission deadline	on	23 Sep 2019
Turing research community receives the list of challenges	on	30 Sep 2019
Voting period starts	on	30 Sep 2019
Voting period ends	on	14 Oct 2019
Announcement of successful challenges	on	15 Oct 2019
Lead proposers confirm challenge teams, event location and dates	by	28 Oct 2019
Theory & Methods Challenge Fortnights event	by	25 May 2020