

CDT Neurotechnology project call 2019-20

Application guidelines



Background Information

The EPSRC Centre for Doctoral Training (CDT) in *Neurotechnology* at Imperial College London is now inviting proposals for 4-year PhD studentships to start in October 2019*.

We welcome proposals for **CDT-funded, jointly-funded** or **fully-partner-funded** studentships.

The CDT programme is run by the Centre for Neurotechnology, part of the Institute of Biomedical Engineering, and is training a new generation of multidisciplinary researchers working at the interface of neuroscience and engineering. Our fifth cohort of students will start in October 2018.

***NOTE: The CDT has applied for renewed funding from EPSRC for a further 5 cohorts of students; decisions will only be announced in Winter 2018. The award of CDT studentships for 2019 is therefore contingent upon our funding being successfully renewed.**

See <http://www.imperial.ac.uk/neurotechnology> for more information on the Centre for Neurotechnology and the CDT.

The Studentships

Fully-funded CDT studentships

We aim to offer at least 10 fully-funded studentships for 2019/20, dependent on renewal of funding*. Studentships cover tuition fees at Home/EU rate and stipend for a total of 4 years. In addition, £4-5K p.a. [exact amount to be confirmed] consumables funding will be provided per studentship, to offset research costs, and cover student conference/travel costs.

Jointly funded studentships

We encourage supervisors to liaise with industry and/or charity partners in their applications; **additional jointly-funded studentships** will be available, for projects which can bring at least 50% funding from a partner organisation. Eligible partner organisations may include industry, charity or exceptionally, government sources. The source must be external to Imperial College.

Partner-funded studentships

Applications for studentships which bring 100% industry (or other partner organisation) funding will be guaranteed acceptance subject to meeting the remit and excellence criteria of the CDT.

The CDT Neurotechnology Programme

Students train in a “1+3” programme, in the first year taking a purpose-developed MRes in Neurotechnology, followed by a three year PhD. The majority of students in the programme are expected to come from **engineering or physical sciences backgrounds**.

The MRes in Neurotechnology

During the MRes year, students take 3 months of taught courses, including *Neuroscience*, a course custom-developed for the MRes which aims to give students from engineering and the physical sciences a thorough grounding in neuroscience, *Ethical and Social Implications of Neurotechnology* and other lecture and practical lab skills modules. Students then undertake a 9-month research project, which will involve laboratory rotations as part of a *single* project, with a

CDT Neurotechnology project call 2019-20

Application guidelines



single thesis submission at the end of the year. The aim of the MRes is to develop all of the technical skills to carry out the PhD work.

The PhD

Students will focus on intensive research work under the guidance of a supervisory team, the members of which will bring complementary expertise to the project. In addition, the student cohorts will meet regularly for ongoing transferrable skills courses and research symposia. During the course of their PhD, students will normally spend a 3 month internship in industry, and/or an international academic research institution.

Supervisor Eligibility

- Supervisors must be drawn from Imperial College or one of the Centre's approved satellite groups¹, however each studentship proposal must contain at least one Imperial College supervisor as lead, and students must be registered at Imperial. Academics or partners at other institutions cannot be named as supervisors but may be listed as *research collaborators*. Jointly-funded or partner-funded projects will have an *external advisor* from the partner organisation *in addition* to the supervisors.
- **At least two supervisors must hold an academic position** that is tenured over the complete period of the studentship. This does not mean that supervisors who do not hold a position for the full four-year period cannot apply. However, in such circumstances a third supervisor from Imperial College who could continue the student supervision (if the original supervisors' tenure was not extended) would have to be added.
- Supervisors must fulfil the usual College criteria for eligibility to act as a PhD supervisor (postdocs/PhD students may NOT be named as supervisors).
- In order to encourage wider participation, please note that no supervisor may make more than **one** application as the identified **lead** supervisor, and supervisors may not be involved in more than **three** applications **in total**.

Project Requirements for the 2019/20 Call

Projects must address the remit of the CDT – *to provide multidisciplinary training at the interface between fundamental or clinical neuroscience and engineering*. Each project must satisfy the following criteria:

- The project must be **fundamentally multidisciplinary**. It must involve a supervisory team involving at least two supervisors who bring substantially different expertise. The project must provide a strong training opportunity for students in engineering or related disciplines, and the project proposal must demonstrate how training in the different facets of the project will be achieved, both in the MRes and PhD components. It is not strictly necessary that the supervision team involve multiple departments, but nevertheless likely in most cases given the degree of multidisciplinaryity we expect.
- The project must provide a high degree of **impact** and **excellence**. We expect each project to demonstrate a “wow factor” – we are looking for projects which take

¹ [CÚRAM Centre for Research in Medical Devices](#), the [MRC Brain Network Dynamics Unit at Oxford University](#), [Crick Institute](#), [Sainsbury-Wellcome Centre at UCL](#)

CDT Neurotechnology project call 2019-20

Application guidelines



innovative approaches to tackle extremely difficult problems that are of major importance for society.

- **Synergy and added value** – in order to facilitate networking amongst students, we will prioritize projects which have synergy with Centre activities, including other projects in the same round and from previous years. A list of CDT projects can be found at <http://www.imperial.ac.uk/neurotechnology/cdt/projects>. It is important to explain the value added by the project, for instance by bringing a new industrial collaboration to the Centre, or through outreach.
- **Supervisor track record** – supervision teams should demonstrate their joint track record in successful research training. In cases where a supervisor has not yet demonstrated this, they should team up with a more senior colleague who has. Note that emphasis will be on quality, rather than quantity alone, of research training.
- **Feasibility and suitability** – projects must be suitable for the 1+3 format. The proposal must describe a self-contained MRes project that can be achieved within 9 months, leading into a PhD project that can be achieved within the following 3 years. Projects must be achievable with the resources and research infrastructure available.

Application Process

Applications should be made on the accompanying form and should not exceed 4 pages, using a font of 10 point or above. The completed application form should be sent by email to Kate Hobson (k.hobson@imperial.ac.uk).

- Application deadline for fully-funded projects: **Wed 31st October 2018, 5pm.**
- Applications for joint/partner-funded studentships can be submitted **on a rolling basis** and will be considered separately from proposals for fully-funded projects. However, **early applications are encouraged** as funding is limited and proposals will be considered on a first-come-first-served basis.

We encourage participants to discuss potential projects with the CDT Director (s.schultz@imperial.ac.uk) if they are unsure of the procedure or the remit.

Review Process

All proposals for fully-funded projects will be peer reviewed by members of the CDT Research Board (see Appendix 1 for membership). Following peer review, proposals will be ranked and evaluated by the board, with funding awarded to the top-ranked proposals. Applications for joint/partner-funded projects that are submitted after the October deadline will be reviewed separately by members of the Research Board and approved/rejected based on fit to the EPSRC remit (for jointly-funded projects) and to the remit and excellence criteria of the CDT.

CDT Neurotechnology project call 2019-20

Application guidelines



Post Award

- **Student eligibility:** Students must normally conform to the eligibility requirements of the EPSRC, which means that the student must be a UK resident. For EU candidates, this means that they are eligible only if they have been resident in the UK **for at least 3 years prior to the start of the course**. For 100% industry funded studentships, EU citizens who are not UK resident can be considered for full funding, or overseas students can be considered who **separately hold a scholarship providing the difference between Home/EU and overseas fees**. All students must have an honours degree at 2.1 level or above (or non-UK equivalent), which would *normally be in an engineering or physical sciences discipline*. Students with a biological sciences background will be considered but will have to demonstrate that they have the quantitative skills required for the MRes in Neurotechnology.
- Students applying to the programme will be interviewed by a panel comprising the project supervisors and at least one member of the CDT Research Board, at a dedicated recruitment day (normally in February/March). All selected students must be approved by the attending Research Board member.
- Although the programme will be advertised centrally, **it is the responsibility of supervisors to ensure that studentships are allocated by the end of June 2019**. Any projects which do not have a suitable candidate in place by this time will be reallocated.
- Students must start in October 2019.
- The programme comprises a 1-year MRes followed by a 3-year PhD. It is not normally possible for a student to omit the MRes year.
- The CDT programme involves colloquia and student-organised conferences. In order to encourage wide interactions, we make attendance at these programmes a **mandatory requirement for both students and supervisors**. Students must also attend a variety of CDT-specific transferrable skills courses throughout their degree.

SUMMARY OF RELEVANT DATES

- **31st October 2018:** deadline for submission of CDT-funded project proposals
- **Mid-November:** Research Board meeting to review proposals
- **By mid-Dec:** decisions communicated
- **Mid-December:** projects advertised online for student applications

- **31st May 2019:** final submission deadline for jointly/100% partner-funded proposals, **HOWEVER early applications are encouraged**, as funding is limited and proposals will be considered on a first-come-first-served basis.

- **30th June 2019:** all fully-funded places to be filled

CDT Neurotechnology project call 2019-20

Application guidelines



Appendix 1 – CDT Management Structure (proposed for 2019, tbc)

Management Group

Simon Schultz	Director	Bioengineering (Faculty of Engineering)
Paul Matthews	Co-Director	Brain Sciences (Faculty of Medicine)
Mark Neil	Co-Director	Life Sciences (Faculty of Natural Sciences)
Martyn Boutelle		Bioengineering
Claudia Clopath		Bioengineering
Dario Farina		Bioengineering
Magdalena Sastre		Brain Sciences
David Sharp		Brain Sciences
Bill Wisden		Life Sciences

Operations Board

Simon Schultz	Director
Kate Hobson	Centre/CDT Manager
Andrei Kozlov	MRes Neurotechnology Director, Cohort Mentor
Dan Goodman	Cohort Mentor
James Choi	Cohort Mentor
Amanda Foust	Cohort Mentor
Tobias Reichenbach	Admissions Tutor
Adam Hampshire	Journal Club Leader

Research Board

Mauricio Barahona	Department of Mathematics
Martyn Boutelle	Department of Bioengineering
Stephen Brickley	Department of Life Sciences
Claudia Clopath	Department of Bioengineering
Tim Constandinou	Department of Electrical & Electronic Engineering
Simone di Giovanni	Division of Brain Sciences
Aldo Faisal	Departments of Bioengineering & Computing
Dario Farina	Department of Bioengineering
Amanda Foust	Department of Bioengineering
Dan Goodman	Department of Electrical & Electronic Engineering
Rylie Green	Department of Bioengineering
Adam Hampshire	Division of Brain Sciences
Paul Matthews	Head, Division of Brain Sciences
Mark Neil	Department of Physics
Tobias Reichenbach	Department of Bioengineering
Magdalena Sastre	Division of Brain Sciences
Simon Schultz	Department of Bioengineering
David Sharp	Division of Brain Sciences
Ravi Vaidyanathan	Department of Mechanical Engineering
Bill Wisden	Department of Life Sciences