EPSRC DTP MOBILITY IN DEFENCE AND SECURITY

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Working closely with key partners within the UK Defence and Security (D&S) sector, the University of Southampton (UoS) and the EPSRC (Engineering and Physical Sciences Research Council) are aiming to increase the number of doctoral- level employees in the sector.

This will reach into the pool of future skilled research leaders working in the sector including:

- existing Defence and Security staff
- those looking to transition from serving military to civilian roles
- those in active policing
- returners from career breaks to hi-tech D&S related work.

This is a pilot project funded by the EPSRC in response to appetite from within the sector for developing this pool of talent and intended to develop and evaluate the proposed way of working. Therefore, candidates should be, or intending to work within the D&S Sector.

What are we offering:

A more flexible route to a PhD or the integrated PhD (iPhD) through a modular approach allowing for a series of research projects and changes in time commitments throughout the period of study aimed at existing company staff, or those wishing to transition into a civilian defence/security role.

The programme's goals are to:

- upskill existing staff to accelerate translation of cutting-edge research into business.
- allow existing staff to progress personally towards a doctoral level qualification by personalised schedules and flexible credit scheme approach to training and research projects.
- increase the skilled workforce within the D&S sector through the training of returners to work, or those transitioning from military or police roles.
- increased connectedness and employability of students offer potential new collaborations between industrial partners and generate a long term connection between cohorts of students.

Recruitment

Recruitment will be via open calls and where appropriate in agreement with a candidate's supporting employer. The dedicated DTP team will help to facilitate the planning of individual research proposals, projects and training, and the formation of suitable supervisory teams.

Prior to acceptance, applicants undertake a supported University of Southampton (UoS) internship. This will evaluate prior learning, deliver introductory research skills, enable initial contacts and supervisory team formation. This occurs prior to an offer of study being made and enables candidates to explore appropriate routes.

Study Mode

The programme will be studied over three (PhD) or four (iPhD) years (full time equivalent), studied in full- or part-time mode, with up to three years total (unfunded) suspensions based around employer needs. Each route has the potential to attract credits enabling an earlier exit award if appropriate. The research study phase can be undertaken in a traditional long project format or a series of modular phases accounting for periods of study breaks.

Training

Candidates will follow a cohort based UoS Research Skills programme (including foundational, disciplinary, responsible research and innovation, data management, ethics, etc.). An in-depth Academic Needs Analysis will be undertaken leading to tailored individual training programmes agreed by the student, supervisors, the DTP team, and employers.

To address competing workloads/priorities, cohort-based training will be timed following cohort consultation.

Initially, training will be delivered in online formats and recorded with materials available 24/7, providing additional flexibility for candidates and employers. This training will take the form of "short burst", week-long, day-release, or evening events. Eventually, if global circumstances permit, training and cohort building may be facilitated by residential activities (with funded accommodation and relevant childcare).

Opportunities for additional partner engagement through wider employee CPD and engagement with the cohorts through co-delivered training are also possible.

Figure 1: Alternative Study Routes and Progression Milestones
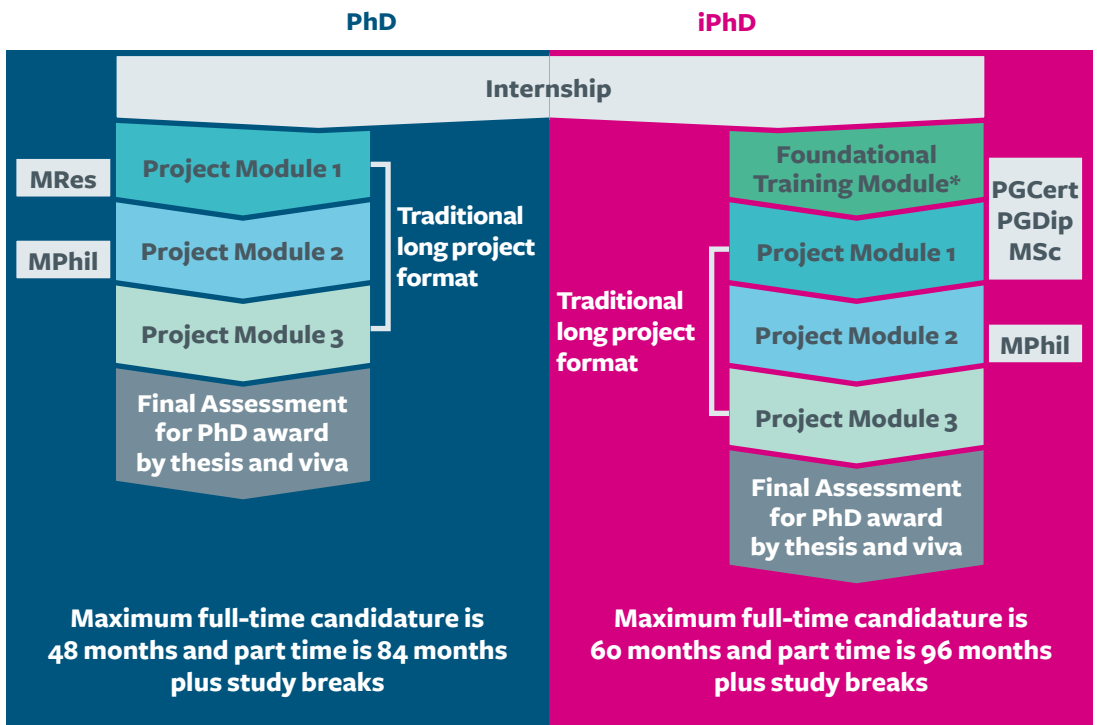
* Bespoke plan for non-Traditional/STEM, e.g., discipline conversion, scientific writing, creative thinking.

Potential exit qualifications after each module, assessed by portfolio of evidence.

Assessment

Final PhD assessment will be by doctoral thesis. There may be credit accumulation through successive evaluation of portfolios of evidence for conversion into differing exit qualifications (successively (PGDip), MRes, MPhil), if employer/candidate priorities/responsibilities evolve. Depending on prior experience, iPhD candidates will be able to undertake extra taught courses at the start of the programme to provide additional or novel, technical knowledge.

Figure 2: External and Internal Interactions for D&S DTP Mobility

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D&S DTP Mobility

- Cyber Security Centre
- Other Mobility DTP
- Centre for Machine Intelligence
- D&S Partners
- Public Policy/ Southampton
- D&S Framework Partners
- UoS Research Groups
- Region Cluster (>1hr drive)
- Visiting D&S Sector Profs
- DTUS
- Relevant Co-located DTPs/CDTs
- CORMIS
- BBSRC DTP EPSRC DTP INSPIRE NERC DTP MINDS UKRI CDT SC DTP ESRC DTP

UoS Groups cover D&S interests in:

- Acoustics/Underwater Acoustics
- Advanced materials and surface engineering
- Aerospace and Astronautics
- AI
- Control
- Criminology
- Cyber
- Drones and Trustworthy Autonomous systems
- Electronics
- Hearing and Vibration
- Human Factors
- Human Health Engineering
- Imaging and computer vision
- Lasers
- Musculoskeletal Health
- Oceanography
- Optimisation
- Photonics
- Politics and Public Policy
- Robotics
The Alan Turing Institute
- (Topological) Data
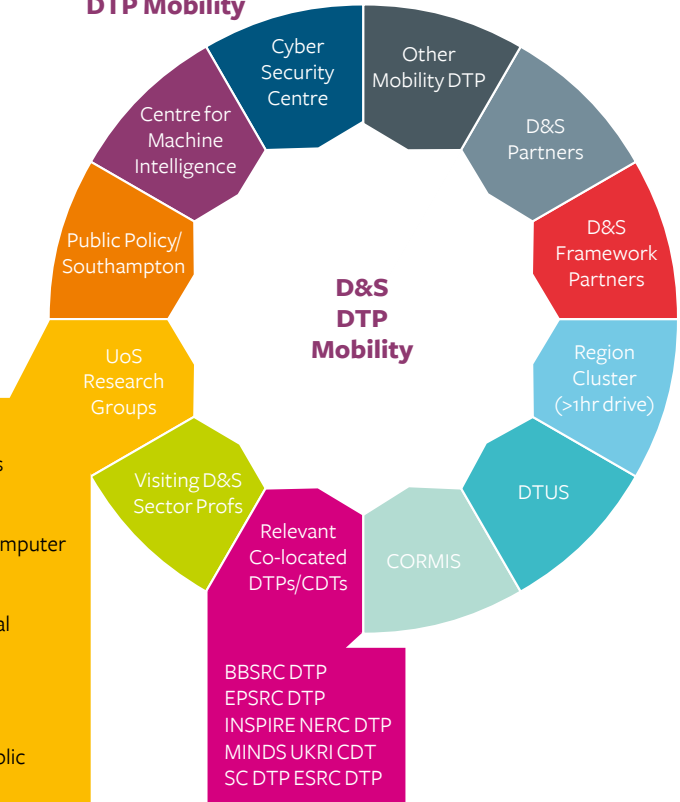
How will it be funded?

The funding model will be mixed, reflecting the costs of flexibilities.

Fees: All fees will be paid by EPSRC.

Research Training and Support: An allocation £5.25k paid for by EPSRC (administered by UoS).

Stipends/salaries: A limited number of EPSRC stipends (£15,009 pa) will be prioritised for returners to work/ transitioners or SME employees. Employees of larger companies would continue to receive their salary from their companies.

Location

Depending on the type of project and COVID situation, research projects may take place at UoS or (for security/ equipment reasons) at employer/partner premises. Supervision normally face-to-face or, when COVID or work commitments require, online.

Placements

For candidates transitioning between careers or aiming to return to the D&S workforce we would engage with partners to offer placements and mentoring.
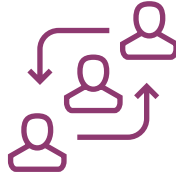
When will it start?

There will be two cohorts: the first commenced their research in Autumn 2021, the second will begin in Autumn 2022.

Benefits to Industry

The Doctoral Training Partnership (DTP) will provide an opportunity to:

upskill/reskill/reorient staff in a cost-effective way

access **CPD** (by agreement) for the company's **broader workforce**

develop a pipeline of **highly trained returners/ transitioners** to fill **capability gaps** or **key-staff shortages**.

co-investigate research solutions to business-related problems in a **flexible format** fitting with budgetary or other constraints

Benefits to the Individual

The DTP will provide the opportunity to reskill for mid-career change of direction or advancement; transitioning between military and hi-tech D&S related civilian roles, and opportunities for placements with (and for returners/ transitioners, mentoring by) companies; flexible work/life/study balance.
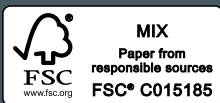
Find out more:

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