CALLING ALL SCIENCE AND ENGINEERING GRADUATES

DO YOU WANT AN **ENHANCED** PHD STUDENTSHIP?

ENGINEERING AND PHYSICS RESEARCH AREAS INCLUDE

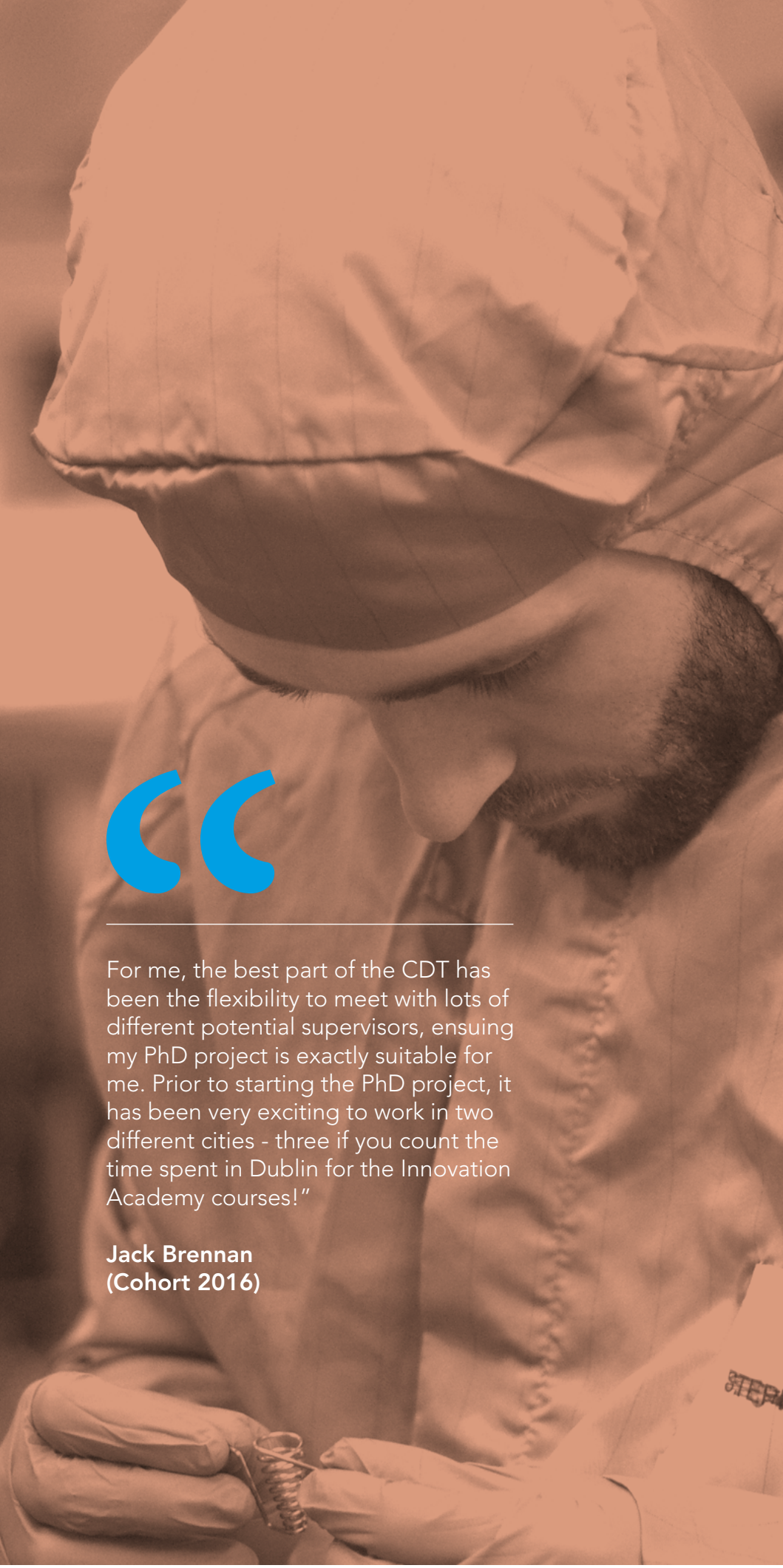
OPTO-ELECTRONICS / NANOTECHNOLOGY
MAGNETIC MATERIALS / PLASMONICS

University of Glasgow

EPSRC
Engineering and Physical Sciences Research Council

QUEEN'S UNIVERSITY BELFAST

EPSRC
Centre for
Doctoral Training in
PHOTONIC INTEGRATION AND
ADVANCED DATA STORAGE



For me, the best part of the CDT has been the flexibility to meet with lots of different potential supervisors, ensuing my PhD project is exactly suitable for me. Prior to starting the PhD project, it has been very exciting to work in two different cities - three if you count the time spent in Dublin for the Innovation Academy courses!"

Jack Brennan
(Cohort 2016)

OVERVIEW

ENHANCED BENEFITS

Tax-free annual stipend

Apple™ laptop and peripherals issued at start of the course for the duration of study

Direct industrial exposure

Competitive opportunities for industrial studentships

Undertake training in business and management skills, receiving the highly regarded Postgraduate Certificate in Innovation and Entrepreneurship

Gain financial experience: manage your own research and training budget

ELIGIBILITY

UK/EU Nationals*

At least 2:1 (BSc/Masters) Degree in the following disciplines:-
Electrical Engineering
Chemical Engineering
Physics
Chemistry
Nanotechnology
Materials Science

* Please see website for residency terms and conditions

THE CENTRE

The Centre for Doctoral Training (CDT) is a partnership between Queen's University Belfast (QUB) and the University of Glasgow (UoG). We provide opportunities for well qualified students from diverse backgrounds to research the novel scientific and engineering developments in highly manufacturable photonic integration related to the storage of digital information technologies.

THE PROGRAMME

Our 4-year PhD Programme is delivered by leading academics from both QUB and UoG, leading to a unique joint PhD degree from both universities.

Due to substantial investment in the Centre from the Engineering and Physical Sciences Research Council, the Department of the Economy NI, both universities and industry, we are able to provide studentships which cover tuition fees and provide and annual maintenance stipend starting at £14,553.

In the first year, students gain experience at both universities and complete a range of scientific and technical courses and exploratory research projects so they can make an informed choice on their substantive PhD research project that they embark on from year two.

“Before starting the CDT programme, I could never have imagined the many opportunities and the activities that I would become involved in. It has been an amazing first year, moving around the different locations and getting to work with so many different people. I also never thought that I would be organising a scientific conference at age 24! This too has been a wonderful opportunity. The CDT’s industry engagement is very potent and not just something that’s on the tagline. The key thing for me is that in addition to becoming a highly qualified scientist and researcher, I will develop the well-rounded soft skills that are required for working in industry.”

Sia Andersson
(Cohort 2016)

THE RESEARCH

RESEARCH THEMES

Ultra-reliable semiconductor lasers operating in a hostile environment (high temperatures of ~100°C and potentially high pressure)

Low cost planar lightwave circuit platforms for coupling lasers into passive waveguides suitable for volume manufacture

Novel nanoplasmonic devices and antennas capable of operating in extreme environments (temperatures ~300°C and pressures up to 10 atm)

Advanced materials for magnetic recording optimised for high temperature fluctuations through composition, layering and patterning on μm and nm scales

Characterisation and failure analysis using scanning probe and electron and ion microscopy

THE CENTRE

CDT PIADS students undertake a diverse and exciting range of topical doctoral research projects that cut across physics, materials, electrical and optical engineering through to applications diverse as data storage and bioscience.

The research themes encompass our expertise in underlying science and materials for next-generation data storage and information-processing technologies. All international strategies foresee an increasing role for advanced functional materials, optics and optical excitations in a host of applications; particularly on an ever-diminishing dimensional scale.

Taking advantage of a critical mass off world-leading staff, each student will also have a supervisory contact at both universities. During their studies students work in a cross-geographical environment and make full use of facilities at both universities. Students benefit from state of the art experimental and computational facilities in the James Watt Nanofabrication Centre and Kelvin Nanocharacterisation Centre at UoG and the Centre for Nanostructured Media at QUB.

EMPLOYMENT PROSPECTS

Our programme is a gateway to a vast array of career paths from data storage, semi-conductors, telecommunications, biophotonics and more. CDT students develop sophisticated technical, research and management skills and are well-equipped to progress into a range of research and development, technical and management roles in industry or academia.

CDT PARTNERS AND CONNECTIONS

INDUSTRIAL EXPOSURE

This CDT programme has been designed and delivered in close consultation with our impressive network of industrial partners. Our students benefit from ongoing opportunities to engage with our partners such as annual conclaves, industrial seminars and site visits. The CDT offers a number of industrially-sponsored PhD studentships on a competitive basis. There are further opportunities for all students to apply for industrial placements during the course of their studies.

Our CDT students also benefit from exclusive access to the "Teamwork and collaboration skills in a cross-geographical environment" course delivered by Seagate Technology as part of their Global Leadership Programme.

"The Global Leadership course included a well-balanced composition of multicultural skills and concepts delivered by very supportive Seagate Technology staff mentors, using the highest standards of training materials from the Harvard Business School. The WebEx virtual meeting training demonstrated practically how the various concepts could be implemented in real global business situations. It gave a real insight to the skills required to undertake collaborative research with partners in different geographic locations."

Ali Mugahid
(Cohort 2014)

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