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Press release

**INNOVATIVE SCHOLARSHIPS FUND SUPPORTS MORE OF
TOMORROW'S RESEARCHERS**

8 June 2022: Nine physics research students - who otherwise would be unable to undertake postgraduate studies - are to benefit from an innovative fund set up by leading physicist Professor Dame Jocelyn Bell Burnell and the Institute of Physics (IOP).

The Bell Burnell Graduate Scholarship Fund (the Fund) was set up to encourage diversity in physics by assisting talented students from under-represented groups to study PhD physics.

Dame Jocelyn, a former president of the IOP, was awarded the 2019 [Special Breakthrough Prize](#) in Fundamental Physics for her role in the discovery of pulsars, and for her continued scientific leadership and engagement with the scientific and wider communities.

The Breakthrough Prize award included £2.3m, which she immediately donated to the IOP to help counter what she described as 'the unconscious bias that still exists in physics research' saying:

"I don't need the money myself, and it seemed to me that this was perhaps the best use I could put it to."

The Bell Burnell Graduate Scholarship Fund was the result. It is a doctoral scholarships fund that aims to encourage diversity in physics, by assisting students from groups under-represented in the physics research community to undertake physics PhD programmes.

Those encouraged to apply include women, people with refugee status, ethnic minority, disabled, financially disadvantaged students, and other students who would otherwise struggle to complete a course of postgraduate study due to their circumstances.

This year's awardees are:

Steve, a mature student who is going to be working with algae models for photobioreactors; Anika, who will be investigating attosecond pulse schemes for quantum technology applications; Abbie, whose research takes place at the large Hadron collider at CERN; and Aishwarya who will be doing her PhD in Advanced Optical Imaging at University College Dublin's School of Physics.

Cheng will be investigating a geophysical instability called baroclinic instability; Elizabeth's research is focused on the investigation of the morphology of different types of ice crystals in the cirrus clouds; Jess is an astronomer who will be studying for her PhD at the University of Edinburgh; Olivia's research is based on a branch of nuclear physics called nuclear data; and Gayathri uses observations from telescopes like the Herschel Space Observatory and the James Clerk Maxwell Telescope to understand what's going on within galaxies.

All have had to overcome personal hurdles and barriers in the pursuit of fulfilling their ambition to study physics at PhD level. From invisible disabilities, to financial insecurity and homeland troubles, these young physicists all have a story to tell, as they begin their career journeys with the help they have been awarded from the Fund.

Rachel Youngman, Deputy Chief Executive of the Institute of Physics, commented:

“This year I am delighted we are supporting nine well deserving students to further their studies and build their careers in physics.

“We need physicists in order to rise to the economic challenge of building a zero-carbon economy and the more diverse we can make our pool of physics researchers and innovators the stronger and more creative it will be.

“The fund set up by Dame Jocelyn is already helping to achieve this. To date, it has enabled 21 students to embark upon a physics PhD, helping them to start their journey to a rewarding and exciting career.

“Among those we have assisted so far are a young woman who embarked upon research into radiographic analysis tools for cancer detection, a young man whose parents were forced to flee violence and discrimination in their homeland, who was able to pursue cosmology research, and a young woman who went onto a PhD programme to develop an infrared detector capable of non-invasively measuring blood glucose.

“There is no doubt that this fund will ultimately benefit many people, and I am delighted to congratulate this year’s awardees.”

In 2019/20, just 25% of physics undergraduate students were female¹. This has increased from 22% in 2010/11², but still does not reflect the proportion of the population who are female.

Professor Helen Gleeson, Cavendish Professor of Physics at the University of Leeds and IOP Representative to Council for Inclusion and Diversity, is the Chair of the Bell Burnell Graduate Scholarship Fund Committee. She said:

“Once again it was extremely difficult to decide upon the awardees; the competition was tough.

“It is such a pleasure though to be helping nine very worthy students this year.

“The successful applicants are all involved in exciting research projects that will bring benefits to all of us, and will also be inspiring others in their roles as ambassadors for the programme.

“As ever, I am delighted to be able to help them on their career journeys.”

Images of the 2022 Bell Burnell Graduate Scholarship Fund awardees and full interviews with each of them can be found [here](#):

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Notes to Editors

¹Higher Education Statistics Agency Student Record 2019/20

²Higher Education Statistics Agency Student Record 2010/11

The 2022 awardees are:

Olivia Tindle, studying at Sheffield Hallam University; Stephen Donegan, studying at Newcastle University; Aishwarya Chanady Babu, studying at University College Dublin School of Physics; Jessica Howell, studying at The University of Edinburgh; Anika Aynul, studying at University College London; Gayathri Eknath, studying at Cardiff University; Abbie Chadwick, studying at University of Liverpool; Cheng Qian, studying at University of Oxford, and Elizabeth Reeja Mathen, studying at University of Hertfordshire.

About the Institute of Physics (IOP)

The Institute of Physics (IOP) is the professional body and learned society for physics in the UK and Ireland. It seeks to raise public awareness and understanding of physics, inspire people to develop their knowledge, understanding and enjoyment of physics and support the development of a diverse and inclusive physics community. As a charity, it has a mission to ensure that physics delivers on its exceptional potential to benefit society.

The IOP has been working to understand and remove barriers to wider participation in physics since 2006. In 2020, it launched its Limit Less campaign, a public facing campaign that aims to ensure young people, particularly from groups and communities currently underrepresented in physics at age 16 and beyond, are no longer excluded - by any kind of barrier - from studying physics if they wish. In 2021, it published 'The importance of equality, diversity and inclusion in physics', a document setting out the benefits of greater diversity and inclusion in physics, and inaugurated Professor Gleeson as IOP Representative to Council for Inclusion and Diversity.

About the Bell Burnell Graduate Scholarship Fund

The Bell Burnell Graduate Scholarship Fund (BBGSF) supports students wishing to study a PhD in Physics and has a specific mission to help students from groups currently under-represented in physics, including female students, black and other minority ethnic (BAME) students, people with refugee status and students from disadvantaged backgrounds.

It was made possible thanks to the generosity of Professor Dame Jocelyn Bell Burnell, who won the prestigious Breakthrough Prize in 2019 for her role in the discovery of pulsars. Dame Jocelyn chose to donate her £2.3m prize award to the Institute of Physics to set up the Fund.

The Fund operates as a joint-funding model. The host university/institution pays at least 50% of the full costs of the doctoral programme for its entire duration, with total costs expected to be in line with EPSRC/UKRI Irish Research Council rates. The host university/institution can put forward a maximum of two students for the Fund.

The Fund will support studies in a physics department, school or faculty at a recognised postgraduate degree awarding institution in the UK or Ireland. The department must hold either/ both Juno or Athena Swan status, current at the date of enrolment of the student on the course. The grant is linked to the student. If the student transfers to another eligible host university/institution, the awarded grant moves with them.

For the purpose of this fund the definition of under-represented groups in physics will be kept under review. In this first instance our definition includes: women, students of Black-Caribbean, Black-African and other minority ethnic (BAME) heritage, students with disabilities, or who require additional funding to support inclusive learning, LGBT+ students and students from disadvantaged backgrounds who may struggle to find the levels of funding needed to complete their studies. People with qualifying refugee status who meet the above criteria are also encouraged to apply. Priority will be

given to students who meet multiple criteria and the decision of the panel on qualification and funding amounts will be final.

The fund will only support studies in a physics department, school or faculty that has either a Juno or Athena SWAN award and must be on a physics-related topic at a recognised graduate degree awarding institution in the UK and Ireland.

The scholarships will normally be paid in support of course fees, living support grants and any additional funding to support accessibility, including support for carer responsibilities.

More detail can be found at: iop.org/bellburnellfund

About Professor Dame Jocelyn Bell Burnell

Over five decades Jocelyn Bell Burnell has been a researcher an educator and a role model, serving as the first woman president of both the Institute of Physics and the Royal Society of Edinburgh and as a President of the Royal Astronomical Society.

Radio pulsars, a form of rotating neutron star that emit beams of electromagnetic radiation as they spin. The first radio pulsar was discovered in 1967 by Jocelyn Bell Burnell, then a graduate student from Glasgow University working with Antony Hewish at the Mullard Radio Astronomy Observatory in Cambridge. The Nobel Prize in Physics 1974 was awarded jointly to Sir Martin Ryle and Antony Hewish 'for their pioneering research in radio astrophysics: Ryle for his observations and inventions, in particular of the aperture synthesis technique, and Hewish for his decisive role in the discovery of pulsars.' As a research student at the time of the discovery, Jocelyn Bell Burnell was not included in the 1974 Nobel Prize citation, despite having been the first to observe and analyse the astronomical objects.

She was one of a group of senior female scientists whose efforts led to the creation of the Athena SWAN awards which recognise commitment to advancing the careers of women in science, and is a renowned champion in the area of encouraging women to study the physical sciences.

Dame Jocelyn has been awarded honorary degrees from some 40 institutions, and is currently a Visiting Academic in astrophysics at the University of Oxford and Chancellor of the University of Dundee.