


Clár-Bríd Tohill

PhD student at the University of Nottingham

Support Astronomer at the INT, La Palma

CONTACT

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EDUCATION

PhD in Astrophysics

University of Nottingham | 2019 - current

MPhys Physics with Astrophysics - First Class Masters

University of Kent | 2015 - 2019

Study abroad year

University of California San Diego |
2017 - 2018

A - Levels in Math, Physics, French and Sociology

Dominican College Fortwilliam |
2013 - 2015

SKILLS

- Python, Fortran 95, IRAF
- UNIX, LINUX
- LaTeX
- Machine Learning
- Tensorflow, Keras
- Laboratory experience
- Public speaking
- Teaching, marking
- Science communication

RESEARCH EXPERIENCE

PhD RESEARCH

UNIVERSITY OF NOTTINGHAM | NOTTINGHAM | 2019 - current

My PhD work focuses on high redshift galaxies and machine learning. I have been working with data from HST and investigating different machine learning algorithms. My current research involves utilising unsupervised machine learning techniques to explore the morphologies of high redshift galaxies.

SUPPORT ASTRONOMER AT THE INT

ISAAC NEWTON GROUP (ING) | LA PALMA, SPAIN | 2021- current

I am currently working as a support astronomer for the Isaac Newton Telescope at the ING on La Palma. My duties involve providing support and assistance to visiting astronomers, taking observations, telescope maintenance and setting up and testing the instrumentation ahead of observation runs. I also trained the next set of support astronomers at the telescope.

Observing Experience

- Isaac Newton Telescope, La Palma (INT)
> 50 nights service and visitor mode
Training next generation INT support astronomers
'Orbital modelling and dynamics of new Cataclysmic Variables' -PI (Oct 2021)
- Nordic Optical Telescope, La Palma (NOT)
1 night service mode
- William Hershel Telescope, La Palma (WHT)
1 night, WEAVE commissioning
- Nickel Telescope, Lick Observatory
1 night remote observing
- Beacon Observatory, University of Kent
6 nights

PUBLICATIONS

Tohill C., et al., 'Quantifying Non-parametric Structure of High-redshift Galaxies with Deep Learning' - ApJ, vol. 916, 4

Ferreira, L., Conselice, C. J., Kuchner, U., & **Tohill C.**, 'A Simulation-driven Deep Learning Approach for Separating Mergers and Star-forming Galaxies: The Formation Histories of Clumpy Galaxies in All of the CANDELS Fields' - ApJ, vol. 931, 34

Affiliations and Awards

- Fellow of the Royal Astronomical Society (RAS)
- Student member of the Institute of Physics (IOP)
- Academic excellence award - University of Kent

Languages

- English (native)
- French (A-Level)
- Spanish (A2)

INTERESTS

Bouldering, Travelling, languages, outreach, Reading, Programming, Scuba diving

REFERENCES

Dr Steven Bamford

Associate Professor
University of Nottingham
steven.bamford@nottingham.ac.uk

Professor Christopher Conselice

Professor
University of Manchester
conselice@gmail.com

CONFERENCES, MEETINGS, TALKS

ERASMUS + Eclipsing binaries and Asteroseismology - Summer School
| September 2022

European Astronomical Society (EAS) - Annual Meeting
Contributed Talk | June 2022

Isaac Newton Group, La Palma (ING) - Astronomy Student Journal Club
Talk | February 2022

European Astronomical Society (EAS) - Annual Meeting
Poster | June 2021

American Astronomical Society (AAS) - 238th Meeting of the AAS
Talk | June 2021

University of Nottingham - Lunch Talk
Talk | June 2021

Royal Astronomical Society (RAS) - Machine Learning and Artificial
Intelligence Applied to Astronomy II
Talk | May 2021

Royal Astronomical Society (RAS) - Early Career Poster Exhibition
Poster | September 2020

University of Nottingham - Lunch Talk
Talk | May 2020

Postgraduate Women in Physics Conference (PgWIPNotts) - University of
Nottingham
Poster | May 2020

WORK HISTORY

LAB DEMONSTRATOR/MARKER

UNIVERSITY OF NOTTINGHAM | NOTTINGHAM | 2019 - current

Have worked as a laboratory demonstrator in first year physics labs at the University of Nottingham for the past 2 years. This role includes demonstrating with the labs on a weekly basis and marking lab diaries as well. From this I have gained teaching and marking experience as well as how to improve my science communication.

MANAGER OF THE INFLATIVERSE

UNIVERSITY OF NOTTINGHAM | NOTTINGHAM | 2019 - current

For the past 2 years I have been a manager of the University of Nottingham's inflatable planetarium which we bring to primary schools and other events as part of our outreach programme. Through this we aim to inspire children to remain in education and teach them about our galaxy and the Universe.

SECRETARY OF PHYSICS SOCIETY

UNIVERSITY OF KENT | CANTERBURY, KENT | 2016 - 2017

I was the secretary of PhySoc, the academic physics society at the University of Kent. From this role I developed improved organisational and communication skills as I was in charge of the weekly newsletter and any bookings the society needed.