

THOMAS HIGGINSON

PhD Student

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🔗 TomHigginson



TEACHING

Graduate Teacher

University of Bristol

📅 March 2023 – Ongoing

📍 Bristol

Roles:

- Running General mathematics and Physics drop-in sessions for all first and second year physics undergraduates.
- Demonstrating in first year undergraduate laboratories.
- Marking assessed work for first and second year astrophysics modules.

Responsibilities:

- Communication is key to ensure students are able to understand the underlying mathematics.
- Quick recollection is essential as questions could be on a vast variety of topics in the drop-in session.
- Problem solving is utilised help students through their problems and help solve their issues.

PROJECTS

Investigating AGN-Environment interactions and the role of AGN Feedback

University of Bristol

📅 September 2023 - Present

- Determining emission mechanisms from multi-wavelength data.
- Developing software to enable data reduction and data processing techniques for different telescopes.

Collaborations:

- LOFAR VLBI Pipeline - I have helped develop the pipeline for the high-resolution processing of LOFAR 2.0.
- 3CR Collaboration - X-ray and optical observations investigating AGN feedback with members from CfA and University of Bristol.

Emission Mechanisms of jets from Red Quasars 3CR 9 and 3CR 14

University of Bristol

📅 September 2022 - September 2023

- Using statistical analysis techniques to investigate properties of two dust-obscured radio loud AGN (red-quasars).
- Methods include Chi-squared, Bayesian Estimation.

Mitigating the effects of climate change by investigating a geographically zoned and environmentally safe particulate release into the lower atmosphere

University of Bristol

📅 Oct 2021 - May 2022

- Design of experimental apparatus, and processing from scratch.

INTERESTS



Football

Supporting and playing



Student Societies

Pool & Snooker Secretary 2022-2024



Hiking

Especially long mountain walks

STRENGTHS

Hard-working

Eye for detail

Critical Analysis

Collaboration

Python

Julia

Linux

Statistical Analysis

PRESENTATIONS

AGN Wings: Unravelling the mystery of Cross-shaped X-ray emission

Extragalactic jets at all Scales | Talk

📅 August 2025

📍 Heraklion, Crete

Exploring the role of extended X-ray emission in AGN Feedback

National Astronomy Meeting | Talk

📅 July 2024

📍 Hull, UK

Exploring gas perpendicular to the radio jet in AGN Feedback

Recipes to Regulate Star Formation | Poster

📅 April 2024

📍 STScI, Baltimore

Extended Emission from Quasars 3CR 9 and 3CR 14

New Results in X-ray Astronomy | Poster

📅 September 2023

📍 Edinburgh

EDUCATION

MSc by Research

University of Bristol

📅 September 2022 – September 2023

BSc in Physics with Astrophysics

University of Bristol

📅 September 2019 – June 2022