

# Rhys Shaw

## M.Inst.P, MSc, BSc

## Astrophysicist

Last update: October 7, 2022

The online version is available at

<https://RhysAlfShaw.github.io/CV>

### Residence

Wales, UK

### Homepage

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[Rhys Shaw](#)

Astrophysics	+++++	Mathematics	+++++	Computational Physics	++++	Python	++++	Fortran	+++	JavaScript	+++
CSS	++	HTML	+++	React.js	+++	Node.js	+++				

Hello, I am Rhys. I am a current PhD researcher at the University of Bristol. My research focuses on radio source analysis, using machine learning techniques. I have some experience with web-development and I have been programming for more than 4 years.

## Research Projects

### PhD Research: Radio source multiplicity and Machine Learning.

Inprogress ~ Due for completion 2026

Developing tools to create true associations between separated radio sources using morphological, spectral and flux analysis of the source to feed into a neural network to learn characteristics of these associations. This will allow for quick processing of SKA and future radio observational data.

[Python](#) [Software Engineering](#) [Machine Learning](#) [Neural Networks](#) [Computational Astrophysics](#) [Radiowave Sources](#)  
[Project Files](#)

### MSc Project: Studing the effect of Substructure in Star Clusters.

2021

Simulating a planetary system orbiting solar mass stars within a fractally substructured cluster using a dual integrator approach, where the cluster was integrated with NBODY6++ and star positions interpolated for use by the planetary integrator.

[Python](#) [Linux](#) [Fortran](#) [Computational Physics](#) [Problem Solving](#)  
[Project Files](#)

### BSc Project: Examining Galaxy Cluster Properties from seperatly selected samples.

2020

Measuring galaxy cluster morphology, with a custom algorithm, and their luminosity-temperature scaling relation with observational data from the Chandra observatory was done to compare two samples of galaxy clusters.

[Python](#) [Data Analysis](#) [Linux](#) [Problem Solving](#)  
[Project Files](#)

## Education

### Academic

2022-2026 | PhD Physics (Starting in September 2022) -- Research Area: Radiowave Astronomy and Machine Learning. University of Bristol

2020-2021 | MSc Data Intensive Astrophysics, Distinction. Cardiff University

2017-2020 | BSc Physics with Astrophysics (2.1). University of Bristol

## **Other**

2022 | Zero to Mastery Web Development in 2022 online course. Udemy