MITCHELL HOOYMANS

I am currently undertaking a PhD in Astrophysics at The University of Queensland, my research focuses on the formation and dynamics of black holes within dense star clusters, a field requiring strong analytical and computational skills. I have a genuine passion for facilitating and encouraging learning and have a strong background providing academic support in various STEM fields in higher education. These experiences have solidified my desire to pursue a career in higher education where I can continue to learn, contribute, and foster academic growth in others.

SKILLS

- Problem-Solving
- Data Analysis
- Programming
- Team Building and Leadership
- Research and Academic Writing
- Mathematical Modelling
- Adaptibility
- Student Guidance
- Student Learning Facilitation
- Communication

EDUCATION

DOCTOR OF PHILOSOPHY

Computational and Theoretical Astrophysics

The University of Queensland | Jan 2025 - Present

BACHELOR OF SCIENCE (HONOURS)

Physics Major (Astronomy and Astrophysics)

Queensland University of Technology | Feb 2024 - Dec 2024

BACHELOR OF SCIENCE/INFORMATION TECHNOLOGY

Physics/Computer Science Major

Queensland University of Technology | 2020 - 2023

EXPERIENCE

CASUAL ACADEMIC

The University of Queensland | July 2025 - Current

In my role as a casual academic I have been responsible for tutoring and marking students in the following courses:

PHYS3071 - Computational Physics I

SESSIONAL ACADEMIC

Queensland University of Technology | Jan 2024 - Current

In my role as a sessional academic I have been responsible for tutoring and marking students in the field of physics in the following courses:

PVB220 - Cosmology
SEB122 - Physics in The Real World
SEB108 - Data Analysis and Visulisation
PVB102 - Physics of the Very Small

LEAD STUDENT SUCCESS PARTNER (STEM)

Queensland University of Technology | Jan 2023 - Dec 2024

As a Lead Student Success Partner (STEM), I coordinate teams of volunteers for QUT's STIMulate Program. I also run study sessions and academic preparedness workshops and provide academic support for various science, engineering, mathematics, and information technology topics.

VOLUNTEERING

PEER LEARNING FACILITATOR

STIMulate, Queensland University of Technology | 2021 - 2022

As a volunteer with QUT's STIMulate Program I volunteered my time each week to provide academic support to first and second-year students in the fields of IT, Science, Engineering and Mathematics

AWARDS AND HONOURS

AWARD FOR MOST OUTSTANDING GRADUATING STUDENT IN A QUEENSLAND PHYSICS MAJOR

The Australian Institute of Physics | 2024

Recognized as the top-performing physics undergraduate in Queensland for 2024

FOS HONOURS SCHOLARSHIP

Queensland University of Technology | 2024

Academic Merit Scholarship for FoS Honours Students who have achieved exceptional results in their undergraduate degree.

DEAN'S LIST FOR ACADEMIC EXCELLENCE

Queensland University of Technology | 2020-2023

For achieving exceptional results each semester, resulting in a GPA of 6.5 or greater

PREVIOUS RESEARCH EXPERIENCE

HONOURS RESEARCH PROJECT

Supervisor: Dr Michael Cowley

My Research in this project focuses on the effect of active galactic nuclei on host galaxies and the development of tools to explore quenching behaviour of galaxies. This project is being undertaken as a core component of my honours degree in which a thesis will be produced.

FINAL YEAR UNDERGRADUATE RESEARCH PROJECT

Supervisor: Dr Michael Cowley

Investigated photometric diagnostic techniques crucial for Galaxy Formation and Evolution studies of AGN. My research explored methods to optimize these diagnostics under limited photometric constraints and assessed their reliability and completeness through comparisons with galaxy models. The findings were documented in a detailed research report submitted to my supervisor.

MID-YEAR UNDERGRADUATE RESEARCH PROJECT

Supervisor: Professor Jose Alarco

Performed research on density functional theory (DFT) and the influence of temperature on DFT calculations as part of the Mid-Year Research Experience Scheme (MY-RES). This research culminated in a report presented to my supervisor.

CONTACT

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References available upon request