



# Sean Richards

PHD CANDIDATE · DEPARTMENT OF PHYSICS

The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

✉ ordinarystarman@gmail.com — 🌐 www.ordinarystarman.com — 📺 krytic

🐦 @ordinarystarman

## EDUCATION

### The University of Auckland

Auckland, New Zealand

#### PHD PHYSICS

September 2021 - Present

- Supervisors: Assoc. Prof. Jan (JJ) Eldridge & Dr Héloïse Stevance
- Thesis: *The Next Generation: Refining the Standard Population Synthesis Model to Better Predict Stellar Population Properties*
- Expected Completion Date: **August 2024**

### The University of Auckland

Auckland, New Zealand

#### MSc PHYSICS

March 2020 - March 2021

- Supervisor: Assoc. Prof. Jan (JJ) Eldridge
- Thesis: *The Missing Mergers: Modelling the observed binary neutron-star population and their mergers*
- Awarded with **Honours (First Class)**

### The University of Auckland

Auckland, New Zealand

#### PGDIPSci PHYSICS

March 2019 - February 2020

- Supervisor: Dr Nicholas Rattenbury
- Dissertation: *The University of Auckland Ground Station One*
- Technical report: *The University of Auckland Ground Station One: System Overview*
- Technical report: *Ground Segment Support for APSS-I* (contains non-public information, and cannot be distributed)

### The University of Auckland

Auckland, New Zealand

#### BSc

February 2016 - November 2018

- Majored in Physics and Computer Science

## AWARDS, FELLOWSHIPS, & GRANTS

2021 **University of Auckland Doctoral Scholarship**, The University of Auckland

2019 **First in Course Award (PHYSICS 746)**, The University of Auckland

## PRESENTATIONS

\* presenting author; + mentored undergraduate

### CONTRIBUTED PRESENTATIONS

**Richards, S.** 2022. New constraints on the Bray conservation-of-momentum natal kick model from multiple distinct observations. Oral presentation: Supernovae in the Gravitational Wave Detection Era, Melbourne, Victoria, Australia.

## TEACHING EXPERIENCE

2018-2019 **PHYSICS 107**, Teaching Assistant

The University of Auckland

2020- **ASTRO 100**, Graduate Teaching Assistant

The University of Auckland

2021- **Tuākana Tutor**, Department of Physics

The University of Auckland

2023- **Physics 102 Tutor**, Department of Physics

The University of Auckland

## RESEARCH EXPERIENCE

**University of Auckland - Department of Physics**

SUPERVISOR: ASSOC. PROF. JAN (JJ) ELDRIDGE

- Research Assistant

Auckland, NZ

April 2021 - September 2021

**University of Auckland - Department of Physics**

SUPERVISOR: DR NICHOLAS RATTENBURY

- Summer Research Scholar: "Ground Segment Support for APSS-I" (non-distributable due to non-disclosure agreement)

Auckland, NZ

December 2019 - February 2020

**OUTREACH & PROFESSIONAL DEVELOPMENT**

---

**SERVICE AND OUTREACH**

2021	<b>Post Graduate Students Association</b> , Welfare Vice President	<i>The University of Auckland</i>
2021	<b>Physics Association of the University of Auckland</b> , Vice President	<i>The University of Auckland</i>
2020	<b>Physics Association of the University of Auckland</b> , Treasurer	<i>The University of Auckland</i>
2017-2018	<b>The University of Auckland Magic Society</b> , President	<i>The University of Auckland</i>
2018	<b>Physics Association of the University of Auckland</b> , Committee Member	<i>The University of Auckland</i>

**PUBLICATIONS**

---

**PUBLISHED****IN REVIEW**

**Richards, S.**, Eldridge, J., Briel, M., Stevance, H., Willcox, R. 2022. New constraints on the Bray conservation-of-momentum natal kick model from multiple distinct observations. *Monthly Notices of the Royal Astronomical Society*.

Stevance, H., Ghodla, S., **Richards, S.**, Eldridge, J., Briel, M., Tang, P. 2022. VFTS 243 as predicted by BPASS models. *Monthly Notices of the Royal Astronomical Society*.

**IN PREP**