

Shanika Galaudage

PhD candidate, Monash University • shanika.galaudage@monash.edu • shanikagalaudage.github.io

Education

- Doctor of Philosophy** | Monash University Feb 2019 – Aug 2022
Dissertation: *Gravitational-wave inference in the catalogue era* (expected)
Supervisors: Eric Thrane and Ilya Mandel
- Bachelor of Science Advanced – Research (Honours)** | Monash University 2018
Majors: Astrophysics and Physics – 1st class honours
Thesis: *Searching for X-ray pulsations from continuous gravitational-wave candidates*
Supervisors: Duncan Galloway and Karl Wette (ANU)

Awards & Scholarships

- J. L. William PhD Scholarship** | Monash University 2019
- Research Training Program (RTP) Stipend** | Australian Government 2019
- Monash Centre for Astrophysics (MoCA) Prize** | Monash University 2018
Awarded to the top Astrophysics honours student.
- ECR / Student Travel Award** | OzGrav 2018
- J. L. William Honours Scholarship** | Monash University 2018

Publications

Below is a list of publications I have made a significant contribution to. I am an author on numerous publications as part of the LIGO Scientific Collaboration.

Galaudage, S., Wette, K., Galloway, D. K., and Messenger, C., *Deep searches for X-ray pulsations from Scorpius X-1 and Cygnus X-2 in support of continuous gravitational-wave searches*, Submitted MNRAS (2021) [arXiv:2105.13803](https://arxiv.org/abs/2105.13803)

The LIGO Scientific Collaboration; the Virgo Collaboration, *Population properties of compact objects from the second LIGO-Virgo Gravitational-Wave Transient Catalog*, Accepted ApJL (2021) [arXiv:2010.14533](https://arxiv.org/abs/2010.14533)

Member of paper writing team; significant contribution to analyses and astrophysical interpretation of results.

Galaudage, S., Adamcewicz, C., Zhu, X.-J., Stevenson, S. and Thrane, E. *Heavy double neutron stars: birth, mid-life and death*, [ApJL](https://arxiv.org/abs/2105.13803) 909 (2021) L19

Romero-Shaw, I. M., Talbot, C., Biscoveanu, S., D'Emilio, V., Ashton, G., Berry, C. P. L., Coughlin, S., **Galaudage, S.**, et al., (51 authors), *Bayesian inference for compact binary coalescences with BILBY: validation and application to the first LIGO-Virgo gravitational-wave transient catalogue*, [MNRAS](https://arxiv.org/abs/2008.07231) 499 (2020) 3295

Bilby and Bilby_Pipe developer; contribution to online Bilby (pipeline from trigger to parameter estimation).

Galaudage, S., Talbot, C. and Thrane, E. *Gravitational-wave inference in the catalog era: evolving priors and marginal events*, [PRD](https://arxiv.org/abs/2008.07231) 102 (2020) 083026

Conferences, Presentations & Workshops

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| Open Data Workshop #4 LIGO (Virtual) – Invited Talk <i>Parameter Estimation with Bilby</i> | May 2021 |
| Gravitational Wave group presentation University of Queensland (Virtual) – Invited Talk <i>Population properties of binary black holes: Results from LIGO/Virgo O3a</i> | Apr 2021 |
| ECR Australia Seminar series ASTRO3D (Virtual) – YouTube <i>Population properties of binary black holes: Results from LIGO/Virgo O3a</i> A series showcasing Australia's Early Career Researchers to international audience. | Mar 2021 |
| Collaboration Meeting LIGO/Virgo/KAGRA (Virtual) – Poster – Honourable Mention | Mar 2021 |
| Annual Meeting Australian National Institute for Theoretical Astrophysics (Virtual) <i>Heavy Double Neutron Stars: birth, midlife and death</i> | Feb 2021 |
| Public Webinar LIGO/Virgo Collaboration (Virtual) – YouTube – Invited Talk Presented results from LIGO/Virgo publications alongside a panel of experts. <i>Population Properties of Compact Objects from the Second LIGO-Virgo Gravitational-Wave Transient Catalog</i> | Nov 2020 |
| School of Physics and Astronomy colloquium Monash University (Virtual) <i>Population properties of binary black holes: Results from LIGO/Virgo O3a</i> | Oct 2020 |
| Annual Scientific Meeting Astronomical Society of Australia (Virtual) <i>Gravitational Wave inference in the catalogue era</i> | Jul 2020 |
| Annual Scientific Meeting Astronomical Society of Australia <i>Selection Effects in Gravitational Wave Astronomy</i> | Jul 2019 |
| Parameter Estimation F2F workshop LIGO PE Group | Feb 2019 |
| Annual Scientific Meeting Astronomical Society of Australia <i>Searching for X-ray pulsations from Low Mass X-ray Binaries</i> | Jul 2018 |

Leadership & Mentoring

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| Media Advisory Committee – ECR representative OzGrav Role involves ensuring voices of Early Career Researchers are heard and represented for media related opportunities | 2021 |
| Women in Physics and Astronomy Committee Monash University Role involves organising events and coordinating a mentoring program as well as creating a supportive environment for women in physics and astronomy. | 2020 – 2021 |
| Palladian Mentoring Program Mac. Robertson Girls' High School | 2020 |
| Science Peer Mentoring Program Monash University | 2018 |
| Advanced Research Mentoring Program Monash University | 2017 – 2018 |
| Global Leadership Advanced Research Program Monash University Winter intensive unit for inter-disciplinary research and development of leadership skills | Jul 2017 |
| Science Future Leaders Program Monash University | 2015 |

Outreach & Engagement

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| Media Article Space Australia – Article | May 2021 |
| Podcast AstroPhiz – SoundCloud Discussion of research and issues of diversity & inclusion to a general audience. | Apr 2021 |
| Social Media Coordinator Space Australia (Freelance role) Communicate Australian space news with general public. | 2021 – present |
| Victoria representative & Social Media Manager IncludeHer Movement A campaign to improve representation of women in high-school STEM courses. | 2020 – present |
| MySci Program Volunteer OzGrav and Monash Astrophysics Create & deliver a workshop for year 11/12 students about gravitational waves. | Feb 2020 |
| Outreach team member OzGrav | 2019 – present |

Teaching Experience

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| Teaching Associate Monash University | 2018 – present |
| <ul style="list-style-type: none">· ASP1010 - Earth to cosmos, Introductory astronomy· ASP2062 - Introduction to astrophysics· ASP3051 - Relativity and cosmology· PHS1001 - Foundation physics· PHS1011 - Classical physics and relativity· PHS1022 - Fields and quantum physics· BMS1031 - Medical biophysics | |