

ALEXANDER PAPADOPOULOS

Institute for Gravitational Research, Glasgow, Scotland

| a.papadopoulos.1@research.gla.ac.uk

| [Github Page](#)

EDUCATION

University of Glasgow, PhD, 2023-Present.

- Cosmology with Gravitational Waves in the Advanced Detector Era
- Supervisors: Dr Rachel Gray and Dr Chris Messenger
- UKRI STFC PhD Studentship

University of Edinburgh, MPhys Astrophysics (First Class), 2018-2023.

- Master's Project: Searching for non-Gaussianity in the Large Scale Structure of the Universe
- Modules including: Cosmology, Galaxy Evolution, Stellar Evolution, Statistical Physics, Numerical Recipes

SKILLS

- | | |
|---|---|
| • Python (numpy, astropy, bilby, pandas) | • Latex |
| • GPU integration with Pytorch | • Anaconda |
| • High throughput computing (SLURM, HTCondor) | • Sampling techniques (nested sampling, MCMC) |
| • bash | • Bayesian Inference |
| • SQL | • Version control (git) |

RESEARCH EXPERIENCE

University of Glasgow

- **PhD Project**, So far this has focused on the inclusion of more advanced compact binary coalescence (CBC) population models into the `gwcosmo` cosmological inference pipeline.

University of Edinburgh

- **Senior Honours Project**, *Understanding the Local Expansion Rate of the Universe*. 2021-2022.
- **Telescope Group Project**, *Star Clusters*, 2021-2022.
- **MPhys Project**, *The Cosmic Dark Matter Density Field*, 2022-2023.

PUBLICATIONS

...

TEACHING EXPERIENCE

- **Online Tutor** Maths and Physics for school-aged pupils. 2018-Present.
- **Graduate Teaching Assistant** University of Glasgow. 2023-Present.

AFFILIATIONS AND AWARDS

- Member of the LIGO/Virgo/KAGRA (LVK) Collaboration
 - Developer on `gwcosmo`, producing reviewed code for official LVK analyses.
 - Member of analysis team for O4a cosmology paper
 - Paper writing team member and `gwcosmo` analysis co-ordinator for O4b cosmology paper
- Member of Institute of Physics
- Pre-Honours Certificate of Merit for MPhys Astrophysics Degree Programme
- Full Blue, Edinburgh University Sports Union

ATTENDANCES AND TALKS

- GR/Amaldi 2025, Glasgow - Presentation "Spectral Siren Cosmology and Binary Classification with a Combined-Population Mass Distribution"
- First ACME Workshop: The gravitational wave sky and complementary observations 2025, Toulouse
- LIGO-Virgo-KAGRA Collaboration Meeting 2024, Barcelona - Talk to Cosmology subgroup : "'A Weighty Problem" - Combined Population Cosmology in `gwcosmo`"
- GraSP 2024, Pisa - Talk : 'Spectral Siren Cosmology with GWs using a Combined-Population Mass Distribution'
- Pint of Science Festival 2024 - Talk : 'Sirens of the Cosmos: The Hubble Tension and Gravitational Waves'
- SUPA Cormack Meeting 2024, University of Glasgow
- GWCats Meeting 2024, University of Glasgow

OTHER SKILLS

Languages English: Native, French: B1, German: A2.