ERIC THRANE

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EDUCATION

University of Washington, Seattle, WA   *2003–2008*
PhD, Physics
A Search for Astrophysical Neutrino Point Sources with Super-Kamiokande
Advisor: R Jeffrey Wilkes

University of Michigan, Ann Arbor, MI   *1999–2003*
BS, Physics with Highest Honors (& BA, Philosophy)
Flat Electron Beam Dynamics: A Comparison of Data with Simulation
Advisor: David Gerdes

RESEARCH INTERESTS

Astrophysics, gravitational waves, cosmology

WORK EXPERIENCE

Professor   2020–
School of Physics & Astronomy, Monash University   *Clayton, VIC*

Chief Investigator   2024–2031
ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav 2)   *Clayton, VIC*

Associate Professor   2018–2019
School of Physics & Astronomy, Monash University   *Clayton, VIC*

Data Theme Leader   2017–2024
ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav)   *Clayton, VIC*

Senior Lecturer   2017–2018
School of Physics & Astronomy, Monash University   *Clayton, VIC*

Lecturer   2015–2016
School of Physics & Astronomy, Monash University   *Clayton, VIC*

Senior Postdoctoral Scholar   2012–2014
Division of Physics, California Institute of Technology   *Pasadena, CA*

Postdoctoral Research Associate   2008–2012
Dept. of Physics & Astronomy, University of Minnesota   *Minneapolis, MN*

AWARDS & FELLOWSHIPS

Probing CP violation with Hyper-K   2025–2028
· $634K AUD with Prof Phil Urquijo; DP250100373

A Transdimensional Approach to Gravitational-Wave Astronomy   2023–2026
· $460K AUD with AProf Paul Lasky; DP230103088

The ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav 2) 2024–2031
· $35M AUD for 23 researchers; CE230100016

ARC Linkage Infrastructure, Equipment and Facilities (LIEF; LE210100002) 2021
· Australian Partnership in Advanced LIGO+ ($3M AUD for 12 investigators)

Rising stars (*The Australian*)   2019
· Australia's top 40 researchers who are less than 10 years into their careers

The ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav) 2016–2023
· $31M AUD for 19 researchers; CE170100004

Breakthrough Prize in Fundamental Physics   2016
· $2M USD split between members of the LIGO Scientific Collaboration

Gruber Cosmology Prize   2016
· Ron Drever, Kip Thorne, Rai Weiss, and the LIGO Science Collaboration

ARC Future Fellowship (FT150100281)   2015–2019
· Gravitational-wave astronomy: detection and beyond ($618K AUD)

Ken Young Fellow   2003
University of Washington   *Seattle, WA*

Graduated with Highest Honors   2003
University of Michigan   *Ann Arbor, MI*

SELECT PUBLICATIONS

With significant personal contribution; my group members are highlighted in bold.

★ = lead and/or corresponding author

[1] The IGWN Collaboration, *GW231123: a Binary Black Hole Merger with Total Mass 190-265 $M_\odot$*, (2025) arxiv/2507.08219.

[2] **L. Passenger**, **S.-Y. Cheung**, **N. Guttman**, **N. Kannachel**, P. D. Lasky, and E. Thrane, *A gaussian process framework for testing general relativity with gravitational waves*, (2025) arxiv/2507.01294.

[3] **S.-Y. Cheung**, **L. Passenger**, P. D. Lasky, and E. Thrane, *A search for extra polarisations using a gaussian process in gravitational-wave transient catalogue 3*, (2025) arxiv/2507.02335.

[4] X.-X. Kou, M. Saleem, V. Mandic, C. Talbot, and E. Thrane, *Progress toward the detection of the gravitational-wave background from stellar-mass binary black holes: a mock data challenge*, (2025) arxiv/2506.14179.

[5] **A. M. Baker**, P. D. Lasky, E. Thrane, and J. Golomb, *Significant challenges for astrophysical inference with next-generation gravitational-wave observatories*, (2025) arxiv/2503.04073.

[6] **H. Tong**, M. Fishbach, and E. Thrane, *Spinning spectral sirens: Robust cosmological measurement using mass-spin correlations in the binary black hole population*, Accepted in *Astrophys. J.* (2025) arxiv/2502.10780.

[7] **V. Di Marco**, A. Zic, R. M. Shannon, E. Thrane, and A. D. Kulkarni, *Choosing suitable noise models for nanohertz gravitational-wave astrophysics*, Accepted in *Astrophys. J.* (2025) arxiv/2502.04653.

[8] **T. A. Clarke**, P. D. Lasky, and E. Thrane, *Inferring jet physics from neutron star - black hole mergers with gravitational waves*, *Astrophys. J.* **984** (2025) 27.

[9] **N. Guttman**, P. D. Lasky, and E. Thrane, *Modelling noise in gravitational-wave observatories with transdimensional models*, *Phys. Rev. D* **111** (2025) 063063.

[10] **L. Pinchbeck**, C. Balazsa, and E. Thrane, *Model-independent dark matter detection with the cherenkov telescope array observatory*, (2024) arxiv/2412.17172.

[11] K. Grunthal, **R. S. Nathan**, *et al.*, *The MeerKAT pulsar timing array: Maps of the gravitational-wave sky with the 4.5 year data release*, *Mon. Not. R. Ast. Soc.* **536** (2024) 1501.

[12] M. Miles *et al.*, *The MeerKAT Pulsar Timing Array: The first search for gravitational waves with the MeerKAT radio telescope*, *Mon. Not. R. Ast. Soc.* (2024) .

[13] Z.-Q. You *et al.*, *Determination of the birth-mass function of neutron stars from observations*, *Nat. Astro.* **457** (2025) 2397.

[14] **S. R. Goode**, M. Schiworski, D. Brown, E. Thrane, and P. D. Lasky, *You only thermoelastically deform once: Point Absorber Detection in LIGO Test Masses with YOLO*, *Optics Express* **33** (2025) 17601 Featured in Spotlight on Optics.

[15] **T. A. Clarke**, N. Sarin, E. J. Howell, P. D. Lasky, and E. Thrane, *Quantifying the coincidence between gravitational waves and fast radio bursts from neutron star–black hole mergers*, *Phys. Rev. D* **11** (2025) 083023.

[16] **C. Adamcewicz**, P. D. Lasky, E. Thrane, and I. Mandel, *No evidence for a dip in the binary black hole mass spectrum*, *Astrophys. J.* **975** (2024) 253.

[17] **L. Passenger**, E. Thrane, P. D. Lasky, E. Payne, S. Stevenson, and B. Farr, *Are all models wrong? falsifying binary formation models in gravitational-wave astronomy*, Accepted in *Mon. Not. R. Ast. Soc.* (2024) arxiv/2405.09739.

[18] **S. Y. Cheung**, P. D. Lasky, and E. Thrane, *Does spacetime have memories? Searching for gravitational-wave memory in the third LIGO-Virgo-KAGRA gravitational-wave transient catalogue*, *Class. Quantum Grav.* **41** (2024) 115010.

[19] The LVK Collaborations, *Observation of gravitational waves from the coalescence of a $2.5 - 4.5 M_\odot$ compact object and a neutron star*, *Astrophys. J. Lett.* **970** (2024) L34.

[20] **H. Tong** *et al.*, *Transdimensional inference for gravitational-wave astronomy with* `Bilby`, *Astrophys. J. Supp.* **276** (2025) 50.

[21] **V. Di Marco**, A. Zic, R. M. Shannon, and E. Thrane, *Systematic errors in searches for nanohertz gravitational waves*, *Mon. Not. R. Ast. Soc.* **532** (2024) 4026.

[22] **T. A. Clarke**, M. Isi, P. D. Lasky, E. Thrane, *et al.*, *Striking the right tone: towards a self-consistent framework for measuring black hole ringdowns*, *Phys. Rev. D* **109** (2024) 124030.

[23] **L. Pinchbeck**, E. Thrane, and C. Balazs, *GammaBayes: a Bayesian pipeline for dark matter detection with CTA*, *J. Cosmo. R. Ast. Part.* **2024** (2024) 020.

[24] **K. Walker**, **R. Smith**, E. Thrane, and D. J. Reardon, *Precision constraints on the neutron star equation of state with third-generation gravitational-wave observatories*, *Phys. Rev. D* **110** (2024) 043013.

[25] **C. Adamcewicz**, P. D. Lasky, and E. Thrane, *Which black hole is spinning? probing the origin of black-hole spin with gravitational waves*, *Astrophys. J. Lett.* **964** (2024) L6.

[26] J. W. Gardner, L. Sun, S. Borhanian, P. D. Lasky, E. Thrane, D. E. McClelland, and B. J. J. Slagmolen, *Multi-messenger astronomy with a southern-hemisphere gravitational-wave observatory*, *Phys. Rev. D* **108** (2023) 123026.

[27] **C. Adamcewicz**, P. D. Lasky, and E. Thrane, *Evidence for a correlation between binary black hole mass ratio and black-hole spins*, *Astrophys. J.* **958** (2023) 13.

[28] D. J. Reardon *et al.*, *Search for an isotropic gravitational-wave background with the parkes pulsar timing array*, *Astrophys. J. Lett.* **951** (2023) L6.

[29] **V. Di Marco**, A. Zic, M. T. Miles, D. J. Reardon, E. Thrane, and R. M. Shannon, *Toward robust detections of nanohertz gravitational waves*, *Astrophys. J.* **956** (2023) 14 arxiv/2305.04464.

[30] **R. S. Nathan** *et al.*, *Improving pulsar-timing solutions through dynamic pulse fitting*, *Mon. Not. R. Ast. Soc.* **523** (2023) 4405.

[31] B. Allen *et al.*, *The international pulsar timing array checklist for the detection of nanohertz gravitational waves*, (2023) arxiv/2304.04767 ★.

[32] **T. A. Clarke**, L. Chastain, P. D. Lasky, and E. Thrane, *Nuclear physics with gravitational waves from neutron stars disrupted by black holes*, *Astrophys. J. Lett.* **949** (2023) L6.

[33] E. Payne and E. Thrane, *Model exploration in gravitational-wave astronomy with the maximum population likelihood*, *Phys. Rev. Res.* **5** (2023) 023013.

[34] J. Paynter and E. Thrane, *Meet the parents: the progenitor binary for the supermassive black hole candidate in E1821+643*, *Astrophys. J. Lett.* **945** (2023) L18.

[35] **H. Tong**, **S. Galaudage**, and E. Thrane, *The population properties of spinning black holes using Gravitational-wave Transient Catalog 3*, *Phys. Rev. D* **106** (2022) 103019.

[36] **C. Adamcewicz** and E. Thrane, *Do unequal-mass binary black hole systems have larger χ_{eff}? Probing correlations with copulas in gravitational-wave astronomy*, *Mon. Not. R. Ast. Soc.* **517** (2022) .

[37] A. M. Knee, **I. M. Romero-Shaw**, P. D. Lasky, J. McIver, and E. Thrane, *A Rosetta Stone for eccentric gravitational waveform models*, *Astrophys. J.* **936** (2022) 172.

[38] **I. Romero-Shaw**, P. Lasky, and E. Thrane, *Four eccentric mergers increase the evidence that ligo–virgo–kagra's binary black holes form dynamically*, *Astrophys. J.* **940** (2022) 171.

[39] **T. A. Clarke**, **I. M. Romero-Shaw**, P. D. Lasky, and E. Thrane, *The birth mass function of neutron stars revealed by pulsar observations*, *Mon. Not. R. Ast. Soc.* **517** (2022) 3778.

[40] S. Biscoveanu, K. Kremer, and E. Thrane, *Probing the efficiency of tidal synchronization in outspiralling double white dwarf binaries with lisa*, *Astrophys. J.* **949** (2023) 95.

[41] B. Goncharov *et al.*, *Consistency of the PPTA signal with a nanohertz gravitational-wave background*, Astrophys. J. Lett. **932** (2022) L22.

[42] F. Broekgaarden, S. Stevenson, and E. Thrane, *Signatures of mass ratio reversal in gravitational waves from merging binary black holes*, Astrophys. J. **938** (2022) 45.

[43] **A. Makai** Baker, P. D. Lasky, E. Thrane, *et al.*, *GWCloud: a searchable repository for the creation and curation of gravitational-wave inference results*, Astrophys. J. Supp. **266** (2023) 33.

[44] **K. Walker**, D. J. Reardon, E. Thrane, and **R. Smith**, *Orbital dynamics and extreme scattering event properties from long-term scintillation observations of psr j16037202*, Astrophys. J. **933** (2022) 16.

[45] **A. Vajpeyi**, **R. Smith**, and E. Thrane, *Deep follow-up of GW151226: ordinary binary or low-mass-ratio system?*, Astrophys. J. **947** (2023) 10.

[46] **I. M. Romero-Shaw**, E. Thrane, and P. D. Lasky, *When models fail: an introduction to posterior predictive checks and model misspecification in gravitational-wave astronomy*, Pub. Astron. Soc. Aust. **39** (2022) E025 arxiv/2202.05479.

[47] N. Sarin, P. D. Lasky, **F. H. Vivanco**, S. P. Stevenson, D. Chattopadhyay, **R. Smith**, and E. Thrane, *Linking the rates of neutron star binaries and short gamma-ray bursts*, Phys. Rev. D **105** (2022) 083004.

[48] **A. Mangipudi**, E. Thrane, and C. Balazs, *Bayesian WIMP detection with the Cherenkov Telescope Array*, J. Cosmo. R. Ast. Part. **2022** (2022) 010.

[49] V. Kalogera *et al.*, *The Next Generation Global Gravitational Wave Observatory: The Science Book*, (2021) arxiv/2111.06990.

[50] R. Abbott *et al.*, *GWTC-3: Compact Binary Coalescences Observed by LIGO and Virgo During the Second Part of the Third Observing Run*, Phys. Rev. X **13** (2023) 041039.

[51] R. Abbott *et al.*, *The population of merging compact binaries inferred using gravitational waves through GWTC-3*, Phys. Rev. X **13** (2023) 011048.

[52] R. Abbott *et al.*, *Constraints on the cosmic expansion history from GWTC-3*, Astrophys. J. **949** (2023) 76.

[53] **A. Vajpeyi**, E. Thrane, **R. Smith**, B. McKernan, and K. S. Ford, *Measuring the properties of active galactic nuclei disks with gravitational waves*, Astrophys. J. **931** (2022) 82.

[54] P. D. Lasky and E. Thrane, *Did goryachev et al. detect megahertz gravitational waves?*, Phys. Rev. D **104** (2021) 103017.

[55] **S. Galaudage**, C. Talbot, **T. Nagar**, D. Jain, E. Thrane, and I. Mandel, *Building better spin models for merging binary black holes: Evidence for non-spinning and rapidly spinning nearly aligned sub-populations*, Astrophys. J. Lett. **921** (2021) L15.

[56] R. Essick, A. Farah, **S. Galaudage**, C. Talbot, M. Fishbach, E. Thrane, and D. E. Holz, *Don't just leave-one-out: Probing extremal gravitational-wave events with coarse-grained likelihoods*, Astrophys. J. **926** (2022) 34.

[57] **I. M. Romero-Shaw**, P. D. Lasky, and E. Thrane, *Signs of eccentricity in two gravitational-wave signals may indicate a sub-population of dynamically assembled binary black holes*, Astrophys. J. Lett. **921** (2021) L31.

[58] **E. Payne**, L. Sun, K. Kremer, P. D. Lasky, and E. Thrane, *The imprint of superradiance on hierarchical black hole mergers*, Astrophys. J. **931** (2022) 79.

[59] B. Goncharov *et al.*, *On the evidence for a common-spectrum process in the search for the nanohertz gravitational wave background with the Parkes Pulsar Timing Array*, Astrophys. J. Lett. **917** (2021) L19.

[60] **A. Vajpeyi**, **R. Smith**, E. Thrane, *et al.*, *A search for intermediate-mass black holes mergers in the second LIGO–Virgo observing run with the Bayes Coherence Ratio*, Mon. Not. R. Ast. Soc. **516** (2022) 5309.

[61] B. McKernan, K. E. S. Ford, T. Callister, W. M. Farr, R. O'Shaughnessy, **R. Smith**, E. Thrane, and **A. Vajpeyi**, *LIGO–Virgo correlations between mass ratio and effective inspiral spin: testing the active galactic nuclei channel*, Mon. Not. R. Ast. Soc. **514** (2022) 3886.

[62] **R. Willcox**, I. Mandel, E. Thrane, A. Deller, S. Stevenson, and A. Vigna-Gómez, *Constraints on weak supernova kicks from observed pulsar velocities*, Astrophys. J. Lett. **920** (2021) L37.

[63] R. Abbott *et al.*, *Observation of gravitational waves from two neutron starblack hole coalescences*, Astrophys. J. Lett. **915** (2021) L5.

[64] C. Talbot, E. Thrane, S. Biscoveanu, and **R. Smith**, *Inference with finite time series: Observing the gravitational Universe through windows*, Phys. Rev. Res. **3** (2021) 043049.

[65] M. Zevin, **I. M. Romero-Shaw**, K. Kremer, E. Thrane, and P. D. Lasky, *Implications of eccentric observations on binary black hole formation channels*, Astrophys. J. Lett. **921** (2021) L43.

[66] R. Abbott *et al.*, *Constraints on Cosmic Strings Using Data from the Third Advanced LIGO–Virgo Observing Run*, Phys. Rev. Lett. **126** (2021) 241102.

[67] **Z.-Q. You**, G. Ashton, **X.-J. Zhu**, E. Thrane, and Z.-H. Zhu, *Optimized localization for gravitational-waves from merging binaries*, Mon. Not. R. Ast. Soc. **509** (2021) 3957.

[68] **M. Hübner**, P. D. Lasky, and E. Thrane, *Memory remains undetected: Updates from the second LIGO/Virgo gravitational-wave transient catalog*, Phys. Rev. D **104** (2021) 023004.

[69] J. Paynter, R. Webster, and E. Thrane, *Evidence for an intermediate-mass black hole from a gravitationally lensed gamma-ray burst*, Nat. Astron. **5** (2021) 560.

[70] **R. Smith** *et al.*, *Bayesian inference for gravitational waves from binary neutron star mergers in third-generation observatories*, Phys. Rev. Lett. **127** (2021) 081102.

[71] **C. Talbot** and E. Thrane, *Fast, flexible, and accurate evaluation of malmquist bias with machine learning: Preparing for the pending flood of gravitational-wave detections*, Astrophys. J. **927** (2022) 76.

[72] **I. M. Romero-Shaw**, K. Kremer, P. D. Lasky, E. Thrane, and J. Samsing, *Gravitational waves as a probe of globular cluster formation and evolution*, Mon. Not. R. Ast. Soc. **506** (2021) 2362.

[73] C. Kimball, C. Talbot, C. P. Berry, M. Zevin, E. Thrane, *et al.*, *Evidence for hierarchical black hole mergers in the second LIGO–Virgo gravitational-wave catalog*, Astrophys. J. Lett. **915** (2021) L35.

[74] **S. Galaudage**, **C. Adamcewicz**, **X.-J. Zhu**, S. Stevenson, and E. Thrane, *Heavy double neutron stars: birth, mid-life and death*, Astrophys. J. Lett. **909** (2021) L19.

[75] C. D. Blair, Y. Levin, and E. Thrane, *Constraining temperature distribution inside LIGO test masses from frequencies of their vibrational modes*, Phys. Rev. D **103** (2021) 022003.

[76] R. Abbott *et al.*, *GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo During the First Half of the Third Observing Run*, Phys. Rev. X **11** (2021) 021053.

[77] R. Abbott *et al.*, *Population properties of compact objects from the second LIGO-Virgo Gravitational-Wave Transient Catalog, Astrophys. J. Lett.* **913** (2021) L7 Focus Issue: Gravitational-wave Astrophysics from the Second LIGO-Virgo Transient Catalog.

[78] **B. Goncharov** *et al.*, *Identifying and mitigating noise sources in precision pulsar timing data sets, Mon. Not. R. Ast. Soc.* **502** (2020) 478.

[79] J. Calderón Bustillo, P. D. Lasky, and E. Thrane, *Black-hole spectroscopy, the no-hair theorem and GW150914: Kerr vs. Occam, Phys. Rev. D* **103** (2021) 024041.

[80] **E. Payne**, C. Talbot, P. D. Lasky, E. Thrane, and J. S. Kissel, *Gravitational-wave astronomy with a physical calibration model, Phys. Rev. D* **102** (2020) 122004.

[81] **I. M. Romero-Shaw**, P. D. Lasky, E. Thrane, and J. Calderón Bustillo, *GW190521: orbital eccentricity and signatures of dynamical formation in a binary black hole merger signal, Astrophys. J. Lett.* **903** (2020) L5 Norris Family Publication Award.

[82] **S. Biscoveanu**, **C. Talbot**, E. Thrane, and **R. Smith**, *Measuring the primordial gravitational-wave background in the presence of astrophysical foregrounds, Phys. Rev. Lett.* **125** (2020) 241101.

[83] R. Abbott *et al.*, *GW190521: A Binary Black Hole Merger with a Total Mass of* $150M_\odot$, *Phys. Rev. Lett.* **125** (2020) 101102.

[84] R. Abbott *et al.*, *Properties and Astrophysical Implications of the* $150M_\odot$ *Binary Black Hole Merger GW190521, Astrophys. J. Lett.* **900** (2020) L13.

[85] **F. Hernandez Vivanco**, **R. Smith**, E. Thrane, and P. D. Lasky, *A scalable random forest regressor for combining neutron-star equation of state measurements: A case study with GW170817 and GW190425, Mon. Not. R. Ast. Soc.* **499** (2020) 5972.

[86] K. Ackley *et al.*, (OzGrav), *Neutron Star Extreme Matter Observatory: A kilohertz-band gravitational-wave detector in the global network, Pub. Astron. Soc. Aust.* **37** (2020) e047.

[87] R. Abbott *et al.*, (LIGO–Virgo), *GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object, Astrophys. J. Lett.* **896** (2020) L44.

[88] **E. Payne**, S. Banagiri, P. Lasky, and E. Thrane, *Searching for anisotropy in the distribution of binary black hole mergers, Phys. Rev. D* **102** (2020) 102004.

[89] C. Talbot and E. Thrane, *Gravitational-wave astronomy with an uncertain noise power spectral density, Phys. Rev. Res.* **2** (2020) 043298.

[90] G. Ashton and E. Thrane, *The astrophysical odds of GW151216, Mon. Not. R. Ast. Soc.* **498** (2020) 1905.

[91] **I. M. Romero-Shaw**, **C. Talbot**, S. Biscoveanu, *et al.*, *Bayesian inference for compact binary coalescences with BILBY: Validation and application to the first LIGO–Virgo gravitational-wave transient catalogue, Mon. Not. R. Ast. Soc.* **499** (2020) 3295.

[92] C. Kimball, **C. Talbot**, C. P. L. Berry, M. Carney, M. Zevin, E. Thrane, and V. Kalogera, *Black hole genealogy: Identifying hierarchical mergers with gravitational waves, Astrophys. J.* **900** (2020) 177.

[93] **X.-J. Zhu** and E. Thrane, *Toward the unambiguous identification of supermassive binary black holes through Bayesian inference, Astrophys. J.* **900** (2020) 117.

[94] **R. J. E. Smith**, **C. Talbot**, **F. Hernandez Vivanco**, and E. Thrane, *Inferring the population properties of binary black holes from unresolved gravitational waves*, *Mon. Not. R. Ast. Soc.* **496** (2020) 3281.

[95] B. P. Abbott *et al.*, (LIGO–Virgo), *GW190412: Observation of a Binary-Black-Hole Coalescence with Asymmetric Masses*, *Phys. Rev. D* **102** (2020) 043015.

[96] **Z.-Q. You**, **X.-J. Zhu**, G. Ashton, E. Thrane, and Z.-H. Zhu, *Standard-siren cosmology using gravitational waves from binary black holes*, *Astrophys. J.* **908** (2020) 215.

[97] **I. M. Romero-Shaw**, **N. Farrow**, S. Stevenson, E. Thrane, and **X.-J. Zhu**, *On the origin of GW190425*, *Mon. Not. R. Ast. Soc. Lett.* **496** (2020) L64.

[98] B. P. Abbott *et al.*, (LIGO–Virgo), *GW190425: Observation of a Compact Binary Coalescence with Total Mass* $\sim 3.4 M_\odot$, *Astrophys. J. Lett.* **892** (2020) L3.

[99] **S. Galaudage**, **C. Talbot**, and E. Thrane, *Gravitational-wave inference in the catalog era: evolving priors and marginal events*, *Phys. Rev. D* **102** (2019) 083026.

[100] **M. Hübner**, **C. Talbot**, P. D. Lasky, and E. Thrane, *Thanks for the memory: measuring gravitational-wave memory in the first LIGO/Virgo gravitational-wave transient catalog*, *Phys. Rev. D* **101** (2020) 023011.

[101] **A. K. Divakarla**, E. Thrane, P. D. Lasky, and B. F. Whiting, *Memory Effect or Cosmic String? Classifying Gravitational-Wave Bursts with Bayesian Inference*, *Phys. Rev. D* **102** (2020) 023010.

[102] **S. Biscoveanu**, E. Thrane, and S. Vitale, *Constraining short gamma-ray burst jet properties with gravitational waves and gamma rays*, *Astrophys. J.* **893** (2020) 38.

[103] E. Thrane, S. Osłowski, and P. D. Lasky, *Ultra-relativistic astrophysics using multi-messenger observations of double neutron stars with LISA and the SKA*, *Mon. Not. R. Ast. Soc.* **493** (2020) 5408 ★.

[104] **B. Goncharov**, **X.-J. Zhu**, and E. Thrane, *Is there a spectral turnover in the spin noise of millisecond pulsars?*, *Mon. Not. R. Ast. Soc.* **497** (2020) 3264.

[105] G. Ashton, E. Thrane, and **R. J. E. Smith**, *Gravitational wave detection without boot straps: a Bayesian approach*, *Phys. Rev. D* **100** (2019) 123018.

[106] **I. M. Romero-Shaw**, P. D. Lasky, and E. Thrane, *Searching for Eccentricity: Signatures of Dynamical Formation in the First Gravitational-Wave Transient Catalogue of LIGO and Virgo*, *Mon. Not. R. Ast. Soc.* **490** (2019) 5210.

[107] **F. Hernandez Vivanco**, **R. J. E. Smith**, E. Thrane, P. D. Lasky, **C. Talbot**, and V. Raymond, *Measuring the neutron star equation of state with gravitational waves: the first forty binary neutron star mergers*, *Phys. Rev. D* **100** (2019) 103009.

[108] S. Banagiri, M. W. Coughlin, J. Clark, P. D. Lasky, M. A. Bizouard, **C. Talbot**, E. Thrane, and V. Mandic, *Constraining the gravitational-wave afterglow from a binary neutron star coalescence*, *Mon. Not. R. Ast. Soc.* **492** (2020) 4945.

[109] **E. Payne**, **C. Talbot**, and E. Thrane, *Higher order gravitational-wave modes with likelihood reweighting*, *Phys. Rev. D* **100** (2019) 123017.

[110] **C. Talbot**, **R. J. E. Smith**, E. Thrane, and G. B. Poole, *Parallelized Inference for Gravitational-Wave Astronomy*, *Phys. Rev. D* **100** (2019) 043030.

[111] B. P. Abbott *et al.*, (LIGO–Virgo), *Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs*, *Phys. Rev. D* **100** (2019) 062001.

[112] **F. Hernandez Vivanco**, **R. J. E. Smith**, E. Thrane, and P. D. Lasky, *Accelerated detection of the binary neutron star gravitational-wave background*, Phys. Rev. D **100** (2019) 043023.

[113] B. P. Abbott *et al.*, (LIGO–Virgo), *A search for the isotropic stochastic background using data from Advanced LIGO's second observing run*, Phys. Rev. D **100** (2019) 061101(R).

[114] B. S. Sathyaprakash *et al.*, *Astro2020 science white paper: Cosmology and the early universe*, 2019. arxiv/1903.09260.

[115] **N. Farrow**, **X.-J. Zhu**, and E. Thrane, *The mass distribution of galactic double neutron stars*, Astrophys. J. **876** (2019) 18.

[116] B. P. Abbott *et al.*, (LIGO–Virgo), *Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo*, Astrophys. J. Lett. **882** (2019) L24.

[117] B. P. Abbott *et al.*, (LIGO–Virgo), *GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs*, Phys. Rev. X **9** (2019) 031040.

[118] D. Martynov, H. Miao, H. Yang, **F. Hernandez Vivanco**, E. Thrane, **R. J. E. Smith**, P. D. Lasky, W. E. East, R. Adhikari, A. Bauswein, A. Brooks, Y. Chen, T. C. H. Grote, Y. Levin, C. Zhao, and A. Vecchio, *Exploring the sensitivity of gravitational wave detectors to neutron star physics*, Phys. Rev. D **99** (2019) 102004.

[119] G. Ashton, M. Hübner, P. D. Lasky, **C. Talbot**, K. Ackley, **S. Biscoveanu**, Q. Chu, **A. Divarkala**, P. J. Easter, **B. Goncharov**, **F. Hernandez Vivanco**, J. Harms, M. E. Lower, **G. D. Meadors**, D. Melchor, E. Payne, M. D. Pitkin, J. Powell, N. Sarin, **R. J. E. Smith**, and E. Thrane, *Bilby: A user-friendly Bayesian inference library for gravitational-wave astronomy*, Astrophys. J. Supp. **241** (2019) 27.

[120] E. Thrane and **C. Talbot**, *An introduction to Bayesian inference in gravitational-wave astronomy: parameter estimation, model selection, and hierarchical models*, Pub. Astron. Soc. Aust. **36** (2019) E010 arxiv/1809.02293 ★.

[121] **B. Goncharov** and E. Thrane, *An all-sky radiometer for narrowband gravitational waves using folded data*, Phys. Rev. D **98** (2018) 064018.

[122] **C. Talbot**, E. Thrane, P. D. Lasky, and **F. Lin**, *Gravitational-wave memory: waveforms and phenomenology*, Phys. Rev. D **98** (2018) 064031 Featured in Kaleidoscope.

[123] **M. E. Lower**, E. Thrane, P. D. Lasky, and **R. J. E. Smith**, *Measuring eccentricity in binary black hole inspirals with gravitational waves*, Phys. Rev. D **98** (2018) 083028.

[124] **X.-J. Zhu**, W. Cui, and E. Thrane, *The minimum and maximum gravitational-wave background from supermassive binary black holes*, Mon. Not. R. Ast. Soc. **482** (2018) 2588.

[125] P. B. Covas *et al.*, *Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO*, Phys. Rev. D **97** (2018) 082002.

[126] M. W. Coughlin *et al.*, *Measurement and subtraction of Schumann resonances at gravitational-wave interferometers*, Phys. Rev. D **97** (2018) 102007.

[127] **R. J. E. Smith** and E. Thrane, *The optimal search for an astrophysical gravitational-wave background*, Phys. Rev. X **8** (2018) 021019 Featured in Physics.

[128] B. P. Abbott *et al.*, (LIGO–Virgo), *Search for tensor, vector, and scalar polarizations in the stochastic gravitational-wave background*, Phys. Rev. Lett. **120** (2018) 201102 Editors Suggestion.

[129] B. P. Abbott *et al.*, (LIGO–Virgo), *All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run, Class. Quantum Grav.* **35** (2018) 065009.

[130] **C. Talbot** and E. Thrane, *Measuring the binary black hole mass spectrum with an astrophysically motivated parameterization, Astrophys. J.* **856** (2018) 173.

[131] **X.-J. Zhu**, E. Thrane, S. Osłowski, Y. Levin, and P. D. Lasky, *Inferring the population properties of binary neutron stars with gravitational-wave measurements of spin, Phys. Rev. D* **98** (2018) 043002.

[132] B. P. Abbott *et al.*, (LIGO–Virgo), *Search for post-merger gravitational waves from the remnant of the binary neutron star merger GW170817, Astrophys. J. Lett.* **851** (2017) L16.

[133] B. P. Abbott *et al.*, (LIGO–Virgo), *GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral, Phys. Rev. Lett.* **119** (2017) 161101.

[134] B. P. Abbott *et al.*, (LIGO–Virgo), *GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences, Phys. Rev. Lett.* **120** (2018) 091101 Editor's Suggestion.

[135] B. P. Abbott *et al.*, (LIGO–Virgo), *Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A, Astrophys. J. Lett.* **848** (2017) L13.

[136] B. P. Abbott *et al.*, (LIGO–Virgo), *A gravitational-wave standard siren measurement of the Hubble constant, Nature* **551** (2017) 85.

[137] E. Thrane, P. D. Lasky, and Y. Levin, *Challenges testing the no-hair theorem with gravitational waves, Phys. Rev. D* **96** (2017) 102004 ★.

[138] **C. Talbot** and E. Thrane, *Determining the population properties of spinning black holes, Phys. Rev. D* **96** (2017) 023012.

[139] T. Callister, A. S. Biscoveanu, N. Christensen, M. Isi, A. Matas, O. Minazzoli, T. Regimbau, M. Sakellariadou, J. Tasson, and E. Thrane, *Tests of general relativity with the stochastic gravitational-wave background, Phys. Rev. X* **7** (2017) 041058.

[140] B. P. Abbott *et al.*, (LIGO–Virgo), *Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model, Phys. Rev. D* **95** (2017) 122003.

[141] E. Thrane, R. P. Anderson, Y. Levin, and L. D. Turner, *Toward terrestrial detection of millihertz gravitational waves with magnetically assisted torsion pendulums, Class. Quantum Grav.* **34** (2017) 105002 ★.

[142] **L. O. McNeill**, E. Thrane, and P. D. Lasky, *Detecting gravitational wave memory without parent signals, Phys. Rev. Lett.* **118** (2017) 181103.

[143] C. Biwer *et al.*, *Validating gravitational-wave detections: The Advanced LIGO hardware injection system, Phys. Rev. D* **95** (2017) 062002.

[144] B. P. Abbott *et al.*, *Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run, Phys. Rev. Lett.* **118** (2017) 121101.

[145] B. P. Abbott *et al.*, (LIGO–Virgo), *Directional limits on persistent gravitational waves from Advanced LIGO's first observing run, Phys. Rev. Lett.* **118** (2017) 121102.

[146] B. P. Abbott *et al.*, (LIGO–Virgo), *GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence, Phys. Rev. Lett.* **116** (2016) 241103.

[147] M. W. Coughlin, N. L. Christensen, R. D. Rosa, I. Fiori, M. Golkowski, M. Guidry, J. Harms, J. Kubisz, A. Kulak, J. Mlynarczyk, F. Paoletti, and E. Thrane, *Subtraction of correlated noise*

in global networks of gravitational-wave interferometers, *Class. Quantum Grav.* **33** (2016) 224003.

[148] P. D. Lasky, E. Thrane, Y. Levin, J. Blackman, and Y. Chen, *Detecting gravitational-wave memory with LIGO: implications of GW150914*, *Phys. Rev. Lett.* **117** (2016) 061102 Editor's Suggestion.

[149] T. Callister, **L. Sammut**, **S. Qiu**, I. Mandel, and E. Thrane, *The limits of astrophysics with gravitational wave backgrounds*, *Phys. Rev. X* **7** (2016) 031018.

[150] B. P. Abbott *et al.*, (LIGO–Virgo), *Observation of gravitational waves from a binary black hole merger*, *Phys. Rev. Lett.* **116** (2016) 061102.

[151] B. P. Abbott *et al.*, (LIGO–Virgo), *GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes*, *Phys. Rev. Lett.* **116** (2016) 131102 Editor's Suggestion.

[152] B. P. Abbott *et al.*, (LIGO–Virgo), *Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914*, *Class. Quantum Grav.* **33** (2016) 134001.

[153] B. P. Abbott *et al.*, (LIGO–Virgo), *All-sky search for long-duration gravitational wave transients with initial LIGO*, *Phys. Rev. D* **93** (2016) 042005.

[154] P. A. Rosado, P. D. Lasky, E. Thrane, X.-J. Zhu, I. Mandel, and A. Sesana, *The most distant observable massive objects*, *Phys. Rev. Lett.* **116** (2016) 101102.

[155] P. D. Lasky *et al.*, *Gravitational-wave cosmology across 29 decades in frequency*, *Phys. Rev. X* **6** (2016) 011035 Highlighted Article.

[156] E. Thrane and M. Coughlin, *Detecting gravitational-wave transients at five sigma: a hierarchical approach*, *Phys. Rev. Lett.* **115** (2015) 181102 ★.

[157] D. Meacher, M. Coughlin, S. Morris, T. Regimbau, N. Christensen, S. Kandhasasmy, V. Mandic, J. D. Romano, and E. Thrane, *A Mock Data and Science Challenge for Detecting an Astrophysical Stochastic Gravitational-Wave Background with Advanced LIGO and Advanced Virgo*, *Phys. Rev. D* **92** (2015) 063002.

[158] C. Messenger *et al.*, *Gravitational waves from Sco X-1: A comparison of search methods and prospects for detection with advanced detectors*, *Phys. Rev. D* **92** (2015) 023006.

[159] E. Thrane, S. Mitra, N. Christensen, V. Mandic, and A. Ain, *All-sky, narrowband, gravitational-wave radiometry with folded data*, *Phys. Rev. D* **91** (2015) 124012 ★.

[160] E. Thrane, V. Mandic, and N. Christensen, *Detecting very long-lived gravitational-wave transients lasting hours to weeks*, *Phys. Rev. D* **91** (2015) 104021 ★.

[161] M. Coughlin, P. Meyers, E. Thrane, J. Luo, and N. Christensen, *The detectability of eccentric compact binary coalescences with advanced gravitational-wave detectors*, *Phys. Rev. D* **91** (2015) 063004.

[162] J. Aasi *et al.*, (LIGO–Virgo), *A directed search for gravitational waves from Scorpius X-1 with initial LIGO*, *Phys. Rev. D* **91** (2015) 062008.

[163] J. Aasi *et al.*, (LIGO–Virgo), *Searching for stochastic gravitational waves using data from the two co-located LIGO Hanford detectors*, *Phys. Rev. D* **91** (2014) 022003 Featured in Kaleidoscope.

[164] J. T. Giblin Jr. and E. Thrane, *Estimates of maximum energy density of cosmological gravitational-wave backgrounds*, *Phys. Rev. D* **90** (2014) 107502.

[165] M. G. Aartsen *et al.*, (LIGO/Virgo/IceCube), *Multimessenger search for sources of gravitational waves and high-energy neutrinos: Initial results for LIGO-Virgo and IceCube*, *Phys. Rev. D* **90** (2014) 102002.

[166] E. Thrane, N. Christensen, R. M. S. Schofield, and A. Effler, *Correlated noise in networks of gravitational-wave detectors: subtraction and mitigation*, *Phys. Rev. D* **90** (2014) 023013 ★.

[167] M. Coughlin, E. Thrane, and N. Christensen, *Detecting compact binary coalescences with seedless clustering*, *Phys. Rev. D* **90** (2014) 083005.

[168] J. Aasi *et al.*, (LIGO–Virgo), *Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009-2010 LIGO and Virgo Data*, *Phys. Rev. Lett.* **113** (2014) 231101.

[169] M. Coughlin, N. Christensen, J. Gair, S. Kandhasamy, and E. Thrane, *Method for estimation of gravitational-wave transient model parameters in frequency-time maps*, *Class. Quantum Grav.* **31** (2014) 165012.

[170] D. Talukder, E. Thrane, S. Bose, and T. Regimbau, *Measuring neutron-star ellipticity with measurements of the stochastic gravitational-wave background*, *Phys. Rev. D* **89** (2014) 123008.

[171] D. Meacher, E. Thrane, and T. Regimbau, *Statistical properties of astrophysical gravitational-wave backgrounds*, *Phys. Rev. D* **89** (2014) 084063.

[172] E. Thrane and M. Coughlin, *Seedless clustering in all-sky searches for gravitational-wave transients*, *Phys. Rev. D* **89** (2014) 063012 ★.

[173] J. T. Whelan, E. L. Robinson, J. D. Romano, and E. Thrane, *Treatment of Calibration Uncertainty in Multi-Baseline Cross-Correlation Searches for Gravitational Waves*, *JPCS* **484** (2014) 012027.

[174] E. Thrane and J. D. Romano, *Sensitivity curves for searches for gravitational-wave backgrounds*, *Phys. Rev. D* **88** (2013) 124032 ★.

[175] J. Aasi *et al.*, (LIGO–Virgo), *Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts*, *Phys. Rev. D* **88** (2013) 122004 ★.

[176] E. Thrane and M. Coughlin, *Searching for gravitational-wave transients with a qualitative signal model: seedless clustering strategies*, *Phys. Rev. D* **88** (2013) 083010 ★.

[177] E. Thrane, N. Christensen, and R. M. S. Schofield, *Correlated magnetic noise in global networks of gravitational-wave interferometers: observations and implications*, *Phys. Rev. D* **87** (2013) 123009 ★.

[178] E. Thrane, *Measuring the non-gaussian stochastic gravitational-wave background: a method for realistic interferometer data*, *Phys. Rev. D* **87** (2013) 043009 ★.

[179] V. Mandic, E. Thrane, S. Giampanis, and T. Regimbau, *Parameter estimation in searches for the stochastic gravitational-wave background*, *Phys. Rev. Lett.* **109** (2012) 171102.

[180] T. Piro and E. Thrane, *Gravitational waves from fallback accretion onto neutron stars*, *Astrophys. J.* **761** (2012) 63.

[181] J. Abadie *et al.*, (LIGO–Virgo), *Search for gravitational waves from low mass compact binary coalescence in LIGO's sixth science run and Virgo's science runs 2 and 3*, *Phys. Rev. D* **85** (2012) 082002.

[182] B. P. Abbott, (LIGO–Virgo), *Directional limits on gravitational waves using LIGO S5 science data*, *Phys. Rev. Lett.* **107** (2011) 271102 ★.

[183] J. Abadie *et al.*, (LIGO–Virgo), *Upper limits on a stochastic gravitational-wave background using LIGO and Virgo interferometers at 600-1000 Hz*, *Phys. Rev. D* **85** (2012) 122001.

[184] T. Prestegard, E. Thrane, N. L. Christensen, M. W. Coughlin, B. Hubbert, S. Kandhasamy, E. MacAyeal, and V. Mandic, *Identification of noise artifacts in searches for long-duration gravitational-wave transients*, Class. Quantum Grav. **29** (2012) 095018.

[185] M. Coughlin for the LIGO Scientific and the Virgo Collaborations, *Identification of long-duration noise transients in LIGO and Virgo*, Class. Quantum Grav. **28** (2011) 235008.

[186] E. Thrane *et al.*, *Long gravitational-wave transients and associated detection strategies for a network of terrestrial interferometers*, Phys. Rev. D **83** (2011) 083004 ★.

[187] E. Thrane *et al.*, *Probing the anisotropies of a stochastic gravitational-wave background using a network of ground-based laser interferometers*, Phys. Rev. D **80** (2009) 122002 ★.

[188] E. Thrane *et al.*, (Super-Kamiokande), *Search for astrophysical neutrino point sources at Super-Kamiokande*, Astrophys. J. **704** (2009) 503 ★.

[189] E. Thrane *et al.*, (Super-Kamiokande), *Search for neutrinos from GRB 080319B at Super-Kamiokande*, Astrophys. J. **697** (2009) 730 ★.

[190] E. Thrane *et al.*, *Photoinjector production of a flat electron beam*, in *Proceedings of the XXI International Linac Conference, Gyeongju, Korea*, p. 308, Pohang Accelerator Laboratory, Pohang, Korea. 2002 ★.

TELESCOPE PROPOSALS

MeerKAT (PI: R. Shannon)   588 hours over two years
The MeerKAT Pulsar Timing Array   *2025–2027*

RECENT TALKS

Australian National University RSAA   June 2024
Results from the 4.5 year MeerKAT Pulsar Timing Array Data Release   *Mt Stromlo, ACT*

IPTA Meeting   June 2024
Mapping the nanohertz gravitational-wave sky   *Sexton, Italy*

GWADW   May 2024
Astrophysics in the Era of neXt-Generation Observatories   *Hamilton Island, QLD*

IAU-IAA Astrostats Seminar   August 2022
Investigating black hole spin with gravitational waves   *Online*

Frontiers of Fundamental Physics   May 2022
Merging compact binaries inferred using gravitational waves through GWTC-3   *Istanbul, Turkey*

Association of Asia Pacific Physical Societies   October 2021
Building better spin models for merging binary black holes   *Seoul, South Korea*

University of Melbourne   September 2021
Building better models for populations of merging binary black holes   *Melbourne, VIC*

University of Michigan   March 2021
Population Properties of Compact Objects from GWTC-2   *Ann Arbor, MI*

University of New South Wales   December 2020
Compact objects in the Second LIGO-Virgo Gravitational-wave Transient Catalog   *Sydney, NSW*

University of Canterbury   December 2020
Population Properties from the Second LIGO-Virgo Catalog   *Canterbury, NZ*

LIGO-Virgo Webinar   November 2020
Population Properties of Compact Objects from the Second LIGO-Virgo Catalog   *Online*

University of Auckland   October 2020
The population properties of binary black holes with Bayesian hierarchical modelling   *Auckland, NZ*

CSIRO Astronomy & Space Science   July 2020
Dispatches from the black hole mass gaps: recent results from LIGO-Virgo   *Marsfield, NSW*

LEADERSHIP & SERVICE

Referee

Astronomy & Astrophysics, Astrophysical Journal, Astrophysical Journal Letters, Journal for Cosmology and Astroparticle Physics, Living Reviews in Relativity, Monthly Notices of the Royal Astronomical Society, Nature Astronomy, Nature Communications, Physical Review Applied, Physical Review D, Physical Review Letters

Reviewer

· Australian Research Council, Swiss National Science Foundation, Royal Society Te Apārangi (New Zealand), US National Science Foundation

Advisory

· NCA Time Domain and Multi-Messenger Astrophysics Working Group Chair (2024), AAL Project Oversight Committee (2024–2025), ASA Time-Domain Astronomy Steering Committee, IPTA Detection Committee (2021–2023), NCA MTR CapOp (2019), AAL Science Advisory (2018–2020)

LIGO Scientific Collaboration

· Co-Chair of Stochastic Data-Analysis Group (2011–2017), Review Chair for Burst Group (2017–2020), Editorial Board (2019–)

Organising Committees

· ASA SOC 2019; GWPAW SOC (2018, 2021, 2022); AGCGRG SOC 2021; GWPAW LOC 2022

Diversity

· LVC Ally (2018–), OzGrav Diversity Committee (2017–)

MEDIA

My group's work has been featured in a number of publications including *The Independent*, *The Sydney Morning Herald*, *The Australian*, CNET, and *The Guardian*. I have discussed my research on radio and television programs including *The 7:30 Report*, *Catalyst*, 3AW radio.

OUTREACH

I regularly give public lectures on black holes and gravitational waves. Recent talk venues include MIT Lincoln Lab, the AIP Nobel Prize Public Lecture, and an Instant Expert event organised by New Scientist.

TEACHING & EDUCATION

Monash University	2015–

· PHS1011 (First-Year Physics): Unit Coordinator
· PHS1022 (First-Year Physics): Unit Coordinator
· PHS4200 (General Relativity)
· PHS5020 (Advanced General Relativity)

Administrative roles

· Postgraduate Research Coordinator	2022–
· Education Head	2015–2016

Supervision

· Research faculty

• Dr Rory Smith	2017–2024

· Postdocs

• Dr Gosia Curyło	2024–
• Dr Sharan Banagiri	2024–
• Dr Nir Guttman	2023–
• Dr Simon Goode	2023–
• Dr Grant Meadors	2018–2019
• Dr Xingjiang Zhu	2017–2021
• Dr Letizia Sammut	2015–2017
• Dr Pablo Rosado	2016

· Postgraduate Students

• Andrew Atta	2024–
• Lachlan Passenger	2024–
• Liam Pinchbeck	2023–
• Shun Cheung	2023–
• Valentina DiMarco	2022–
• Hui Tong	2022–
• Christian Adamcewicz	2022–
• Teagan Clarke	2022–
• Rowina Nathan	2022–
• Avi Vajpeyi	2020–2023
• Shanika Galaudage	2019–2023
• Isobel Romero-Shaw	2018–2021

– Winner: Robert Street Doctoral Prize

• Moritz Hübner	2018–2021
• Francisco Hernandez	2017–2021
• Colm Talbot	2016–2020

– Winner: Vice-Chancellors Commendation for Thesis Excellence
– Winner: Charlene Heisler Prize for the most outstanding astronomy PhD thesis in Australia
– Winner: Robert Street Doctoral Prize

- Boris Goncharov 2016–2020
- Sylvia Biscoveanu (Fulbright) 2017–2018

· Honours/MSc Students
- Makai Baker 2024
- Chan Anand 2024
- Michelle Zhang 2024
- Lachlan Passenger 2023
- Nikhil Kannachel 2023
- Jiaxuan Zhou 2022
- Macauley Angus 2022
- Tushar Nagar 2021
- Kris Walker 2021
- Abhi Mangipudi 2020–2021
- Ethan Payne 2020
  - Winner: Australian Institute of Physics Laby Medal for the best Honours or Masters thesis from an Australian University
- Nick Farrow 2019
- Marcus Lower 2017
- Chris Whittle 2016
- Lucy McNeill 2016

· Undergraduate Students
- Emma Sapkin 2024
- Ella Garth 2024
- Jordan Klein 2022
- Carter Hills 2020
- Atul Divakarla (IREU from Florida) 2018
- Alex Kemp 2017
- William Campbell 2015
- Shi Qiu 2015
- Tyson Jones 2015