

Stephen Taylor | Curriculum Vitae

California Institute of Technology, 1200 E. California Blvd – Pasadena, CA 91125

+1 (626) 689-5832 • Stephen.R.Taylor@jpl.nasa.gov

[stevertaylor.github.io](https://github.com/stevertaylor) • [stevertaylor](https://twitter.com/stevertaylor) • [in stephen-taylor](https://www.linkedin.com/in/stephen-taylor)

Education

Institute of Astronomy, University of Cambridge

Cambridge, UK

PhD (Astronomy)

2010–2014

Advisor: Dr. Jonathan R. Gair; Thesis Title: *Exploring The Cosmos With Gravitational Waves*

University of Oxford

Oxford, UK

MPhys (1st Class), [ranked 1st in Jesus College, 4th across University]

2006–2010

Advisor: Prof. Steven Rawlings; Thesis Title: *The Cosmic Evolution Of Black-hole Accretion*

Professional Experience

CALIFORNIA INSTITUTE OF TECHNOLOGY

Pasadena, USA

Caltech Postdoctoral Scholar (TAPIR group)

2016–Present

Visiting scholar (TAPIR group)

2014–2016

NASA JET PROPULSION LABORATORY

Pasadena, USA

NASA Postdoctoral Fellow

2014–2016

INSTITUTE OF ASTRONOMY, UNIVERSITY OF CAMBRIDGE

Cambridge, UK

PhD candidate

2010–2014

Grants & Funding

Jun 2016: “New Directions and New Opportunities for NANOGrav Astrophysics”: Awarded \$11k by the NANOGrav Physics Frontier Center to host a collaboration “sprint week” in March 2017.

Honors & Awards

2015: International Pulsar Timing Array (IPTA) Steering Committee Prize — “Honorable Mention”

2015: Gravitational Wave International Committee (GWIC) Thesis Prize — “Honorable Mention”

2014: NASA Postdoctoral Fellowship (JPL)

2013–2014: Royal Astronomical Society Travel Awards — [total exceeds £1k]

2012–2014: Christ’s College (Cambridge) Travel Grants [various; total exceeds £1k]

2010: Science and Technology Facilities Council (STFC) — full PhD studentship award

2008: Examiner’s Prize, Oxford Physics Speaking Competition

2007: Oxford Physics department prize for laboratory work

2007–2010: Undergraduate Scholar of Jesus College, Oxford

2006–2010: Regularly awarded Oxford undergraduate departmental and college examination prizes

Teaching Experience

Jun–Aug 2016: Co-supervisor of Caltech summer undergraduate student (Maya Fuller)

May 2016: Guest Lecturer for Caltech Ph237 class “Gravitational Waves”

Mar 2016: Co-organizer of student workshop at NANOGrav Spring meeting

Sep 2015: Lecturer for NANOGrav detection-group workshop at Caltech

Jun 2015: Lecturer at “CSI PTA” Aspen summer workshop

2011–2013: Supervisor for Cambridge Part II undergraduate students in RELATIVITY

2011: Prepared computing coursework for Cambridge Part II undergraduate students

Professional Service

Reviewer for international journals

Monthly Notices of the Royal Astronomical Society (MNRAS), Physical Review D (PRD)

Conference and seminar organization

Oct 2016: Chair of SOC for NANOGrav Fall meeting at University of Illinois Urbana-Champaign

Mar 2016: SOC and LOC member for NANOGrav Spring meeting at Caltech

Mar 2016: Co-organizer of NANOGrav student workshop at Caltech

2015–2016: Caltech TAPIR and LIGO postdoctoral lunch seminar series

Mar 2014: SOC and LOC member for British Gravity meeting (BritGrav) at Cambridge, UK

Professional affiliations

North American Nanohertz Observatory for Gravitational-waves (NANOGrav) [Full member] • European Pulsar Timing Array (EPTA) [Member] • International Pulsar Timing Array (IPTA) [Member] • American Physical Society (DGRAV) [Member] • American Astronomical Society [Member] • Royal Astronomical Society [Fellow]

Outreach & Media Engagement

Outreach

2016: Featured gravitational-wave expert at NASA's "Ticket to Explore JPL" event

2013: Interactive presentation at Cambridge's Institute of Astronomy Open Day

2012–2014: Presentation to prospective students (Institute of Astronomy graduate interviews)

2012: Outreach talk at Institute of Astronomy public-observing evening: "The Space Race"

2011: Interactive presentation at Cambridge's Institute of Astronomy Open Day

Press releases

Feb 2016: Lead-author: "*Pulsar Web Could Detect Low-Frequency Gravitational Waves*"

Apr 2016: Collaboration: "*Gravitational Wave Search Provides Insights into Galaxy Evolution and Mergers*"

Publications

- 22 peer-reviewed publications (of which 8 are first-author) with 317 citations, h-index 10.

- Metrics available at <https://scholar.google.com/citations?user=iN2djBMAAAAJ&hl=en>.

- 5 key publications are indicated below, with most recent first.

1: **S. R. Taylor**, M. Vallisneri, J. A. Ellis, C. M. F. Mingarelli, T. J. W. Lazio, and R. van Haasteren. "Are We There Yet? Time to Detection of Nanohertz Gravitational Waves Based on Pulsar-timing Array Limits". *Astrophys. J. Lett*, 819:L6 (2016). [8 citations]

2: L. Lentati, **S. R. Taylor**, [and 34 others]. "European Pulsar Timing Array limits on an isotropic stochastic gravitational-wave background". *MNRAS*, 453:2576–2598 (2015). [56 citations]

3: **S. R. Taylor**, C. M. F. Mingarelli, J. R. Gair, [and 32 others]. "Limits on Anisotropy in the Nanohertz Stochastic Gravitational Wave Background". *Phys.Rev. Lett*, 115(4):041101 (2015). [14 citations]

4: **S. R. Taylor** and J. R. Gair. "Searching for anisotropic gravitational-wave backgrounds using pulsar timing arrays". *Phys. Rev. D*, 88(8):084001 (2013). [31 citations]

5: **S. R. Taylor**, J. R. Gair, and I. Mandel. "Cosmology using advanced gravitational-wave detectors alone". *Phys. Rev. D*, 85(2):023535 (2012). [34 citations]

Presentations

- 29 oral presentations (of which 10 were invited), with 4 conference leadership roles.

- Recent presentations are available to view at <https://speakerdeck.com/stevertaylor>.

References

Available upon request.