Stephen Taylor | Curriculum Vitae

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Education

Institute of Astronomy, University of Cambridge — **Cambridge, UK**
PhD (Astronomy) — *2010–2014*

University of Oxford — **Oxford, UK**
MPhys, First Class — *2006–2010*
Graduated 4^{th} in University

Doctoral Thesis

Title: *Exploring the cosmos with gravitational waves*

Supervisor: Dr. Jonathan R. Gair

Description:

Professional experience

NASA Jet Propulsion Laboratory — **Pasadena**
NASA Postdoctoral Fellow — *2014–Present*

California Institute of Technology — **Pasadena**
Visting scholar (TAPIR group) — *2014–Present*

Awards

2015: International Pulsar Timing Array (IPTA) Steering Committee Prize — "Honourable Mention"

2015: Gravitational Wave International Committee (GWIC) Thesis Prize — "Honourable Mention"

2014: NASA Postdoctoral Fellowship (JPL)

2010: Science and Technology Facilities Council (STFC) PhD Studentship at IoA Cambridge

2007–2010: Undergraduate Scholar of Jesus College, Oxford

2008: Examiner's Prize, Oxford Physics Speaking Competition

2007: Oxford Physics department prize for laboratory work

2006–2010: Various Oxford undergraduate departmental and college examination prizes

Teaching experience

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

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

2011: Updated Cambridge Part II undergraduate computing projects from C to Matlab

Computer skills

OS: Linux/Unix, Windows

Programming: C/C++, PYTHON

Typography: LaTeX, Microsoft Office, Pages, OpenOffice

Scientific: Mathematica, Matlab, PYTHON

GPU Programming: CUDA C, PyCUDA

Outreach

2013: Presentation at the 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

2011: Presentation at the Institute of Astronomy Open Day

Professional affiliations

American Physical Society: Member

APS DGRAV: Member

American Astronomical Society: Member

Royal Astronomical Society: Fellow

North American Nanohertz Observatory for Gravitational waves (NANOGrav): Full member

European Pulsar Timing Array (EPTA): Member

International Pulsar Timing Array (IPTA): Member

Recent presentations

Invited talks

Jun 2016: *Gravitational-wave data-analysis techniques for pulsar-timing arrays*, IPTA conference, Stellenbosch, South Africa

Apr 2016: *Sources of nanohertz gravitational-waves for pulsar-timing array searches*, NANOGrav student workshop, California Institute of Technology, Pasadena CA, USA

Contributed talks

May 2016: *Carrying the physics of supermassive black-hole binary evolution into pulsar-timing array searches*, EPTA meeting, Bielefeld, Germany

Apr 2016: *Are we there yet? Time to detection of nanohertz gravitational waves*, American Physical Society meeting, Salt Lake City UT, USA

Mar 2016: *Carrying the physics of supermassive black-hole binary evolution into pulsar-timing array searches*, NANOGrav meeting, California Institute of Technology, Pasadena CA, USA

Oct 2015: *Are we there yet? Time to detection of nanohertz gravitational waves*, NANOGrav meeting, McGill University, Montreal, Canada

Jun 2015: *Eccentric supermassive black-hole binary signals in pulsar-timing data*, European Pulsar Timing Array meeting, Bonn, Germany

Apr 2015: *Eccentric supermassive black-hole binary signals in pulsar-timing data*, American Physical Society meeting, Baltimore MD, USA

Feb 2015: *Eccentric supermassive black-hole binary signals in pulsar-timing data*, NANOGrav meeting, Arecibo, Puerto Rico

Jan 2015: *Exploring the cosmos with gravitational waves*, American Astronomical Society meeting, Seattle WA, USA

Nov 2014: *EPTA constraints on gravitational-wave anisotropy*, European Pulsar Timing Array meeting, Cambridge, UK

Jun 2014: *EPTA and IPTA searches for gravitational-wave background anisotropy*, International Pulsar Timing Array meeting, Banff, Canada

May 2014: *EPTA limits on gravitational-wave anisotropy*, European Pulsar Timing Array meeting, Astron, Netherlands

Jun 2014: *EPTA and IPTA searches for gravitational-wave background anisotropy*, International Pulsar Timing Array meeting, Banff, Canada

Oct 2013: *The pulsar-term in PTA continuous-wave searches: a blessing and a curse*, European Pulsar Timing Array meeting, Pula, Sardinia

Jul 2013: *Probing anisotropy of the GW background with pulsar timing arrays*, 20th International Conference on General Relativity and Gravitation and 10th Amaldi Conference on Gravitational Waves, Warsaw

Jun 2013: *The first PTA search pipeline for anisotropy in the GW background*, International Pulsar Timing Array meeting, Krabi, Thailand

Apr 2013: *Searching For Anisotropic Gravitational-wave Backgrounds Using Pulsar Timing Arrays*, European Pulsar Timing Array meeting, l'Observatoire de Paris, Paris

Nov 2012: *Weighing the evidence for a gravitational-wave background*, European Pulsar Timing Array meeting, Albert Einstein Institute (AEI), Potsdam

Feb 2012: *Hubble without the Hubble: Cosmology using advanced gravitational-wave detectors alone*, Gravitational-Wave Meeting, Institut de Ciències de l'Espai, Barcelona

Seminars

Dec 2015: *Prospects for near future detection and astrophysical inference with PTAs*, Gravitational-wave group seminar, University of Birmingham, UK

Dec 2015: *Prospects for near future detection and astrophysical inference with PTAs*, Statistics group seminar (School of Mathematics), University of Edinburgh, UK

Dec 2015: *Prospects for near future detection and astrophysical inference with PTAs*, CaJAGWR seminar, California Institute of Technology

May 2013: *Searching For Anisotropic Gravitational-wave Backgrounds Using Pulsar Timing Arrays*, Albert Einstein Institute (AEI), Hanover

Feb 2013: *Weighing the evidence for a gravitational-wave background, Institute of Astronomy seminar*, University of Cambridge

Dec 2012: *Weighing the evidence for a gravitational-Wave background*, University of Birmingham

Jun 2012: *Milestones in Spacetime: Double Neutron-Star Binaries as Gravitational-Wave Standard Sirens*, Institute of Astronomy seminar, University of Cambridge

Posters

Aug 2015: *Galactic environment effects on gravitational wave signals in pulsar timing arrays*, Postdoc Research Day, NASA Jet Propulsion Laboratory

Aug 2012: *Cosmology without EM counterparts: Standard sirens in the advanced era and beyond*, Rattle and Shine, KITP Santa Barbara

Dec 2011: *Cosmology using advanced gravitational-wave detectors alone*, Graduate Student Conference 2011, Cavendish Laboratory, University of Cambridge

Publications