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Personal Statement

I am a lecturer and Royal Society University Research Fellow, a cosmologist and an astrostatistician: I generate robust conclusions on the fundamental physics of the Universe by applying sophisticated Bayesian and likelihood-free inference techniques to large, modern datasets. I have set numerous definitive constraints on early-Universe physics using cosmic microwave background (CMB) data, including the first observational constraints on eternal inflation, the first full-sky constraints on topological defects called textures, and the definitive limits on the Universe's anisotropy and non-trivial topology. I have influenced the design of multiple next-generation CMB experiments: my public forecasting code, CMB4CAST, has been used by the CMB-S4, CORE, EBEX-IDS, LiteBIRD, Simons Array and Simons Observatory collaborations. In recent years, I have focused on identifying the cause of the tension between estimates of the Hubble Constant from the local Universe and the CMB using upcoming multi-messenger datasets.

Employment

2020–: Lecturer, University College London (UCL)

2019–2024: Royal Society University Research Fellow, UCL

2016–2019: Flatiron Research Fellow, Center for Computational Astrophysics

2013–2016: Postdoctoral Researcher, Imperial College London

2012–2013: Postdoctoral Researcher, UCL

2006–2009: Investment Systems Developer, Carbon Capital Ltd

2004–2006: Web Developer, Qube Software Ltd

Education

2009–2012: Department of Physics and Astronomy, UCL

PhD (Astrophysics): *"Novel Algorithms for Early-Universe Cosmology"*, awarded 28 December 2012, supervised by Prof. Hiranya Peiris

2000–2004: Gonville and Caius College, University of Cambridge

MSci Natural Sciences (Astrophysics): first class degree

BA Hons Natural Sciences (Astrophysics): first class degree

Grants and Awards

2019: Royal Society **University Research Fellowship** (five years' independent research funding, two years' PhD funding matched by department [£674K])

2019: UK Science & Technology Facilities Council **Ernest Rutherford Fellowship** (five years' independent research funding [£634K], declined); University of Portsmouth **Dennis Sciama Postdoctoral Research Fellowship** (three years' independent research funding, declined)

2018: Member of Planck team awarded **Gruber Cosmology Prize** for "observational discoveries leading to fundamental advances in our understanding of the Universe"

2018: Member of Planck team awarded Royal Astronomical Society **Group Achievement Award** for "outstanding achievement by large consortia in astronomy"

2016: Flatiron Institute **Research Fellowship** (three years' independent research funding [$465K])

2013: Lagrange Institute **Postdoctoral Fellowship**, Max Planck Institute for Astrophysics **Postdoctoral Fellowship**, Perimeter Institute **Postdoctoral Fellowship** (three years' independent research funding; declined)

2013: UCL **Jon Darius Memorial Prize** (outstanding postgraduate research in Astrophysics)

2012: Runner-up Royal Astronomical Society **Michael Penston Thesis Prize** (best doctoral thesis in Astronomy and Astrophysics)

2012: UK Science & Technology Facilities Council **Studentship Enhancement Programme** award (three months' postdoctoral research funding)

2004: University of Cambridge **Institute of Astronomy Prize** (best examination result in Astrophysics)

Teaching

2019: University of Cambridge, Astro Hack Week Guest Lecturer

Designed and delivered three hours of invited lectures on Bayesian probability theory and computation, with Justin Alsing; slides and Jupyter notebook exercises available online

2019: Flatiron Institute, Computational Data Analysis Graduate Course, Guest Lecturer

Designed and delivered two 90-minute invited lectures (open to all New-York-based working researchers in physical sciences) on Bayesian hierarchical modeling; slides, Jupyter notebook exercises and recordings (lecture 1, lecture 2) available online

2014–2016: Imperial College London, PH2-LC Laboratory and Computing II, Computing Demonstrator

Core elements: (i) use of object-oriented Python programming in Physics problems; (ii) research project modelling optical systems using ray-tracing or relativistic pion decay in simple detectors

2013–1014: Imperial College London, PH1-PSK Professional Skills I, Teaching Assistant

Core elements: (i) group research project leading to oral presentation; (ii) topical review of popular science journal article; (iii) individual scientific presentation; (iv) calculator-free problem-solving

2013: UCL, PHASM336 Advanced Physical Cosmology, Substitute Lecturer

Delivered three-hour lecture on behalf of Prof. Hiranya Peiris

Supervision and Mentoring

PhD supervisor (2020–): Kiyam Lin

Project title: *"Optimal Fundamental Physics Information from Cosmic Large-Scale Structure Maps "*, funded by UCL's inter-disciplinary Cosmoparticle Initiative (project joint with Benjamin Joachimi)

PhD supervisor (2019–): Francesca Gerardi

Project title: *"Probing the Universe's Expansion with Standard Sirens"*, funded by UCL's inter-disciplinary Cosmoparticle Initiative (project joint with High-Energy Physics)

Undergraduate (Year 1) Summer Project supervisor: Lingyi Hu & Kumiko Kawato (2015), Andrew Counsell & Lucie Fortova (2016)

Seven-week project *"Forecasting Cosmological Constraints"* writing Python-based Fisher-matrix forecast of CMB polarization experiment, poster presentation and report

PhD mentor (2014–2016): Daniela Saadeh (Research Fellow, University of Nottingham)

Thesis: *"Testing the Isotropy of the Universe with the CMB"*, winner of 2016 Institute of Physics Gravitational Physics Thesis Prize

Journal articles: *"A Framework for Testing Isotropy with the Cosmic Microwave Background"* (Mon. Not. Roy. Astron. Soc.) and *"How Isotropic is the Universe?"* (Phys. Rev. Lett.)

Masters co-supervisor (2014): Niccolò Dalmasso (PhD candidate, Carnegie Mellon University)

Thesis: *"How Fast is the Universe Expanding?"*

Journal article: *"Clarifying the Hubble Constant Tension with a Bayesian Hierarchical Model of the Local Distance Ladder"* (Mon. Not. Roy. Astron. Soc.)

Masters co-supervisor (2012): Thibaut Josset (PhD, Aix-Marseille Université)

Thesis: *"Evidence for Bianchi Cosmologies from Observations of the CMB"*

Journal article: *"Bayesian Analysis of Anisotropic Cosmologies: Bianchi VII$_h$ and WMAP"* (Mon. Not. Roy. Astron.)

Leadership and Organisation

2020–: UCL PDRA Mentoring Scheme coordinator and Cosmoparticle Initiative Workshop facilitator.

2019–: UCL Astrophysics Seminar organiser.

2013–2016, 2019–: Organiser London Cosmology Discussion Meeting: quarterly half-day meetings designed to foster collaboration between London-based cosmologists.

2019: Organiser Likelihood-Free Inference Workshop: five-day inter-disciplinary workshop and hackathon gathering developers and prospective users of Likelihood-Free Inference to share cutting-edge techniques and applications and discuss open challenges.

2018: Organiser Tristate Postdoc Retreat: two-day meeting for astronomy postdocs in New York area, featuring: lightning networking talks; *"Career-Path Strategy & Work-Life Balance"* and *"Careers in Data Science"* workshops; Decadal Survey white-paper planning session; academic and data-science career panels.

2014–2018: Lead cosmology forecaster for EBEX-IDS CMB polarization mission collaboration.

2014–2015: Co-leader of topology and geometry Bayesian analyses in *"Planck 2015 Results. XVIII. Background Geometry & Topology"* (Astron. Astrophys.).

2013–2016: Postdoctoral cohort representative: Imperial College Astrophysics Group staff meetings, Department of Physics postdoc representative meetings.

2009–2013: PhD & Postdoctoral cohort representative at UCL departmental staff meetings

Press and Public Engagement

2021: Invited talk at Society for Public Astronomy's January 30 meeting.

2020: Invited speaker at Your Universe 2020 *"30 Years of the Hubble Space Telescope"* panel discussion.

2018: Interviews in American Physical Society's Physics and APS News after invited talk at April Meeting's *"Crisis in Cosmology"* session.

2017: Interview with Sveriges Radio's Vetandets Värld (World of Wisdom) programme.

2016: Royal Society Summer Science Exhibition 2016 (14,371 visitors), demonstrator at Planck Collaboration's *"What Happened at the Big Bang?"* stall; interview in Imperial College London podcast.

2016: Phys. Rev. Lett. article *"How Isotropic is the Universe"* selected as Editors' Suggestion; covered by American Physical Society's Physics magazine; interviews in Imperial College London and UCL press releases; full coverage.

2013: Science, Technology, Engineering and Mathematics *"Speed Careers"* event (five-minute interviews by pairs of schoolchildren), Whitgift School.

2012: *"Observing the Multiverse"* outreach talk at UCL's Astronomy Diploma Club.

2012: Phys. Rev. Lett. article *"Robust Constraint on Cosmic Textures from the Cosmic Microwave Background"* selected as Science's Editors' Choice; interviews by BBC News and FQXi podcast.

2011: Phys. Rev. Lett. article *"First Observational Tests of Eternal Inflation"* selected as Editors' Suggestion; covered by American Museum of Natural History's Science Bulletins; American Physical Society's Physics magazine, BBC's Horizon television programme, BBC News, BBC Science Focus, National Geographic, New Scientist, New York Times.

2009: Demonstrator at UCL's free Your Universe festival of astronomy and particle physics.

Programming Skills and Public Codes

Python, Stan, TensorFlow 2, Fortran 90, IDL, OpenMP, MPI, LaTeX, HTML, CSS, PHP and SQL.

Publicly available codes (more available on Github):

CMB4CAST. Forecasting CMB experiments' ability to clean polarized foreground contamination, extract lensing from resulting CMB maps and constrain cosmology. Runs on NERSC supercomputers via web interface. Used in design studies of CMB-S4, CORE, EBEX-IDS, LiteBIRD, Simons Array and Simons Observatory experiments.

PYDELFI. Python code coupling massive data compression with density-estimation likelihood-free inference to allow parameter estimation using only forward-simulation of data.

HH0: Hierarchical models for inference of Hubble Constant (current expansion rate of Universe) from Cepheid distance ladder, inverse distance ladder and binary neutron star data. Python/Stan code.

Professional Affiliations and Service

Member: UCL Cosmoparticle Initiative (Core Member), LSST:UK (Junior Associate, 2020-22), EBEX Collaboration, Simons Observatory Collaboration, Royal Astronomical Society

Referee: Astronomy & Astrophysics, Astrophysical Journal, Journal of Cosmology & Astroparticle Physics, Monthly Notices of the Royal Astronomical Society, Physical Review D, Physical Review Letters, Physical Review Research

Invited Conference and Seminar Presentations

25 March 2021: 25th Symposium on Astroparticle Physics in the Netherlands (online keynote talk)

12 March 2021: Institut d'Astrophysique de Paris, IAP Seminar (online)

3 March 2021: "A (Hubble) Tension Headache" Workshop, University of Southampton (online)

24 February 2021: University of Connecticut, Astrophysics Seminar (online)

30 November 2020: University of Oxford, Astrophysics Colloquium (online)

12 February 2020: Queen Mary University of London, London Relativity and Cosmology Seminar

20 January 2020: UCL, Astrophysics Seminar

10 December 2019: "CoSyne: Cosmological Synergies in the Upcoming Decade" Conference, Institut d'Astrophysique de Paris, plenary talk

13 November 2019: "Gravitational Wave Probes of Fundamental Physics" Workshop, Amsterdam, plenary talk

29 July 2019: "Understanding Cosmological Observations" Workshop, Centro de Ciencias de Benasque Pedro Pascual, plenary talk

25 February 2019: Institute for Advanced Study, Princeton, Princeton University / IAS Cosmology Lunch

29 October 2018: Stony Brook University, Astronomy Seminar

4 October 2018: "The Future of H_0: Crisis or Concordance" Workshop, Kavli Institute for Cosmological Physics, Chicago, introduction talk

15 April 2018: American Physical Society April Meeting, Columbus, "Crisis in Cosmology" session

21 November 2017: American Museum of Natural History, New York, Astrophysics Seminar

10 November 2017: Kavli Institute for Cosmological Physics, Chicago, Friday Lunch Seminar

9 May 2014: Royal Astronomical Society, Annual General Meeting

7 June 2013: Istituto Nazionale di Alta Matematica, Università di Roma La Sapienza, "Probabilistic and Statistical Techniques for Cosmological Applications" Meeting

12 November 2013: Perimeter Institute for Theoretical Physics, Cosmology & Gravitation Seminar

10 May 2013: Centre for Astroparticle Physics and Cosmology, Imperial College London, CAPAC Cosmology Seminar

11 December 2012: Perimeter Institute for Theoretical Physics, special seminar

21 February 2011: Centre for Theoretical Cosmology, University of Cambridge, CTC / DAMTP Cosmology Lunch Talk

Publications

ADS **h-index 25**, 3879 citations

Refereed Journal Articles

"SSSpaNG! Stellar Spectra as Sparse, Data-Driven, Non-Gaussian Processes", **S. Feeney**, B. Wandelt and M. Ness, 2019, **Mon. Not. Roy. Astron. Soc.**, 501 (3) (arXiv:1912.09498 [astro-ph.SR])

"Exploiting Network Topology for Accelerated Bayesian Inference of Grain Surface Reaction Networks", J. Heyl, S. Viti, J. Holdship and **S. Feeney**, 2020, **Astrophys. J.**, 904 197 (arXiv:2010.02877 [astro-ph.GA])

"Unbiased Hubble Constant Estimation from Binary Neutron Star Mergers", D. Mortlock, **S. Feeney**, H. Peiris, A. Williamson and S. Nissanke, 2019, **Phys. Rev. D**, 100, 103523 (arXiv:1811.11723 [astro-ph.CO])

"Cosmic Shear: Inference from Forward Models", P. Taylor, T. Kitching, J. Alsing, B.Wandelt, **S. Feeney** and J. McEwen, 2019, **Phys. Rev. D**, 100, 023519 (arXiv:1904.05364 [astro-ph.CO])

"Fast Likelihood-Free Cosmology with Neural Density Estimators and Active Learning", J. Alsing, T. Charnock, **S. Feeney** and B. Wandelt, 2019, **Mon. Not. Roy. Astron. Soc.**, 488, 3 (arXiv:1903.00007 [astro-ph.CO])

"Prospects for Resolving the Hubble Constant Tension with Standard Sirens", **S. Feeney**, H. Peiris, A. Williamson, S. Nissanke, D. Mortlock, J. Alsing and D. Scolnic, 2019, **Phys. Rev. Lett.**, 122, 061105 (arXiv:1802.03404 [astro-ph.CO])

"The EBEX Balloon Borne Experiment - Detectors and Readout", EBEX Collaboration (inc. **S. Feeney**), 2018, **Astrophys. J. Supp. Ser.**, 239, 1 (arXiv:1803.01018 [astro-ph.CO])

"Massive Optimal Data Compression and Density Estimation for Scalable, Likelihood-Free Inference in Cosmology", J. Alsing, B. Wandelt and **S. Feeney**, 2018, **Mon. Not. Roy. Astron. Soc.**, 477 (3) (arXiv:1801.01497 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Survey Requirements and Mission Design", J. Delabrouille, ... **S. Feeney (73/204)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 014 (arXiv:1706.04516 [astro-ph.IM])

"Exploring Cosmic Origins with CORE: The Instrument", P. de Bernardis, ... **S. Feeney (77/130)**, ... and N. Vittorio, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 015 (arXiv:1705.02170 [astro-ph.IM])

"Exploring Cosmic Origins with CORE: Inflation", F. Finelli, ... **S. Feeney (52/131)**, ... and K. Young, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 016 (arXiv:1612.08270 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Cosmological Parameters", E. Di Valentino, ... **S. Feeney (62/129)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 017 (arXiv:1612.00021 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Gravitational Lensing of the CMB", A. Challinor, ... **S. Feeney (5/114)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 018 (arXiv:1707.02259 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Cluster Science", J.-B. Melin, ... **S. Feeney (58/122)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 019 (arXiv:1703.10456 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Extragalactic sources in Cosmic Microwave Background maps", G. De Zotti, ... **S. Feeney (48/125)**, ... and K. Young, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 020 (arXiv:1609.07263 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Effects of Observer Peculiar Motion", C. Burigana, ... **S. Feeney (53/120)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 021 (arXiv:1704.05764 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: Mitigation of Systematic Effects", P. Natoli, ... **S. Feeney (59/127)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 022 (arXiv:1707.04224 [astro-ph.CO])

"Exploring Cosmic Origins with CORE: B-mode Component Separation", M. Remazeilles, ... **S. Feeney (52/117)**, ... and M. Zannoni, 2018, **J. Cosmol. Astropart. Phys.**, 04 (2018), 023 (arXiv:1704.04501 [astro-ph.CO])

"Clarifying the Hubble Constant Tension with a Bayesian Hierarchical Model of the Local Distance Ladder", **S. Feeney**, D. Mortlock and N. Dalmasso, 2018, **Mon. Not. Roy. Astron. Soc.**, 476 (3) (arXiv:1707.00007 [astro-ph.CO])

"Optimization Study for the Experimental Configuration of CMB-S4", D. Barron, ..., **S. Feeney (6/12)**, ... and A. Suzuki, 2018, **J. Cosmol. Astropart. Phys.**, 02 (2018), 009, (arXiv:1702.07467 [astro-ph.CO])

"A Measurement of the Cosmic Microwave Background B-Mode Polarization Power Spectrum at Sub-Degree Scales from 2 years of POLARBEAR Data", P. Ade, ..., **S. Feeney (21/81)**, ... and A. Zahn, 2017, **Astrophys. J.**, 848, 141, (arXiv:1705.02907 [astro-ph.CO])

"Wavelet-Bayesian Inference of Cosmic Strings Embedded in the Cosmic Microwave Background", J. McEwen, **S. Feeney**, H. Peiris, Y. Wiaux, C. Ringeval and F. Bouchet, 2017, **Mon. Not. Roy. Astron. Soc.**, 472 (4) (arXiv:1611.10347 [astro-ph.IM])

"Cosmic Microwave Background Science at Commercial Airline Altitudes", **S. Feeney**, J. Gudmundsson, H. Peiris, L. Verde and J. Errard, 2017, **Mon. Not. Roy. Astron. Soc. Lett.**, 469 (1) (arXiv:1610.07604 [astro-ph.IM])

"Making Maps of Cosmic Microwave Background Polarization for B-mode Studies: the POLARBEAR Example", D. Poletti, ..., **S. Feeney (16/49)**, ... and N. Whitehorn, 2016, **Astron. Astrophys.** (arXiv:1608.01624 [astro-ph.IM])

"A Framework for Testing Isotropy with the Cosmic Microwave Background", D. Saadeh, **S. Feeney**, A. Pontzen, H. Peiris, J. McEwen, 2016, **Mon. Not. Roy. Astron. Soc.**, 462 (2) (arXiv:1604.01024 [astro-pH.CO])

"How Isotropic is the Universe?", D. Saadeh, **S. Feeney**, A. Pontzen, H. Peiris, J. McEwen, 2016, **Phys. Rev. Lett.** 117, 131302 (arXiv:1605.07178 [astro-pH.CO])

"The POLARBEAR-2 and the Simons Array Experiments", A. Suzuki, ... **S. Feeney (21/90)**, ... and O. Zahn, 2016, **J. Low. Temp. Phys.**, 104, 3, 805 (arXiv:1512.0729 [astro-ph.IM])

"Planck 2015 Results. XVIII. Background Geometry and Topology of the Universe", Planck Collaboration (inc. **S. Feeney**), 2016, **Astron. Astrophys.**, 594, A18 (arXiv:1502.01593 [astro-ph.CO])

"Robust Forecasts on Fundamental Physics from the Foreground-Obscured, Gravitationally-Lensed CMB Polarization", **J. Errard and S. Feeney (co-first authors)**, H. Peiris and A. Jaffe, 2016, **J. Cosmol. Astropart. Phys.**, 03 (2016), 052 (arXiv:1509.06770 [astro-ph.CO])

"Planck 2015 Results. I. Overview of Products and Scientific Results", Planck Collaboration (inc. **S. Feeney**), 2016, **Astron. Astrophys.**, 594, A1 (arXiv:1502.01582 [astro-ph.CO])

"POLARBEAR Constraints on Cosmic Birefringence and Primordial Magnetic Fields", POLARBEAR Collaboration (inc. **S. Feeney**), 2015, **Phys. Rev. D**, 92, 123509, (arXiv:1509.02461 [astro-ph.CO])

"Forecasting Constraints from the Cosmic Microwave Background on Eternal Inflation", **S. Feeney**, F. Elsner, M. Johnson and H. Peiris, 2015, **Phys. Rev. D**, 92, 083515 (arXiv:1506.01716 [astro-ph.CO])

"Modeling Atmospheric Emission for CMB Ground-based Observations", J. Errard, ..., **S. Feeney (19/75)**, ... and O. Zahn, 2015, **Astrophys. J.**, 809, 1, 63, 19 (arXiv:1501.07911 [astro-pH.CO])

"Sparse Inpainting and Isotropy", **S. Feeney**, D. Marinucci, J. McEwen, H. Peiris, B. Wandelt and V. Cammarota, 2014, **J. Cosmol. Astropart. Phys.**, 01 (2014), 050 (arXiv:1308.0602 [astro-pH.CO])

"(Lack of) Cosmological Evidence for Dark Radiation After Planck", L. Verde, **S. Feeney**, D. Mortlock, and H. Peiris, 2013, **J. Cosmol. Astropart. Phys.**, 09 (2013), 013 (arXiv:1307.2904 [astro-pH.CO])

"The Importance of Local Measurements for Cosmology", L. Verde, R. Jimenez and **S. Feeney**, 2013, **Phys. Dark Universe**, 2, 2, 65-71 (arXiv:1303.5341 [astro-pH.CO])

"Bayesian Analysis of Anisotropic Cosmologies: Bianchi VII_h and WMAP", J. McEwen, T. Josset, **S. Feeney**, H. Peiris, A. Lasenby, 2013, **Mon. Not. Roy. Astron. Soc.**, 436 (4) (arXiv:1303.3409 [astro-pH.CO])

"Is There Evidence for Additional Neutrino Species from Cosmology?", **S. Feeney**, H. Peiris and L. Verde, 2013, **J. Cosmol. Astropart. Phys.**, 04 (2013), 036 (arXiv:1302.0014 [astro-ph.CO])

"Hierarchical Bayesian Detection Algorithm for Early-Universe Relics in the Cosmic Microwave Background", **S. Feeney**, M. Johnson, J. McEwen, D. Mortlock and H. Peiris, 2013, **Phys. Rev. D**, 88, 043012 (arXiv:1210.2725 [astro-ph.CO])

"Robust Constraint on Cosmic Textures from the Cosmic Microwave Background", **S. Feeney**, M. Johnson, D. Mortlock and H. Peiris, 2012, **Phys. Rev. Lett.**, 108, 241301 (arXiv:1203.1928 [astro-ph.CO])

"Optimal Filters for Detecting Cosmic Bubble Collisions", J. McEwen, **S. Feeney**, M. Johnson and H. Peiris, 2012, **Phys. Rev. D**, 85, 103502 (arXiv:1202.2861 [astro-ph.CO])

"Avoiding Bias in Reconstructing the Largest Observable Scales from Partial-Sky Data", **S. Feeney**, H. Peiris and A. Pontzen, 2011, **Phys. Rev. D**, 84, 103002 (arXiv:1107.5466 [astro-ph.CO])

"First Observational Tests of Eternal Inflation: Analysis Methods and WMAP 7-Year Results", **S. Feeney**, M. Johnson, D. Mortlock and H. Peiris, 2011, **Phys. Rev. D**, 84, 043507 (arXiv:1012.3667 [astro-ph.CO])

"First Observational Tests of Eternal Inflation", **S. Feeney**, M. Johnson, D. Mortlock and H. Peiris, 2011, **Phys. Rev. Lett.**, 107, 071301 (arXiv:1012.1995 [astro-ph.CO])

"Automated Detection of Classical Novae with Neural Networks", **S. Feeney**, V. Belokurov, N. W. Evans et al., 2005, **Astron. J.**, 130, 84-94 (astro-ph/0504236)

In Review

"Prospects for Measuring the Hubble Constant with Neutron-Star-Black-Hole Mergers", **S. Feeney**, H. Peiris, S. Nissanke and D. Mortlock, 2020, in review with **Phys. Rev. Lett.** (arXiv:2012.06593 [astro-ph.CO])

"Optimal Proposals for Approximate Bayesian Computation", J. Alsing, B. Wandelt and **S. Feeney**, 2018, in review with **Bayesian Anal.** (arXiv:1808.06040 [math.ST])

White Papers and Pre-Prints

"PICO: Probe of Inflation and Cosmic Origins", S. Hanany et al. (inc. **S. Feeney**), 2019 (arXiv:1902.10541 [astro-ph.IM])

"The Simons Observatory: Science Goals and Forecasts", Simons Observatory Collaboration (inc. **S. Feeney**), 2018 (arXiv:1808.07445 [astro-ph.CO])

"CMB-S4 Science Book, First Edition", K. Abazajian, . . . , **S. Feeney (27/86)**, . . . and K. Wu, 2016 (arXiv:1610.02743 [astro-ph.CO])

Referees

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