

Seshadri Nadathur

PERSONAL DETAILS

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Nationality: British

RESEARCH FIELDS

I am a theoretical astrophysicist, interested in using measurements of large-scale structure of the Universe to learn about dark energy and cosmology. I am best known for my work developing the use of cosmic voids as a precision tool for such studies. My work covers theory, simulation and observations of redshift-space distortions, baryon acoustic oscillations, gravitational lensing and secondary CMB anisotropies. I am a member of the Euclid, DESI, DES and eBOSS galaxy survey collaborations, and co-lead of the Voids Work Package in Euclid.

ACADEMIC POSITIONS

STFC Ernest Rutherford Fellow	University College London	01/2021 –
Dennis Sciama Research Fellow	Institute of Cosmology and Gravitation, University of Portsmouth	10/2015 – 12/2020
Postdoctoral research fellow	University of Helsinki	10/2013 – 09/2015
Postdoctoral research fellow	University of Bielefeld	12/2011 – 09/2013
Lecturer in Physics	Trinity College, University of Oxford	10/2007 – 09/2011

EDUCATION

DPhil, Theoretical Physics <i>Supervisor: Prof. Subir Sarkar</i>	University of Oxford	10/2007 – 11/2011
MPhys Physics (<i>1st class</i>)	University of Oxford	10/2005 – 06/2007
BSc Hons Physics (<i>1st class</i>)	University of Delhi	07/2002 – 06/2005

GRANTS AND AWARDS

STFC Ernest Rutherford Fellowship, PI (approx. £528K)	2020
Marie-Skłodowska Curie Individual Fellowship, PI (approx. €183K)	2015
Dennis Sciama Postdoctoral Fellowship, ICG Portsmouth	2015
Vice Chancellor's Award, University of Oxford	2011
Clarendon Domus Scholarship, Merton College, Oxford (approx. £40,000)	2007
Overseas Research Award, University of Oxford	2007
Rhodes Scholarship (India & Trinity) (approx. £39,000)	2005 – 2007
Peter Fisher Prize, Trinity College, Oxford	2007
Millard Scholarship, Trinity College, Oxford	2006
Summer Research Fellowship, Indian Academy of Sciences	2004

TEACHING AND SUPERVISION

PhD supervision:

Sladana Radinović (Oslo)	2019 –
Alexander Woodfinden (Waterloo)	2019 –
Paul Carter (ICG Portsmouth)	2017 – 2019

Other research supervision:

Part supervision of PhD students Mikko Lavinto and Samuel Flender (both at Helsinki) on papers contributing to their thesis submissions	2012 – 2014
Virginia d’Emilio, SEPnet undergraduate research placement (ICG Portsmouth)	2017

Graduate teaching:

Invited lecturer, <i>Bayesian Methods for Galaxy Clustering</i>	Les Houches Advanced Euclid School	2020
Invited lecturer, <i>Bayesian Methods for Galaxy Clustering</i> (rescheduled due to Covid-19)	GOLD cosmology workshop, Pascal Institute, Paris-Saclay	2020
PhD lecture course, <i>MCMC techniques in cosmology</i>	ICG Portsmouth	2019
Core PhD lecture course, <i>Observational Cosmology</i>	ICG Portsmouth	2017 – 2019
PhD lecture course, <i>Statistical Methods for Cosmic Structure Formation</i>	ICG Portsmouth	2017

Undergraduate teaching:

Invited lecturer, University of Helsinki summer school Lectures on <i>Large-scale structure</i>	2015
Lecturer in Physics, Trinity College, Oxford Tutorial teaching for 1 st year physics undergraduates, college examinations and assessments, admissions interviews. Topics taught: <i>Mathematical Methods 1 & 2, Waves, Optics</i> (c. 380 contact hours over 4 years)	2007 – 2011

PROFESSIONAL
ACTIVITIES**Collaborations:**

- Member of Euclid Consortium since 2018, working in Science Ground Segment (SGS) and Galaxy clustering Science Working Group (GC-SWG)
- **Co-lead of Voids work package (WP:V)** in Euclid GC-SWG (this work package has over 80 participating scientist members)
- **Lead for validation team for galaxy sample selection and spectroscopic visibility mask** development in Euclid SGS; both are key parts of Euclid data reduction pipeline
- Member of SDSS-IV eBOSS collaboration; contributed to eBOSS Data Release 16 analysis papers as part of the quasar and galaxy clustering working group
- **Led eBOSS DR16 void-galaxy correlation analysis**
- Member of DESI collaboration since 2018; working in GQC and C³ working groups
- Committee member, DESI Speakers Board
- Member of DES collaboration since 2015; contributed to several papers from the Theory and Combined Probes working group

Scientific meeting organization:

<i>Understanding Cosmological Observations</i> biennial workshop	Benasque, Spain	2017 and 2019
<i>South Coast Cosmology</i>	ICG Portsmouth	2018
<i>UKCosmo</i> meeting	ICG Portsmouth	2017

Assessments and reviewing:

2020:	External censor for FYS110 physics examination, University of Stavanger
2019:	Grant reviewer, National Science Centre Poland
Since 2017:	Referee for Astrophysical Journal
Since 2016:	Referee for EPJC
Since 2014:	Referee for MNRAS, Astrophysics and Space Science

2013: MSc thesis reviewer, A.-S. Balleier (University of Bielefeld)
 2012: MSc thesis reviewer, B. Kalus and BSc thesis reviewer, P. Niksa (both University of Bielefeld)

**PUBLIC
OUTREACH**

TV:

Episode consultant and on-screen interview, *Hannah Fry's Mysterious World of Maths*, BBC4 and Open University (2018, [link](#))

Radio:

Interviews for The Star Spot podcast (Toronto, 2019) and BBC Radio Solent (2018)

Print:

Writer for The Conversation (since 2016); interviews for Mercury Magazine (2019), Live Science (2019, [link](#)), New Scientist (2016, [link](#))

Public lectures/talks:

Hampshire Astronomy Group	2019
Winchester Science Festival	2017
ICG 15 th Anniversary celebrations	2017
Stargazing Live Portsmouth	2016 and 2017

Social Media:

ICG social media coordinator	2018 – 2019
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**INVITED
ACADEMIC
PRESENTATIONS**

Seminar, Heidelberg ITP	2020
Colloquium, Maynooth University	2020
Cosmology Talks online seminar (YouTube link)	2020
Seminar, University of Sussex	2019
Seminar, Queen Mary University of London	2019
Cosmology Lunch talk, Princeton University	2019
Colloquium, University of Waterloo	2019
Keynote speaker, CINY Workshop, Beijing	2018
Invited speaker, GR Effects in LSS workshop, Sexten	2018
Seminar, University College London	2017
Seminar, University of the Western Cape	2017
Seminar, University of Cape Town	2017
Seminar, African Institute for Mathematical Sciences	2017
Seminar, Royal Observatory Edinburgh	2016
Colloquium, University of Hull	2016
Colloquium, IUCAA Pune	2016
Invited speaker, Multi-scale modelling for LSS workshop, ICTP Trieste	2015
Seminar, Leibniz AIP	2015
Seminar, ICC Durham	2014
Brown Bag Seminar, University of Oxford	2014
Seminar, University of Sussex	2014
Seminar, ICG Portsmouth	2014
Seminar, University of Helsinki	2013
Seminar, NBI Copenhagen	2012
Seminar, University of Göttingen	2012
Seminar, RWTH Aachen	2012

**PUBLICATIONS
SUMMARY
([FULL LIST
ONLINE](#))**

42 journal papers (37 published or in press, 5 submitted) and 2 conference proceedings
 19 first-author or lead-author papers
 6 second-author or equal-author papers
 1455 total citations (source NASA ADS; as of 02/11/2020)
 h-index = 23 (23 papers with >23 citations each)

REFERENCES

Professor Will J. Percival

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Professor Adam Amara

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Professor Kari Enqvist

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