

Srinivasan Raghunathan
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Education:

- Doctor of Philosophy in Astronomy, Universidad de Chile, Chile: Conferred in Mar 2016.
 - Awarded graduate student of 2013 prize, Department of Astronomy.
 - Awarded CONICYT PhD fellowship by the Chilean National Commission for Scientific and Technological Research.
 - MSc by research in Astrophysics, University of Central Lancashire, UK: Conferred in Jan 2010.
 - Bachelor of Engineering, Electronics and Communication, Anna University, India: Conferred in Jun 2006.
 - 85% + distinction.
 - Awarded class topper of 2006 prize.
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Appointments:

- National Centre for Supercomputing Applications, University of Illinois at Urbana-Champaign, USA (*Current*): Survey Science Fellow at the Centre for AstroPhysical Surveys.
 - University of California, Los Angeles, USA (2018 - 2021): Postdoctoral scholar.
 - University of Melbourne, Australia (2015 - 2018): Postdoctoral scholar.
 - Universidad de Chile, Chile (2011 - 2014): Masters and undergraduate co-lecturer: Cosmology and general astronomy (4 hours per week).
 - Electronic Data Systems (EDS), India (2006 - 2008): Software Engineer: Technology - IBM mainframes and UNIX.
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Grants / Academic Credentials:

- 2024: PI - Fermi National Accelerator Laboratory - Universities Research Association's Visiting Scholars Program (VSP): 20,000 USD towards cosmological inference from SPT-3G data.
 - 2021: Survey Science Fellowship, Centre for AstroPhysical Surveys, National Centre for Supercomputing Applications.
 - 2017: Laby-Betty travel grant, University of Melbourne.
 - 2015: Simons foundation grant, Aspen centre for Physics.
 - 2013: Research student of the year, Department of Astronomy, UChile.
 - 2013: Universidad de Chile scholarship to carry out PhD thesis work at Princeton University for three months.
 - 2010 - 2015: CONICYT PhD fellowship, National Commission of Scientific Research and Technology, Chile.
 - 2006: Graduate student of the year prize, Sri Sairam Engineering College, India.
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Student supervisions:

- Kevin Levy, MSc, “Mass calibration of X-ray clusters from eROSITA using CMB lensing”. Co-supervision with Dr. Kaustuv Basu, University of Bonn, Germany (2020 - 2021). **No. of publications: 1** (One first author article).
 - Dr. Sanjay Patil, PhD, “Weighing the giants with CMB lensing”. Co-supervision with Dr. Christian Reichardt, University of Melbourne, Australia (2015 - 2020). **No. of publications: 4** (One first author; and three second author articles).
 - Dr. Tracey Friday, PhD, “Correlations between multiple tracers of the cosmic web”. Co-supervision with Dr. Roger Clowes, University of Central Lancashire, UK (2015 - 2020). **No. of publications: 2** (Two first author articles).
 - Alexia Lopez, MSc, “Assessing the Potential of Intervening MgII Absorbers for Cosmology”. Co-supervision with Dr. Roger Clowes, University of Central Lancashire, UK (2018 - 2019). **No. of publications: 1** (One first author article).
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Collaborations:

Present: South Pole Telescope (SPT), CMB-S4, South Pole Observatory (BICEP+SPT), Terahertz Intensity Mapper (TIM) and CMB-HD.

Past: Atacama B-mode Search (PhD thesis project).

Professional activities:

- **Reviewer:**
 - **Journals:**
 - * Physical Review Letters (May 2021 - to date).
 - * Physical Review D. (Sep 2020 - to date).
 - * Journal of Cosmology and Astroparticle Physics (Feb 2024 - to date).
 - * Monthly Notices of the Royal Astronomical Society (May 2024 - to date).
 - * Galaxies, Multidisciplinary Digital Publishing Institute (MDPI) (Sep 2021 - to date).
 - **Others:**
 - * NSF 2025 Graduate Research Fellowship Program (GRFP) (Nov 2024 - to date).
- **Telescope Allocation Committee:**
 - Member of the National Radio Astronomy Observatory (NRAO) Science Review Panel (Nov 2021 - Nov 2023).
- **Collaboration responsibilities:**
 - Co-ordinator of SPT CMB secondaries and cross-correlations analysis working group (Oct 2024 - to date).
 - Co-ordinator of CMB-S4 galaxy clusters analysis working group (May 2021 - to date).
 - Co-ordinator of SPT data analysis working group calls (Jan 2021 - to date).
- **Tutorials:**
 - Tutor at the computing boot camp (August 2023) - Organised by Centre for AstroPhysics Surveys, UIUC.

- **Colloquium / Seminars:**

- Colloquium organiser, Centre for AstroPhysics Surveys, UIUC (Jan 2022 - Aug 2023).
 - Astrophysics colloquium organiser, School of Physics, U. of Melbourne (Feb 2017 - April 2018).
 - Cosmology journal organiser, School of Physics, U. of Melbourne (Feb 2016 - Feb 2017).
 - Journal club organiser, Department of Astronomy, U. of Chile (Feb 2012 - Feb 2013).
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Conference/meeting talks: ☆- Invited/Review; Black - Conference; Red - Colloquium / Seminar.

- ☆ “South Pole Telescope x Euclid”, Euclid CMBXC WG Meeting, Kavli Institute for Cosmology, University of Cambridge, Nov 2024.
- “Cosmology and Astrophysics with the Secondary Anisotropies of the Cosmic Microwave Background from South Pole Telescope and Future Surveys.”, University of New Mexico, New Mexico State University, Texas A&M University, USA, Oct 2024.
- ☆ “Review talk on the kinematic Sunyaev–Zeldovich Effect”, New Physics from Old Light: Illuminating the Universe with CMB Secondaries, University of Cambridge, September 2024..
- ☆ “South Pole Telescope”, CMB-S4 meeting, University of Illinois Urbana Champaign, July 2024.
- ☆ “Constraining the Epoch of Reionisation using CMB as the backlight”, IoA50: New Frontiers of Astronomy, University of Cambridge, July 2024.
- ☆ “Constraints on the Epoch of Reionisation using the kSZ 4-pt measurement from the South Pole Telescope”, PASCOS 2024 - Rencontres du Vietnam, July 2024.
- ☆ “Cosmology with the South Pole Telescope (SPT): Latest and Upcoming results from SPT”, Cosmology from home, June 2024.
- “Sunyaev-Zeldovich from CMB Surveys”, University of Southern California / University of California Santa Cruz, USA, March 2024.
- “Sunyaev-Zeldovich from CMB Surveys”, University of Cincinnati / Case Western Reserve University, USA, Nov 2023.
- “Constraining the Epoch of Reionisation Using the kinematic Sunyaev-Zeldovich Signal.”, University of Illinois Urbana Champaign / University of Minnesota, USA, Sep/Oct 2023.
- “Prospects for Kinematic Sunyaev-Zeldovich Measurements from Current and Future CMB Experiments”, Observing the Universe at millimetre wavelengths, Grenoble, France, June 2023.
- “Towards a robust detection of the kinematic Sunyaev-Zeldovich power spectrum using South Pole Telescope and Herschel-SPIRE data.”, California Institute of Technology, University of California Davis, and University of Wisconsin Milwaukee, USA, April/May 2023.
- ☆ “Observing and interpreting the most ancient light in the universe”, Mini School on Gravitation and Cosmology, Indian Institute of Technology IIT-Madras, India, Nov 2022. (Invited Review Talk)
- “Demystifying the dark side of the universe Using kinematic and thermal Sunyaev-Zeldovich effects.”, Tata Institute of Fundamental Research, Nov 2022.
- ☆ “Kinematic Sunyaev–Zeldovich effect and reionisation science from small-scale CMB experiments”, CMB+EoR Summer workshop, Montreal, Canada, July 2022. (Invited Review Talk)

- “First detection of polarized CMB-Cluster lensing using SPTpol and DES”, Cluster Mass ESA meeting, Virtual, Sep 2021.
 - “Demystifying the dark side of the universe using secondary cosmic microwave background anisotropies.”, USC, USA, Jan 2021 and NCSA, USA, May 2021.
 - “CMB-Cluster lensing”, Stanford / UCLA, USA, Jan 2018; and Harvard / Cornell / Princeton, USA, Sep 2017.
 - “CMB-Cluster lensing forecasts for the CMB-S4 experiment”, Clusters 2017, Spain, Jul 2017.
 - “CMB-Cluster lensing with SPTpol and SPT-3G: Forecasts and systematic error budgets”, Swinburne University and University of Queensland, Australia, Jun 2017.
 - “Primordial gravitational waves and CMB polarization”, University of Melbourne, School of Physics colloquium, Australia, Aug 2016.
 - “Towards the first detection of CMBPol cluster lensing using SPTpol data”, Australian Astronomical Society Annual meeting, University of Sydney, Australia, Jul 2016.
 - “Status of the Atacama B-mode Search experiment”, Cosmology on the Beach, Mexico, Jan 2016.
 - “Search for primordial gravitational waves using Atacama B-mode Search experiment”, SOCHIAS (Chilean Astronomical Society) annual meeting, Chile, Mar 2015.
 - “Search for primordial B-modes from CMB polarization and characterizing ABS telescope”, Alpine cosmology workshop, Austria, Jul 2014.
 - “Pointing and beam characterization of the Atacama B-mode Search (ABS) experiment”, Workshop on New Light in Cosmology from the CMB, ICTP, Italy, Jul 2013.
 - “CMB Polarization and the search for tensor modes”, CosmoSur II, Chile, May 2013.
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