

Arun Kannawadi

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| CONTACT | Department of Astrophysical Sciences, Princeton University, 4 Ivy Lane, Princeton, NJ 08544, USA | Website: arunkannawadi.github.io Email(s): arunkannawadi@princeton.edu kannawadi.arun@gmail.com |
| RESEARCH INTERESTS | Weak gravitational lensing (WL), Galaxy clusters, Mass mapping, Large-scale structure of the Universe, Cosmology with Big Data | |
| CAREER POSITIONS | Postdoctoral Research Associate Princeton University, Princeton NJ, USA. | October 2019 - present |
| | Postdoctoral Researcher Leiden Observatory, Leiden, The Netherlands | September 2016 - September 2019 |
| | MITACS Globalink Research Assistant University of Toronto, Toronto, Canada. | May 2010 - August 2010 |
| | Summer intern, working on μ CLinux Sands India Pvt. Ltd., Chennai, India | May 2009 - August 2009 |
| EDUCATION | <i>Doctorate of Philosophy</i> McWilliams Center for Cosmology Department of Physics, Carnegie Mellon University Advisor: Prof. Rachel Mandelbaum Thesis: Systematic effects in realistic image simulations for future Weak Lensing surveys | May 2013 - August 2016 |
| | <i>Master of Science, Physics</i> Department of Physics, Carnegie Mellon University (CMU) | August 2011 - May 2013 |
| | <i>Bachelor of Technology, Electrical Engineering & Physics</i> Indian Institute of Technology, Madras (IITM) Chennai, India | August 2007 - June 2011 |
| PUBLICATIONS | <i>As of February 28, 2020, I have 28 refereed journal papers and 8 pre-prints on arXiv/astro-ph, several of which are accepted for publication. I have a total of 849 citations according to SAO/NASA ADS, with an h-index of 14, i.e., 14 papers with 14 or more citations.</i> | |
| GRANTS, AWARDS & FELLOWSHIPS | Pipeline Scientist, LSST Dark Energy Science Collaboration (US\$149k) Co-I for Cycle 28 HST proposal (HST-AR-16138; US\$20k) “Constraining the masses of galaxy overdensities at $z > 1$ in CANDELS and COSMOS through weak lensing in the NIR” Several travel supports from LSST DESC Travel funding from Graduate Student Assembly to attend 224 th AAS meeting (US\$1K) The Arnys Clinton Lilly Jr. Fellowship (Graduate fellowship) The Dr. Thane Smith Fellowship (Graduate fellowship) MITACS Scholarship (CA\$8.5k) Travel grant from Office of Alumni Affairs, IITM (15K INR) Scholarship from T.I.M.E covering 4 year tuition at IITM (> 104K INR) | October 2020-2023 2020-2022 2015 2014 2012 2012 2010 2010 2007-2011 |

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| SOFTWARE | Python, C, C++, Matlab/Octave, Git, L ^A T _E X | |
| DEVELOPMENT | Co-developed GalSim ¹ , an open source package for realistic galaxy image simulations. Stack developer, Rubin Observatory Data Management | |
| TEACHING & MENTORSHIP | Invited lecturer - Special undergraduate course on Gravitational Lensing ² University of Antioquia, Medellin, Colombia (Developed 20 hours worth of lecture and lab exercises) Research supervisor for a Masters student at Leiden Observatory LEAPS ³ research advisor for undergraduate students TA - Summer Academy of Mathematics and Science (SAMS) TA - Physics-II for Engineers (33-107) TA - Matter and Interactions-II (33-132) TA - Physics-II for Science students (33-112) | Summer 2017 October 2018 - July 2019 Summer 2017 & 2018 Summer-2 2012 Summer-1 2012 Spring 2012 Fall 2011, 2012 |
| SELECTED TALKS | Thunch, Dept. of Astrophysical Sciences, Princeton University, Princeton Plenary talk at the Euclid Consortium meeting, Helsinki, Finland (c.) Cosmology on Safari, KwaZulu-Natal, South Africa Stony Brook/Brookhaven National laboratory joint cosmology seminar HSC meeting, Princeton University, Princeton Seminar, Raman Research Institute, Bangalore Seminar, Indian Institute of Astrophysics, Bangalore Seminar(s), Indian Institute of Technology, Madras Dark Energy in the Laboratory, Lorentz Center, Leiden (c.) 228 th meeting, American Astronomical Society (AAS), San Diego * Invited talks, unless denoted by (c.) | December 2020 June 2019 March 2019 January 2019 January 2019 December 2017 December 2017 Dec 2017, Jan 2015 November 2017 June 2016 |
| PROFESSIONAL ACTIVITIES & OUTREACH | Editorial board member, Galaxies (ISSN 2075-4434) Reviewer for MNRAS (19 reviews for 8 manuscripts) Writer for Princeton Insights accessible reviews Organising team, Astronomy on Tap, Leiden Public talk, Planetarium of Medellin, Colombia Public talk, Allegheny Observatory, Pittsburgh Poster Judge for 228th AAS meeting Poster Judge for Meeting of the Minds, CMU Coordinator for Science outreach, National Service Scheme, IITM | August 2020 - present July 2015 - present July 2020 - present March 2017 - March 2019 July 2017 July 2016 June 2016 May 2016 Aug 2008 - July 2009 |
| LEADERSHIP ROLES | Convener of job opportunities outside academia for Astro graduates <i>Co-Lead</i> , Shape measurement work package, Euclid Consortium President of Indian Graduate Student Association, CMU (nominated for Outstanding Student Organization Leader in 2014; previously served as Vice-President and Treasurer Coordinator - Shaastra Circuit Design Challenge, IITM Project Lead, Fertiliser feeder, Spirit of Engineering, IITM | June 2020 - present September 2017 - present 2014 January 2010 - October 2010 May 2008 - October 2008 |
| MEMBERSHIPS | Active member of Euclid Consortium Diversity Committee Junior member, International Astronomical Union (IAU) Infrastructure contributor to Kilo-Degree Survey (KiDS) Member of the WFIRST Detector requirements team Member of LSST Dark Energy Science Collaboration Member of Euclid Consortium | June 2018 - present October 2018 - present 2016 - present 2014-2016 2013- 2016 & 2019 - present 2013 - present |

¹ <https://github.com/GalSim-developers/GalSim>

² <https://sites.google.com/site/astrotwincolo/meetings/2017-5th-meeting>

³ <http://leaps.strw.leidenuniv.nl/>

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| SCHOLARLY ACHIEVEMENTS | All India Rank of 206 (top 0.1 percentile) in IIT-Joint Entrance Examination (JEE) | 2007 |
| | All India Rank of 618 and Tamilnadu State Rank of 12 in | |
| | All India Engineering Entrance Examination (AIEEE) | 2007 |
| | All India Rank of 4 in Vellore Institute of Technology Entrance Examination | 2007 |
| | First in the district of Chennai on 10 th grade board examinations | 2005 |

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| POSTERS PRESENTED | Workshop on Weak gravitational lensing, Berkeley | January 2019 |
| | Workshop on Foreground physical effects on LSST WL Science | December 2015 |
| | Innovation with Impact, CMU | April 2015 |
| | 224 th meeting, American Astronomical Society (AAS), Boston | June 2014 |

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| WORKSHOPS PARTICIPATED | Rubin Observatory algorithms workshop (virtual) | March 2020 |
| | Euclid Consortium meeting, Bonn, Germany | June 2018 |
| | Statistical challenges for LSS in the era of LSST, Oxford, England | April 2018 |
| | Euclid Consortium meeting, London, England | June 2017 |
| | The Bright & Dark Universe, Naples, Italy | January 2017 |
| | LSST Dark Energy Science Collaboration meeting, Sacramento, USA | March 2015 |
| | Wide Field Infra-Red Survey meeting, Pasadena, USA | November 2014 |
| | Santa Fe Cosmology Workshops, 2013 & 2014 | July 2013, 2014 |
| | Summer school on Astrostatistics, Pennsylvania State University (PSU), USA | May 2013 |

REFERENCES

Prof. Dr. Henk Hoekstra

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Prof. Rachel Mandelbaum

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