

LIST OF PUBLICATIONS

Priyamvada Natarajan

Citation Statistics from NASA ADS: Total number of citations - 20,109
Number of papers: 218 (as of March 12, 2024)
h-index: 82; i-10 index: 172

1. Natarajan, Priyamvada et al., 2024.
Strong Lensing By Galaxy Clusters
Space Science Reviews, 220, 19, *arXiv2403.06245*.
2. Tokayer, Yarone; Dutra, Isaque; Natarajan, Priyamvada; Mahler, Guillaume; Jauzac, Mathilde; Meneghetti, Massimo.
The Galaxy-Galaxy Strong Lensing cross section and the internal distribution of matter in LCDM substructure
ApJ, *under review*.
3. Fu Shenming; et al., 2024.
LoVoCCS – II. Weak Lensing Mass Distributions, Red-Sequence Galaxy Distributions, and Their Alignment with the Brightest Cluster Galaxy in 58 Nearby X-ray-Luminous Galaxy Clusters
submitted ApJ, *arXiv2402.10337*.
4. Burke, Colin; Liu, Yichen; Ward, Charlotte; Natarajan, Priyamvada; Greene, Jenny; 2024.
Dwarf AGNs from Variability for the Origins of Seeds (DAVOS): Properties of Variability-Selected AGNs in the COSMOS Field and Expectations for Rubin Observatory
ApJ under review, *arXiv240206882B*
5. Chowdhary, Rudrani Kar; Chang, Janet; Dai, Lixin & Natarajan, Priyamvada, 2024.
Detecting Population III Stars through Tidal Disruption Events in the Era of JWST and Roman
submitted ApJ, *arXiv240112752C*.
6. Natarajan, Priyamvada; Pacucci, Fabio; Ricarte, Angelo; et al., 2024.
First Detection of an Over-Massive Black Hole Galaxy: UHZ1 – Evidence for Heavy Black Hole Seeds From Direct Collapse?
ApJ Letters, 960, L1.
7. Natarajan, P; et al. 2023.
Introducing QUOTAS as a new research platform for the data-driven discovery of supermassive black holes *Nature Astronomy*, 7, 879
8. Cho, Hyerin; Prather, Ben; Narayan, R; Natarajan, P; et al. 2023.
Bridging Scales in Black Hole Accretion and Feedback: Magnetized Bondi Accretion in 3D GRMHD
ApJ Letters, 959, 22.

9. Pirzkal, N; et al. 2023.
The Next Generation Deep Extragalactic Exploratory Public Near-Infrared Slit-less Survey Epoch 1 (NGDEEP-NISS1): Extra-Galactic Star-formation and Active Galactic Nuclei at $0.5 < z < 3.6$
under review, The Astrophysical Journal, arXiv:2312.09972

10. Leung, Gene., et al. 2023.
NGDEEP Epoch 1: The Faint End of the Luminosity Function at z 9-12 from Ultradeep JWST Imaging
ApJ Letters, 954, 46.

11. Bodgan, Akos; Goulding, Andy; Natarajan, Priyamvada; et al., 2024.
Evidence for heavy seed origin of early supermassive black holes from a z 10 X-ray quasar
Nature Astronomy, 8, 126.

12. Bagley, Micaela., et al., 2023.
The Next Generation Deep Extragalactic Exploratory Public (NGDEEP) Survey
accepted ApJ, arXiv:2302.05466.

13. Galison, Peter., et al., 2023.
The Next Generation Event Horizon Telescope Collaboration: History, Philosophy, and Culture
Galaxies, 11, 32.

14. Beauchesne, Benjamin., et al. 2023.
A new step forward in realistic cluster lens mass modelling: Analysis of Hubble Frontier Field Cluster Abell S1063 from joint lensing, X-ray and galaxy kinematics data
MNRAS, 527, 3246.

15. Meneghetti, Massimo et al., 2023.
A persistent excess of galaxy-galaxy strong lensing observed in galaxy clusters
A&A Letters, 678, 2.

16. Allen, Bruce., et al., 2023.
The International Pulsar Timing Array checklist for the detection of nanohertz gravitational waves
available at arXiv:23004.04767.

17. The International Pulsar Timing Array Collaboration+, 2023.
Comparing recent PTA results on the nanohertz stochastic gravitational wave background
under review ApJ, arXiv:2309.00693.

18. Chen, Nianyi, et al., 2023.
Flyby Galaxy Encounters with Multiple Black Holes Produce Star-forming Linear Features
ApJ Letters, 954, 2.

19. Goulding, Andy., et all., 2023.
UNCOVER: The growth of the first massive black holes from JWST/NIRSpec – spectroscopic redshift confirmation of an X-ray luminous AGN at $z=10.1$
ApJ Letters, 955, 24.

20. Tremmel, Michael; Ricarte, Angelo; Natarajan, Priyamvada., et al. 2023 .
An Enhanced Massive Black Hole Occupation Fraction Predicted in Cluster Dwarf Galaxies

under review OJA, arXiv:2306.12813.

21. Agazie, Gabriella., et al., 2023.
The NANOGrav 15-year data set: Search for Transverse Polarization Modes in the Gravitational-Wave Background
submitted, arXiv:2310.12138.
22. Agazie, Gabriella., et al., 2023.
The NANOGrav 15-year Data Set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries
ApJ Letters, 951, 8.
23. Agazie, Gabriella., et al., 2023.
The NANOGrav 15 yr Data Set: Evidence for a Gravitational-wave Background
ApJ Letters, 951, 8.
24. Agazie, Gabriella., et al., 2023.
The NANOGrav 15 yr Data Set: Search for Signals from New Physics
ApJ Letters, 951, 11.
25. Agazie, Gabriella., et al., 2023 .
The NANOGrav 15 yr Data Set: Constraints on Supermassive Black Hole Binaries from the Gravitational-wave Background
ApJ Letters, 952, 37.
26. Sengul, Cagan; Birrer, Simon; Natarajan, Priyamvada; Dvorkin, Cora., 2023.
Detecting Low-Mass Perturbors in Cluster Lenses using Curved Arc Bases
MNRAS, 526, 2525.
27. Niemić, Anna, et al., 2023.
Beyond the ultradeep frontier fields and legacy observations (BUFFALO): a high-resolution strong+weak-lensing view of Abell 370
MNRAS, 524, 2883.
28. Khusid, Nicole; Mingarelli, Chiara; Natarajan, Priyamvada, et. al., 2023.
Strongly Lensed Supermassive Black Hole Binaries as Nanohertz Gravitational-wave Sources
ApJ, 955, 25.
29. Weller, Emma Jane; Pacucci, Fabio; Natarajan, Priyamvada; Di Matteo, Tiziana., 2023.
Overmassive central black holes in the cosmological simulations ASTRID and Illustris TNG50
MNRAS, 522, 4963.
30. Johnson, Michael., et al. 2023.
Key Science Goals for the Next-Generation Event Horizon Telescope
Galaxies, vol. 11, Issue 3, p. 61.

31. van Dokkum., et al. 2023.
A Candidate Runaway Supermassive Black Hole Identified by Shocks and Star Formation in its Wake
ApJ Letters, 946, L50
32. Ricarte, Angelo., et al. 2023.
The ngEHT's Role in Measuring Supermassive Black Hole Spins,
Galaxies, vol. 11, issue 1, p. 6.
33. Pesce, D., et al. 2023.
Expectations for Horizon-Scale Supermassive Black Hole Population Studies with the ngEHT,
Galaxies, vol. 11, issue 1, p. 109.
34. Galison, Peter., et al. 2023.
The Next Generation Event Horizon Telescope Collaboration: History, Philosophy, and Culture,
Galaxies, vol. 11, issue 1, p. 32.
35. Emami, R., et al. 2023.
Probing plasma composition with the next generation Event Horizon Telescope (ngEHT),
Galaxies, 11, 11.
36. Emami, R., et al. 2023.
Tracing the hot spot motion using the next generation Event Horizon Telescope (ngEHT),
Galaxies, 11, 23.
37. Ramakrishnan, Venkatesh., et al., 2023.
Event Horizon and Environs (ETHER): A Curated Database for EHT and ngEHT Targets and Science
Galaxies, 11, 15.
38. Ghosh, Aritra., et al. 2023.
Morphological Parameters and Associated Uncertainties for 8 Million Galaxies in the Hyper Suprime-Cam Wide Survey
ApJ 953, 134.
39. Chadayammuri, Urmila; Bogdan, Akos; Ricarte, Angelo & Natarajan, Priyamvada. 2023.
Constraints from dwarf galaxies on black hole seeding and growth models with current and future surveys
ApJ, 946, 51.
40. Rui, Zhe Lee; Pacucci, Fabio; Natarajan, Priyamvada & Loeb, Avi. 2023.
The Two $z \sim 13$ Galaxy Candidates HD1 and HD2 Are Likely Not Lensed
MNRAS, 519, 585L.
41. Burke, C., et al. 2023.
Dwarf AGNs from Variability for the Origins of Seeds (DAVOS): Intermediate-mass black hole demographics from optical synoptic surveys
MNRAS, 518, 1880.

42. Mahler, G., et al. 2023.
Precision modeling of JWST's first cluster lens SMACSJ0723.3-7327
ApJ, 945, 49.
43. Gottlieb, Ore., et al. 2023.
Jetted and Turbulent Stellar Deaths: New -LVK-Detectable Gravitational Wave Sources *ApJ Letters*, 951, 30.
44. Cerini, Giulia; Cappelluti, Nico & Natarajan, Priyamvada. 2023.
New metrics to probe the dynamical state of galaxy clusters
ApJ, 945, 152.
45. Natarajan, Priyamvada; Kwok, Sun-Tang; Khochfar, Sadegh; McGibbon, Robert; Nord, Brian; Sigurdsson, Steinn; Tricot, Joe; George, Daniel & Hidary, Jack. 2021.
QUOTAS: A new research platform for the study of supermassive black hole populations, their hosts galaxies and parent dark matter halos,
ApJ, 952, 146.
46. Boddy, K., et al. 2022.
Snowmass2021 theory frontier white paper: Astrophysical and cosmological probes of dark matter, *Journal of High Energy Astrophysics*, Volume 35, p. 112-138.
47. Tonima Tasmin, Ananna., et al. 2022.
Probing the Structure and Evolution of BASS Active Galactic Nuclei through Eddington Ratios
ApJ Lett., 939, L13.
48. Meneghetti, M., et al. 2022.
The probability of galaxy-galaxy strong lensing events in hydrodynamical simulations of galaxy clusters
A&A, 668, 188.
49. Ragagnin, A., et al. 2022.
Galaxies in the central regions of simulated galaxy clusters
A&A, 665, 16.
50. Shenming, Fu., et al. 2022.
LoVoCCS. I. Survey Introduction, Data Processing Pipeline, and Early Science Results
ApJ, 933, 84.
51. Mahler, Guillaume; Natarajan, Priyamvada; Jauzac, Mathilde & Richard, Johan. 2023.
Gravitational lensing effects of supermassive black holes in cluster environments,
MNRAS, 518, 54.
52. Cappelluti, Nico; Hasinger, Guenther; Natarajan, Priyamvada. 2022.
Exploring the high-redshift PBH-LCDM Universe: early black hole seeding, the first stars and cosmic radiation backgrounds,
ApJ, 926, 205.

53. Agniva, Ghosh; et al. 2021.
Further support for a trio of mass-to-light deviations in Abell 370: free-form Grate lens inversion using BUFFALO strong lensing data,
MNRAS, 506, 6144.
54. Pesce, Dominic; et al. 2021.
Towards determining the number of observable supermassive black hole shadows,
ApJ, 923, 260.
55. Stopyra, Stephen; Peiris, Hiranya; Pontzen, Andrew; Jasche, Jens & Natarajan, Priyamvada. 2021.
Quantifying the Rarity of the Local Super-Volume, *MNRAS*, 507, 542.
56. Natarajan, Priyamvada; Kwok, Sun-Tang; Khochfar, Sadegh; Nord, Brian; Sigurdsson, Steinn; Tricot, Joe; George, Daniel & Hidary, Jack. 2021.
Quasarnet: A new research platform for the data-driven investigation of black holes, *Commentary in Nature Astronomy*, *accepted*.
57. Ricarte, Angelo; Tremmel, Michael; Natarajan, Priyamvada & Quinn, Tom. 2021.
Unveiling the Population of Wandering Black Holes via Electromagnetic Signatures,
ApJ Lett, 916, L18.
58. Ricarte, Angelo; Tremmel, Michael; Natarajan, Priyamvada; Zimmer, Charlotte & Quinn, Tom. 2021.
The Origin and Demographics of Wandering Black Holes,
MNRAS, 503, 6098.
59. Natarajan, Priyamvada. 2021.
A new channel to form Intermediate Mass Black Holes throughout cosmic time,
MNRAS, 501, 1413.
60. Meneghetti, M; Davoli, G; Bergamini, P; Rosati, P; Natarajan, P. et al. 2020.
An excess of small-scale gravitational lenses observed in galaxy clusters, *Science*, Vol. 369, Issue 6509, 1347-1353.
61. Holley-Bockelmann, K. et al. 2020.
Getting Ready for LISA: The Data, Support and Preparation Needed to Maximize US Participation in Space-Based Gravitational Wave Science,
eprint arXiv:2012.02650.
62. Tam, S-I., et al. 2020.
The distribution of dark matter and gas spanning 6 Mpc around post-merger galaxy cluster MS-0451-03,
MNRAS, 496, 4032.
63. Ricarte, Angelo; Tremmel, Michael; Natarajan, Priyamvada & Quinn, Thomas. 2020.
A Link between Ram Pressure Stripping and Active Galactic Nuclei,
ApJ, 895, L8.
64. Niemeic, Anna., et al. 2020.
hybrid-LENSTOOL: a self-consistent algorithm to model galaxy clusters with strong- and weak-lensing simultaneously,
MNRAS, 493, 3331.
65. Steinhardt, C., et al., 2020.
The BUFFALO HST Survey, *ApJS*, 247, 64.
66. Natarajan, Priyamvada et al. 2019.
Disentangling nature from nurture: tracing the origin of seed black holes,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 73.

67. Cornish, Neil., et al. 2019.
The Discovery Potential of Space-Based Gravitational Wave Astronomy,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 76.
68. Pacucci, Fabio., et al. 2019.
Detecting the Birth of Supermassive Black Holes Formed from Heavy Seeds,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 117.
69. Baker, John., et al. 2019.
Multi-messenger science opportunities with mHz gravitational waves, *White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 123.*
70. Colpi, Monica., et al. 2019.
The Gravitational View of Massive Black Hole Mergers,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, 2BAAS, 51, 7, 383.
71. Wang, Yun., et al. 2019.
Illuminating the dark universe with a very high density galaxy redshift survey over a wide area,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 508.
72. Thorpe, James., et al. 2019.
The Laser Interferometer Space Antenna: Unveiling the Millihertz Gravitational Wave Sky,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 77.
73. Holley-Bockelmann, K., et al. 2019.
Building a Field: The Future of Astronomy with Gravitational Waves,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 228.
74. Mueller, G., et al., 2019.
Space based gravitational wave astronomy beyond LISA,
White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository, BAAS, 51, 7, 243.
75. Kashlinsky, S. et al., 2019.
Populations behind the source-subtracted cosmic infrared background anisotropies, White paper submitted to the 2020 Decadal Survey, the NAS White Paper Repository,
BAAS, 51, 7, 37.
76. Bertone, G., et. al., 2019.
Gravitational wave probes of dark matter: challenges and opportunities,
White Paper submitted to arXiv.190710610.
77. Woods, Tyrone., et. al., 2019.
Titans of the early Universe: The Prato statement on the origin of the first supermassive black holes,
PASA, 26, 37.
78. Ananna, T., et al., 2019.
VizieR Online Data Catalog: Stripe 82X survey multiwavelength catalog,
2019yCat, 18500066A.

79. Ricarte, Angelo; Pacucci, Fabio; Cappelluti, Nico; Natarajan, Priyamvada & Quinn, Tom, 2019.
The clustering of undetected high-redshift black holes and their signatures in cosmic backgrounds,
MNRAS, 489, 1006.
80. Ricarte, Angelo; Tremmel, Michael; Natarajan, Priyamvada & Quinn, Tom, 2019.
Tracing Black Hole and Galaxy Co-evolution in the Romulus Simulations,
MNRAS, 489, 802.
81. Natarajan, Priyamvada et al. 2019.
Disentangling nature from nurture: tracing the origin of seed black holes, *White paper submitted to the 2020 Decadal Survey submitted to NAS White Paper Repository, 2019arXiv190409326N*
82. Tremmel, Michael et al., 2019.
Introducing RomulusC: A Cosmological Simulation of a Galaxy Cluster with Unprecedented Resolution,
MNRAS, 483, 3336.
83. Ricarte, Angelo & Natarajan, Priyamvada, 2018.
The Observational Signatures of Supermassive Black Hole Seeds,
MNRAS, 481, 3278.
84. Ricarte, Angelo & Natarajan, Priyamvada, 2018.
Exploring SMBH Assembly with Semi-analytic Modelling,
MNRAS, 474, 1995.
85. Cappelluti, Nico et al., 2018.
Searching for the 3.5 keV Line in the Deep Fields with Chandra: The 10 Ms Observations,
ApJ, 854, 179.
86. Jauzac, Mathilde et al., 2018.
Growing a Cosmic Beast: observations and simulations of MACSJ0717.5+3745,
MNRAS, 481, 2901.
87. Pacucci, Fabio; Natarajan, Priyamvada; et al., 2017.
Conditions for Optimal Growth of Black Hole Seeds,
ApJ Letters, 850, 42.
88. Ananna, Tonima Tasnim; et al., 2017.
AGN Populations in Large Volume X-ray Surveys: Photometric Redshifts and Population Types found in the Stripe 82X Survey,
ApJ, 850, 66.
89. Cappelluti, Nico et al., 2017.
Probing Large-scale Coherence between Spitzer IR and Chandra X-Ray Source-subtracted Cosmic Backgrounds,
ApJ, 847, 11.

90. Lotz, Jennifer; et al. 2017.
The Frontier Fields: Survey Design and Initial Results,
ApJ, 837, 97.
91. Trakhtenbrot, Benny; Volonteri, Marta; Natarajan, Priyamvada, 2017.
On the Accretion Rates and Radiative Efficiencies of the Highest-redshift Quasars,
ApJ, 836, 1.
92. Pacucci, Fabio; Natarajan, Priyamvada; Ferrara, Andrea, 2017.
Feedback Limits to Maximum Seed Masses of Black Holes,
ApJ, 835, 36.
93. Natarajan, Priyamvada; Pacucci, Fabio; Ferrara, Andrea; Agarwal, Bhaskar; Ricarte, Angelo; Zackrisson, Eric & Cappelluti, Nico, 2017.
Unveiling the first black holes with JWST: multi-wavelength spectral predictions,
ApJ, 838, 117.
94. Cappelluti, Nico; et al., 2017.
The Chandra COSMOS Legacy Survey: Energy Spectrum of the Cosmic X-Ray Background and Constraints on Undetected Populations,
ApJ, 837, 19.
95. Natarajan, Priyamvada; Chadayammuri, Urmila; Jauzac, Mathilde et al., 2017.
Mapping substructure in the HST Frontier Fields cluster lenses and in cosmological simulations,
MNRAS, 468, 1962.
96. Rexroth, Markus; Natarajan, Priyamvada; Kneib, Jean-Paul., 2016.
A new method to break the mass-sheet degeneracy using aperture moments,
MNRAS, 460, 2505.
97. Meneghetti, Massimo; Natarajan, Priyamvada; et al., 2017.
The Frontier Fields Lens Modeling Comparison Project,
MNRAS, 472, 3177.
98. Schwinn, Johannes; Jauzac, Mathilde; et al., 2016.
Abell 2744: Too much substructure for Lambda CDM?
MNRAS, 463, 3876.
99. Richard, Johan; et al. 2016.
Hubble Frontier Fields: predictions for the return of SN Refsdal with the MUSE and GMOS spectrographs,
MNRAS, 457, 2029.
100. Agarwal, Bhaskar; Johnson, Jarrett L.; Zackrisson, Erik; Labbe, Ivo; van den Bosch, Frank C.; Natarajan, Priyamvada; Khochfar, Sadegh, 2016.
Detecting direct collapse black holes: making the case for CR7,
MNRAS, 460, 4003

101. Jauzac, Mathilde; et al., 2016.
The extraordinary amount of substructure in the Hubble Frontier Fields cluster Abell 2744,
MNRAS, 463, 3876.
102. LaMassa, Stephanie, et al. 2016.
On R-W1 as a diagnostic to discover obscured active galactic nuclei in wide area X-ray surveys,
ApJ, 818, 88.
103. Park, Kwang-Ho; Ricotti, Massimo; Natarajan, Priyamvada; Wise, John; Bogdanovic, Tamara., 2016.
Bulge-driven fueling of seed black holes,
ApJ, 818, 184.
104. Limousin, M. et al. 2016.
Strong-Lensing Analysis of MACS,J0717.5+3745 from Hubble Frontier Fields observations: How well can the mass distribution be constrained?
A&A, 588, 99.
105. Ricarte, Angelo; Natarajan, Priyamvada; Dai, Lixin; Coppi, Paolo, 2016.
Tidal Disruption Events by a Massive Black Hole Binary,
MNRAS, 458, 1712.
106. Agarwal, Bhaskar; Smith, Britton; Glover, Simon; Natarajan, Priyamvada; Khochfar, Sadegh, 2016.
New constraints on direct collapse black hole formation in the early Universe,
MNRAS, 459, 4209.
107. Jauzac, Mathilde; et al., 2015.
Hubble Frontier Fields: a high-precision strong-lensing analysis of the massive galaxy cluster Abell 2744 using 180 multiple images,
MNRAS, 452, 1437.
108. Jauzac, Mathilde; et al., 2015.
Hubble Frontier Fields: Predictions for the Return of SN Refsdal with the MUSE and GMOS Spectrographs,
MNRAS, 452, 1437.
109. Atek, Hakim; Richard, Johan; Jauzac, Mathilde; Kneib, Jean-Paul; et al., 2015.
Are Ultra-faint Galaxies at $z=6-8$ Responsible for Cosmic Reionization ? Combined Constraints from the Hubble Frontier Fields Clusters and Parallels,
ApJ, 814, 69.
110. Jauzac, Mathilde et al., 2015.
Hubble Frontier Fields : A High-Precision Strong-Lensing Mass Model of the Massive Galaxy Cluster Abell 2744 using 150 Multiple Images,
MNRAS, 446, 4132.
111. Kulier, Andrea; Ostriker, Jeremiah P.; Natarajan, Priyamvada; Lackner, Claire N.; Cen, Renyue, 2015.

- Understanding Black Hole Mass Assembly via Accretion and Mergers at Late Times in Cosmological Simulations,
ApJ, 799, 178.
112. Atek, Hakim et al., 2015.
New Constraints on the Faint-end of the UV Luminosity Function at $z \sim 7 - 8$ using the Gravitational Lensing of the Hubble Frontier Fields Cluster A2744,
ApJ, 800, 18.
113. Natarajan, Priyamvada, 2014.
Seeds to monsters: tracing the growth of black holes in the universe,
Gravitation and Cosmology, 46, 1702.
114. Alexander Tal & Natarajan, Priyamvada, 2014.
Rapid growth of seed black holes in the early universe by supra-exponential accretion,
Science, 345, 1330.
115. D'Aloisio, Anson; Natarajan, Priyamvada & Shapiro, Paul, 2014.
The effect of large-scale structure on the magnification of high-redshift sources by cluster lenses,
MNRAS, 445, 3581.
116. Richard, Johan et al., 2014.
Mass and magnification maps for the Hubble Space Telescope Frontier Fields clusters: implications for high-redshift studies,
MNRAS, 444, 268.
117. Atek, Hakim et al., 2014.
Probing the $z > 6$ Universe with the First Hubble Frontier Fields Cluster A2744,
ApJ, 786, 60.
118. Jauzac, Mathilde et al., 2014.
Hubble Frontier Fields: a high-precision strong-lensing analysis of galaxy cluster MACSJ0416.1-2403 using ~ 200 multiple images,
MNRAS, 443, 1549.
119. Treister, E.; Schawinski, K.; Volonteri, M.; Natarajan, P, 2013.
New Observational Constraints on the Growth of the First Supermassive Black Holes,
ApJ, 778, 130.
120. Atek, Hakim et al., 2013.
Probing the $z > 6$ Universe with the first Hubble Frontier Fields cluster Abell 2744,
ApJ, 786, 60.
121. Treu, T. et al., 2013.
Dark energy with gravitational lens time delays,
White paper submitted to SNOWMASS2013, preprint arXiv1306.1272T.

122. Agarwal, Bhaskar; Davis, Andrew; Khochfar, Sadegh; Natarajan, Priyamvada & Dunlop, James, 2013.
Unravelling obese black holes in the first galaxies,
MNRAS, 432, 3438.
123. Natarajan, Priyamvada & Volonteri, Marta, 2012.
The mass function of black holes $1 < z < 4.5$ comparison of models with observations,
MNRAS, 422, 2051
124. Capelo, Pedro; Coppi, Paolo & Natarajan, Priyamvada, 2012.
The polytropic approximation and X-ray scaling relations: constraints on gas and dark matter profiles for galaxy groups and clusters,
MNRAS, 422, 686
125. Oguri, Masamune, et. al., 2012.
Combined strong and weak lensing analysis of 28 clusters from the Sloan Giant Arcs Survey,
MNRAS, 420, 3213
126. D'Aloisio, Anson & Natarajan, Priyamvada, 2012.
The Effects of Primordial Non-Gaussianity on Giant-Arc Statistics: A Scale Dependent Example,
published in proceedings of the 2011 Frank N. Bash New Horizons in Astronomy Symposium,
arXiv:1202.0553.
127. Natarajan, Priyamvada, 2012.
The formation of the first black holes in the Universe,
white paper, circulated.
128. Natarajan, Priyamvada & Volonteri, Marta, 2012.
The crisis in fueling the brightest quasars at all epochs,
white paper, circulated.
129. Natarajan, Priyamvada & Volonteri, Marta, 2012.
The mass function of black holes $1 < z < 4.5$: comparison of models with observations,
MNRAS, 422, 2051
130. Capelo, Pedro; Coppi, Paolo & Natarajan, Priyamvada, 2012.
The polytropic approximation and X-ray scaling relations: constraints on gas and dark matter profiles for galaxy groups and clusters,
MNRAS, 422, 686
131. Oguri, Masamune, et. al., 2012.
Combined strong and weak lensing analysis of 28 clusters from the Sloan Giant Arcs Survey,
MNRAS, 420, 3213
132. Tanvir, Nial et al., 2012.
Star formation in the early universe: beyond the tip of the iceberg,
submitted to ApJ, 754, 46.

133. Kneib, Jean-Paul & Natarajan, Priyamvada, 2011.
Cluster-lenses,
A&ARv, 19, 47.
134. Schawinski, Kevin et al., 2011.
Evidence for three accreting black holes in a galaxy at $z \sim 1.35$: A Snapshot of recently formed black hole seeds?,
ApJ, 743, L37.
135. Natarajan, Priyamvada, 2011.
The mass assembly history of black holes in the Universe,
Invited Review, Proceedings of the XVth Congress of Philosophy & Foundations of Science published by American Institute of Physics, arXiv:1105.4902
136. Treister, Ezequiel; Schawinski, Kevin; Volonteri, Marta; Natarajan, Priyamvada & Gawiser, Eric., 2011.
Black hole growth in the early Universe is self-regulated and largely hidden from view,
Nature, 474, 356.
137. D'Aloisio, Anson & Natarajan, Priyamvada, 2011.
The effects of primordial non-Gaussianity on giant-arc statistics,
MNRAS, 415, 1913.
138. Natarajan, Priyamvada, 2011.
The formation and evolution of massive black hole seeds in the Universe,
BASI, 39, 145.
139. Volonteri, Marta; Natarajan, Priyamvada & Gültekin, Kayhan, 2011.
How important is the dark matter halo for black hole growth?
ApJ, 737, 50.
140. D'Aloisio, Anson & Natarajan, Priyamvada, 2011.
Cosmography with cluster strong lenses: the influence of substructure and line-of-sight halos,
MNRAS, 411, 1628.
141. Schawinski, Kevin; et al., 2010.
The Sudden Death Of The Nearest Quasar,
ApJ, 724, L30.
142. Davis, Andrew; D'Aloisio, Anson & Natarajan, Priyamvada, 2011.
Virialization of high redshift dark matter haloes,
MNRAS, 416, 242.
143. Natarajan, Priyamvada, 2010
Weak lensing constraints on dark matter haloes of early-type galaxies,
HiA, 15, 71.

144. Jullo, Eric; Natarajan, Priyamvada; et al., 2010.
Cosmological Constraints from Strong Gravitational Lensing in Clusters of Galaxies,
Science, 329, 924.
145. Treister, Ezequiel; Natarajan, Priyamvada et al., 2010.
Major Galaxy Mergers and the Growth of Supermassive Black Holes in Quasars,
Science, 328, 600.
146. Davis, Andrew & Natarajan, Priyamvada, 2010.
Spin and structural halo properties at high redshift in a Λ cold dark matter Universe,
MNRAS, 407, 691.
147. Comerford, Julia; Moustakas, Leonidas & Natarajan, Priyamvada, 2010.
Observed Scaling Relations for Strong Lensing Clusters: Consequences for Cosmology and Cluster
Assembly,
ApJ, 715, 162.
148. Capelo, Pedro; Coppi, Paolo & Natarajan, Priyamvada, 2010.
Hydrostatic equilibrium profiles for gas in elliptical galaxies,
MNRAS, 407, 1148.
149. Volonteri, Marta & Natarajan, Priyamvada, 2009.
Journey to the $M_{BH} - \sigma$ relation: the fate of low-mass black holes,
in the Universe, *MNRAS*, 400, 1911.
150. Gilmore, James & Natarajan, Priyamvada, 2009.
Cosmography with cluster strong lensing,
MNRAS, 396, 354.
151. Oguri, M., et al., 2009.
Subaru Weak Lensing Measurements of Four Strong Lensing Clusters: Are Lensing Clusters Over-
Concentrated?,
ApJ, 699, 1038.
152. Davis, Andrew & Natarajan, Priyamvada, 2009.
Angular momentum and clustering properties of early dark matter halos,
MNRAS, 393, 1498.
153. D'Aloisio, Anson; Furlanetto, Steven & Natarajan, Priyamvada, 2009.
The abundance of lensing protoclusters,
MNRAS, 394, 1469.
154. Natarajan, Priyamvada & Treister, Ezequiel, 2009.
Is there an upper limit to black hole masses?
MNRAS, 393, 838.

155. Natarajan, Priyamvada, et al., 2009.
Survival of dark matter halos in the cluster Cl0024+16,
ApJ, 693, 970.

156. Limousin, M; Sommer-Larsen, Jesper; Natarajan, Priyamvada & Milvang-Jensen, Bo, 2009
Probing the truncation of galaxy dark matter halos in high density environments from hydro-
dynamical N-body simulations,
ApJ, 696, 1771.

157. Natarajan, Priyamvada; Croton, Darren & Bertone, Gianfranco, 2008.
Consequences of dark matter self-annihilation for galaxy formation,
MNRAS, 388, 1652.

158. Natarajan, Priyamvada & HongSheng Zhao, 2008.
MOND plus neutrinos not enough for cluster lensing,
MNRAS, 389, 250.

159. Wilson, G; et al., 2008.
An ultra-bright, dust-obscured, millimeter galaxy beyond the Bullet Cluster,
MNRAS, 390, 1061.

160. Rines, Kenneth; Diaferio, Antonaldo & Natarajan, Priyamvada, 2008.
WMAP5 and the Cluster Mass Function,
ApJ, 679, L1.

161. Eliasdottir, A., et al., 2008.
Where is the matter in the merging cluster Abell 2218?,
preprint, arXiv:07105636.

162. Hennawi, Joseph; Gladders, Micheal; Oguri, Masamune; Dalal, Neal; Koester, Benjamin; Natarajan, Priyamvada et al., 2008.
A New Survey for Giant Arcs,
AJ, 135, 664.

163. Volonteri, Marta; Lodato, Guiseppe & Natarajan, Priyamvada, 2008.
The evolution of massive black hole seeds,
MNRAS, 383, 1079.

164. Capelo, Pedro & Natarajan, Priyamvada, 2007.
How robust are the constraints on cosmology and galaxy evolution from the lens-redshift test?
NJPh, 9, 445.

165. Lodato, Guiseppe & Natarajan, Priyamvada, 2007.
The mass function of high redshift seed black holes,
MNRAS, 377, 64.

166. Rines, Kenneth; Diaferio, Antonaldo & Natarajan, Priyamvada, 2007.
The Virial Mass Function of nearby SDSS Galaxy Clusters,
ApJ, 657, 183.
167. Natarajan, Priyamvada; De Lucia, Gabriella & Springel, Volker, 2007.
Substructure in lensing Clusters and Simulations,
MNRAS, 376, 180.
168. Comerford, Julia & Natarajan, Priyamvada, 2007.
The observed concentration-mass relation for galaxy clusters,
MNRAS, 379, 190.
169. Moeller, Ole; Kitzbilcher, Manfred & Natarajan, Priyamvada, 2007.
Strong lensing statistics in large, $z < 0.2$ surveys: bias in the lens galaxy population,
MNRAS, 379, 1195.
170. Limousin, Marceau; Kneib, Jean-Paul; Bardeau, Stephane; Natarajan, Priyamvada; Czoske, Oliver;
Smail, Ian; Ebeling, Harald & Smith, Graham, 2007.
Truncation of Galaxy Dark Matter Halos in high density environments,
A&A, 461, 881.
171. Limousin, M; Richard, J; Jullo, E; Kneib, J-P; Fort, B; Soucail, G; Eliasdottir, A; Natarajan, P;
Ellis, R. S; Smail, I; et al., 2007.
Combining Strong and Weak gravitational lensing in Abell 1689,
ApJ, 668, 643.
172. Lodato, Guiseppe & Natarajan, Priyamvada, 2006.
Supermassive black hole formation during the assembly of pre-galactic discs,
MNRAS, 371, 1813.
173. Cobb, Bethany; Bailyn, Charles; van Dokkum, Pieter & Natarajan, Priyamvada, 2006.
Could GRB 060614 and its presumed host galaxy be a chance superposition?
ApJ, 651, L85.
174. Aazami, Amir & Natarajan, Priyamvada, 2006.
Substructure and the cusp and fold Relations, *MNRAS*, 372, 1692.
175. Benatov, Latchezar; Rines, Ken; Natarajan, Priyamvada et al., 2006.
Galaxy orbits and the Intracluster Gas Temperature in Clusters,
MNRAS, 370, 427.
176. Cobb, Bethany; Bailyn, Charles; van Dokkum, Pieter & Natarajan, Priyamvada, 2006.
SN 2006aj and the Nature of Low-Luminosity Gamma-Ray Bursts,
ApJ, 645, L113.
177. Jakobsson, Pal et al., 2006.
GRB 050814 at $z = 5.3$ and the Redshift Distribution of Swift GRBs,

- AIPC*, 838, 552.
178. Treister, Ezequiel et al., 2006.
Spitzer Number Counts of Active Galactic Nuclei in the GOODS Fields,
ApJ, 640, 603.
179. Jakobsson, Pal et al., 2006.
A mean redshift of 2.8 for Swift Gamma-Ray Bursts,
A&A, 447, 897.
180. Natarajan, Priyamvada et al., 2005.
The Redshift distribution of Gamma-Ray Bursts revisited,
MNRAS, 364, L8.
181. Armitage, Philip & Natarajan, Priyamvada, 2005.
Eccentricity of Supermassive Black Hole Binaries coalescing from gas rich mergers,
ApJ, 634, 921.
182. Limousin, Marceau; Kneib, Jean-Paul & Natarajan, Priyamvada, 2005.
Constraining the Mass Distribution of Galaxies using Galaxy-Galaxy Lensing in Clusters and in
the Field,
MNRAS, 356, 309.
183. Natarajan, Priyamvada & Springel, Volker, 2004.
Abundance of Substructure in Clusters of Galaxies,
ApJ, 617, L13.
184. Barnard, Vicki et al., 2004.
SCUBA Observations of the Host Galaxies of Gamma-ray Bursts,
AIPC, 727, 508.
185. Tanvir, Nial et al., 2004.
The Sub-millimeter Properties of GRB Host Galaxies *MNRAS*, 352, 1073.
186. Quadri, Ryan; Moeller, Ole & Natarajan, Priyamvada, 2003.
Lensing effects of misaligned disks in Dark Matter Halos,
ApJ, 597, 659.
187. Jaunsen, Andreas et al., 2003.
An HST study of three very faint GRB Host Galaxies,
A&A, 402, 125.
188. Kneib, Jean-Paul et al., 2003.
HST Study of Cl0024+16: II. Measuring the Cluster Mass Distribution,
ApJ, 598, 804.

189. Treu, Tommaso et al., 2003.
A Wide-Field Space Telescope Study of the Cluster CL0024+16 at $z = 0.4$: I. Morphological distributions to 5 Mpc radius,
ApJ, 591, 53.
190. Barnard, Vicki et al., 2003.
SCUBA observations of the Host Galaxies of four dark Gamma-ray Bursts,
MNRAS, 338, 1.
191. Natarajan, Priyamvada; Kneib, Jean-Paul & Smail, Ian, 2002.
Evidence for Tidal Stripping of Dark Matter Halos in Massive Cluster Lenses,
ApJ, 580, L11.
192. Natarajan, Priyamvada; Loeb, Abraham; Kneib, Jean-Paul & Smail, Ian, 2002.
Constraints on the Collisional Nature of the Dark Matter from Gravitational Lensing in the Cluster A2218,
ApJ, 580, L17.
193. Hjorth, Jens et al., 2002.
The Afterglow and Complex Environment of the Optically Dim Burst GRB 980613,
ApJ, 576, 113.
194. Moller, Ole; Natarajan, Priyamvada; Kneib, Jean-Paul & Blain, Andrew, 2002.
Probing the Mass Distribution in Groups of Galaxies using Gravitational Lensing,
ApJ, 573, 562.
195. Schneider, Raffaella; Ferrara, Andrea; Natarajan, Priyamvada & Omukai, Kazuyuki, 2002.
First Stars, Very Massive Black Holes, and Metals,
ApJ, 571, 30.
196. Armitage, Philip & Natarajan, Priyamvada, 2002.
Accretion during the Merger of Supermassive Black Holes,
ApJ, 567, L9.
197. Goldberg, David & Natarajan, Priyamvada, 2002.
The Galaxy Octopole Moment as a Probe of Weak-Lensing Shear Fields,
ApJ, 564, 65.
198. Crittenden, Robert; Natarajan, Priyamvada; Pen, Ue-Li & Theuns, Tom, 2002.
Detecting Intrinsic alignments from non-zero curl modes in the distortion field,
ApJ, 568, 20.
199. Holland, S., et al., 2001.
The host galaxy and optical light curve of the gamma-ray burst GRB 980703,
A&A, 371, 52.

200. Crittenden, Robert; Natarajan, Priyamvada; Pen, Ue-Li & Theuns, Tom, 2001.
Spin induced Galaxy alignments and their Implications for Weak Lensing measurements,
ApJ, 559, 552.
201. Natarajan, Priyamvada; Crittenden, Robert; Pen, Ue-Li & Theuns, Tom, 2001.
Do Angular Momentum Induced Ellipticity Correlations Contaminate Weak Lensing Measurements?
PASP, 18, 198.
202. Natarajan, Priyamvada & Almaini, Omar, 2000.
Stellar contributors to the hard X-ray Background,
MNRAS, 318, L21.
203. Fynbo, Johann et al., 2000.
Hubble Space Telescope Space Telescope Imaging Spectrograph Imaging of the Host Galaxy of GRB 980425/SN 1998BW,
ApJ, 542, L89.
204. Natarajan, Priyamvada & Refregier, Alexandre, 2000.
Two-dimensional Galaxy-Galaxy Lensing: a direct measure of the flattening and alignment of light and mass in galaxies,
ApJ, 538, L113.
205. Blain, Andrew & Natarajan, Priyamvada, 2000.
Gamma-ray Bursts and the history of Star Formation,
MNRAS, 312, L35.
206. Natarajan, Priyamvada & Armitage, Philip, 1999.
Warped discs and the directional stability of jets in Active Galactic Nuclei,
MNRAS, 309, 961.
207. Armitage, Philip & Natarajan, Priyamvada, 1999.
The Blandford-Znajek mechanism and emission from isolated accreting black holes, *ApJ*, 523, L7.
208. Armitage, Philip & Natarajan, Priyamvada, 1999.
Lense-Thirring precession of accretion disks of Accretion Disks around Compact Objects,
ApJ, 525, 909.
209. Natarajan, Priyamvada, 1999.
Consequences of feedback from early supernovae for disk assembly,
ApJ, 105, L512.
210. Natarajan, Priyamvada & Pringle, James, 1998.
The alignment of disk and black hole spins in active galactic nuclei,
ApJ, 506, L97.
211. Haehnelt, Martin; Natarajan, Priyamvada & Rees, Martin, 1998.
High-redshift galaxies, their active nuclei and central black holes,

MNRAS, 300, 817.

212. Natarajan, Priyamvada & Sigurdsson, Steinn, 1998.
Sunyaev-Zeldovich decrements with no clusters?
MNRAS, 302, 288.
213. Natarajan, Priyamvada; Kneib, Jean-Paul; Smail, Ian & Ellis, Richard, 1998.
The Mass-to-Light Ratio of early-type Galaxies: Constraints from Gravitational Lensing in the Rich Cluster AC114,
ApJ, 499, 600.
214. Natarajan, Priyamvada; Sigurdsson, Steinn & Silk, Joseph, 1998.
Quasar outflows and the formation of dwarf galaxies,
MNRAS, 298, 577.
215. Wijers, Ralph; Bloom, Joshua; Bagla, Jasjeet & Natarajan, Priyamvada, 1998.
Gamma-ray bursts from stellar remnants: probing the Universe at high redshift,
MNRAS 294, L13.
216. Natarajan, Priyamvada & Pettini, Max, 1997.
Estimating the mass density in neutral gas at $z < 1$,
MNRAS, 291, L28.
217. Natarajan, Priyamvada et al., 1997.
The Host to Gamma-Ray Burst 970508: a Distant Dwarf Galaxy?
NEW ASTRONOMY, 2, 471.
218. Natarajan, Priyamvada & Kneib, Jean-Paul, 1997.
Lensing by galaxy halos in clusters of galaxies,
MNRAS, 287, 833.
219. Natarajan, Priyamvada; Hjorth, Jens & van Kampen, Eelco, 1996.
Distribution Functions for Clusters of Galaxies from N-body Simulations,
MNRAS, 286, 329.
220. Natarajan, Priyamvada & Lynden-Bell, Donald, 1996.
An analytic approximation to the Isothermal Sphere,
MNRAS, 286, 268.
221. Natarajan, Priyamvada & Kneib, Jean-Paul, 1996.
Probing the dynamics of Cluster-lenses,
MNRAS, 283, 1031.

INVITED REVIEWS

Early Black Holes (2024), in preparation for Physics Reports.

Cluster Lenses: Nature's Telescopes (2023), in preparation for Nature.

The First Black Holes (2017), appeared as cover article for Scientific American in February 2018.

The formation of the first black holes in the Universe (2013)

GR20/Amaldi 10 proceedings, published in Gravitation and Cosmology.

The formation and evolution of black hole seeds in the early Universe (2011)

Bulletin of the Astronomical Society of India, Chandra Centennial Volume, arXiv:1104.4797

Cluster lenses (2011)

The Astronomy & Astrophysics Review, Volume 9, 47, Springer.

The mass assembly history of black holes in the Universe (2011)

American Institute of Physics, Proceedings of the Congress of Philosophy and Foundations of Science XV - International Program 'Frontier Areas of Research Excellence'

Modeling the accretion history of supermassive black holes (2004)

In: *Supermassive Black Holes in the Distant Universe*, ed. A. J. Barger, Kluwer Academic Publishers.

BOOKS

Natarajan, Priyamvada (2024)

Manuscript in Progress, Penguin Random House, to be published in 2026.

Natarajan, Priyamvada (2016)

Mapping the Heavens: radical ideas that reveal the cosmos Yale University Press, published Summer 2016.

Natarajan, Priyamvada (2002)

Editor: *The Shapes of galaxies and their dark matter halos* Proceedings of the Yale Cosmology Workshop, World Scientific.

RECENT OTHER PUBLICATIONS

Essays for New York Review of Books titled *In Search of Planet X*, published in 2019; and essay titled *What's the matter with matter*, published in 2021.

Catalog Essay for Antony Gormley Retrospective at the Royal Academy of Art, London, U.K. to be published in September 2019.

Opinion piece titled "At Long Last, a Glimpse of a Black Hole" in the New York Times, published on April 9, 2019.

Book reviews in the Wall Street Journal June 2018; December 2018, May 2019, March 2021, March 2022, December 2023.

Invited cover article for Scientific American February 2018, *The Puzzle of the First Black Holes*, republished in Special Issue title *Extreme Physics* in April 2019.

Invited pieces for Nautilus Magazine & Discover Magazine.

Invited Book Essays in the New York Review of Books titled *What Scientists Really Do; Revelation from Outer Space; Einstein at 100; Calculating Women* and *Exploration of Near & Far Worlds*.

Invited blog pieces for the New York Review Blog and Yale Press Blog.

Invited submission to journal *India in Transition* on Transforming India into a knowledge power.

Five Opinion Editorial pieces in the Hindustan Times published in New Delhi (newspaper with the largest circulation in India), three pieces published in Huffington Post, one in the Washington Post weekend Outlook section and one in CNN. All pieces are themed on science and math education and research.

Monthly column on astronomy at the popular level in the newspaper 'Asian Age' (2005 - 2008).

Rees, Martin & Natarajan, Priyamvada (2003)

The Dark Universe - a commissioned popular article for DISCOVER magazine (December 2003 issue).

Natarajan, Priyamvada (1998)

The Universe through Gravity's Lens- a popular level review article on Gravitational Lensing in *The Icon Critical Dictionary of the New Cosmology*, ed. Peter Coles, Icon Books Ltd., U.K.

Natarajan, Priyamvada & Lahav, Ofer (1996)

Synopsis of the Cosmology Session at the National Astronomy Meeting, Liverpool, U.K. : Testing cosmological models, *The Observatory*, Vol. 116, No. 1135, 335.

Creative writing - poetry and fiction - first collection of poems titled '784 Main Street Collection' published by WishWomen (Vol. 1, Issue 6) a women's poetry review magazine in August 1996.