

Navin Sridhar

CONTACT INFO	Department of Physics and KIPAC, 452 Lomita Mall, Stanford, CA 94305 E-mail: nsridhar@stanford.edu
EMPLOYMENT	Stanford University, CA <ul style="list-style-type: none">• Simons Collaboration (SCEECs) postdoctoral fellowship/KIPAC (2024–2028)• Supervisor: Dr. Roger Blandford
EDUCATION	Columbia University, NY <ul style="list-style-type: none">• Ph.D. in Astrophysics (May 2024)• M.A. (2020), M.Phil (2021) in Astrophysics Advisors: Dr. Lorenzo Sironi, Dr. Brian D. Metzger Thesis: Electromagnetic and Multimessenger Signals From Magnetized Outflows of Compact Object Binaries Indian Institute of Science Education & Research, Bhopal <ul style="list-style-type: none">• BS-MS in Physics (CPI: 9.05/10) (May 2018) Thesis: Accretion disk evolution around black holes, and thermonuclear bursts in neutron stars. (Caltech and TIFR)
AWARDS AND FELLOWSHIPS	<ol style="list-style-type: none">1. PI of NASA NICER grant (US\$45,000) (2026–2027)2. Neil Gehrels Prize Fellowship: JSI, University of Maryland & NASA (2024)3. Brinson Fellowship: Northwestern University/CIERA & University of Chicago (2024)4. NASA <i>FINESST</i> award (US\$100,000) (2022–2024)5. PI of NASA NICER grant (US\$37,500) (2022–2024)6. Simons Foundation Aspen center for physics grant (US\$1,350) (July 2023)7. International Astronomical Union (S378) travel grant (US\$1,600) (March 2023)8. Columbia Arts and Sciences Graduate Council travel grant (US\$500) (2022)9. Columbia ASGC Student/Diversity Initiative Grant (US\$2,000) (2022–2023)10. AAS National Osterbrock Leadership fellow (US\$6,400) (2021–2023)11. The Yeh Family endowment fellowship, Columbia University (2019–2020)12. Dean’s fellowship for graduate study at Columbia University (2018–2020)13. Caltech Summer Undergraduate Research Fellowship (US\$6,600) (July–Oct 2017)14. Mitacs Globalink Research Internship Award (~CA\$6,600) (May–July 2017)15. <i>INSPIRE</i> fellowship by DST, Govt. of India (INR 400,000) (2013–2018)
RESEARCH EXPERIENCE/ VISITS	<ul style="list-style-type: none">• Affiliated scientist, SCEECs (2023–2027)• Simons Collaboration on Extreme Electrodynamics of Compact Sources• Visiting Researcher, KITP, UC Santa Barbara (Sept 2024)• Visiting Student Researcher, Caltech, Pasadena (2023–2024) Host: Dr. Sterl Phinney• Stellar Interactions and the Transients they Cause, Aspen (July 2023) Host: Aspen Center for Physics, Colorado• Visiting researcher, Simons Foundation – plasma astrophysics program (2019–2023) Center for Computational Astrophysics, Flatiron Institute, NY Advisor(s): Dr. Sasha Philippov, Dr. Lorenzo Sironi• Summer Undergraduate Research Fellow (SURF), Caltech, Pasadena (July–Oct 2017) Advisor(s): Dr. Javier García, Prof. Fiona Harrison• Mitacs Globalink Research Intern, University of Alberta, Edmonton (May–July 2017) Advisor: Dr. Rodrigo Fernández• Visiting Summer Research Program, TIFR, Mumbai (May–July 2016) Advisor: Prof. Sudip Bhattacharyya• Indian Academy of Sciences summer research fellow, ISRO, Bangalore (June–Aug 2015) Advisor: Dr. Anuj Nandi• Visiting Student Program, IIAp, Bangalore (May–Dec 2015) Advisor: Prof. Aruna Goswami

As a lead author (10):

1. **Sridhar, N.**, Sobacchi, E., Sironi, L., et al. 2026. “*Interaction of Strong Electromagnetic Waves with Unmagnetized Pair Plasmas in the Relativistic Regime*” in prep.
2. **Sridhar, N.**, Ripperda, B., Sironi, L., et al. 2025. “*Bulk Motions in the Black Hole Jet Sheath as a Candidate for the Comptonizing Corona*” ApJ 979, 199
3. **Sridhar, N.**, Metzger, B. D., & Fang, K. 2024. “*High-Energy Neutrinos from Gamma-Ray-Faint Accretion-Powered Hypernebulæ.*” ApJ 960, 74
4. **Sridhar, N.**, Sironi, L., & Beloborodov, A. M. 2023. “*Comptonization by Reconnection Plasmoids in Black Hole Coronæ II: Electron-Ion Plasma.*” MNRAS 518, 1301-1315
5. **Sridhar, N.**, & Metzger, B. D. 2022. “*Radio Nebulæ from Hyper-Accreting X-ray Binaries as Common Envelope Precursors and Persistent Counterparts of FRBs*” ApJ 937, 5
6. **Sridhar, N.**, Sironi, L., & Beloborodov, A. M. 2021. “*Comptonization by Reconnection Plasmoids in Black Hole Coronæ I: Magnetically Dominated Pair Plasma*” MNRAS 507, 5625-5640
7. **Sridhar, N.**, Metzger, B. D., Beniamini, Paz., et al. 2021. “*Periodic Fast Radio Bursts from Luminous X-ray Binaries.*” ApJ 917, 13
8. **Sridhar, N.**, Zrake, J., Metzger, B. D., et al. 2021. “*Shock-powered radio precursors of neutron star mergers from accelerating relativistic binary winds.*” MNRAS 501, 3184-3202
9. **Sridhar, N.**, García, J. A., Steiner, J. F., et al. 2020. “*Evolution of the Accretion Disk—Corona during the Bright Hard-to-soft State Transition: A Reflection Spectroscopic Study with GX 339-4.*” ApJ 890, 53
10. **Sridhar, N.**, Bhattacharyya, S., Chandra, S., & Antia, H. M. 2019. “*Broad-band reflection spectroscopy of MAXI J1535-571 using AstroSat: estimation of black hole mass and spin.*” MNRAS 487, 4221-4229

≤ 3rd author, with significant contributions (10): [† = supervised student]

11. Uno, K.†, Metzger, B. D., **Sridhar, N.** et al. 2025. “*The Population of Radio Hypernebulæ from Mass-Transferring Massive Binaries*” to be submitted to ApJ
12. Gupta, S.†, **Sridhar, N.**, Sironi, L. 2023. “*Comptonization by Reconnection Plasmoids in Black Hole Coronæ III: Dependence on the Guide Field in Pair Plasma.*” MNRAS 527, 6065-6075
13. Gupta, S.†, **Sridhar, N.**, Sironi, L. 2025. “*The Role of Electric Dominance for Particle Injection in Relativistic Reconnection*” MNRAS 538, 49-59
14. Bhandari, S., Marcote, B., **Sridhar, N.**, et al. 2023. “*Constraints on the persistent radio source associated with FRB 20190520B using the European VLBI Network*”, ApJ 958, 2
15. Eftekhari, T., Fong, W-F., Gordon, A. C., **Sridhar, N.**, et al. 2023. “*An X-ray census of Fast Radio Burst host galaxies: constraints on AGN and X-ray counterparts*”, ApJ 958,1
16. Metzger, B. D., **Sridhar, N.**, Margalit, B., et al. 2022. “*A Toy Model for the Time-Frequency Structure of Fast Radio Bursts: Implications for the CHIME/FRB Burst Dichotomy.*” ApJ 925, 135
17. Margalit, B., Beniamini, P., **Sridhar, N.**, Metzger, B. D., 2020. “*Implications of a Fast Radio Burst from a Galactic Magnetar.*” ApJL 899, L27
18. García, J. A., Tomsick, J. A., **Sridhar, N.**, et al. 2019. “*The 2017 Failed Outburst of GX 339-4: Relativistic X-Ray Reflection near the Black Hole Revealed by NuSTAR and Swift Spectroscopy.*” ApJ 885, 48
19. Bhattacharyya, S., Yadav, J. S., **Sridhar, N.**, et al. 2018. “*Effects of Thermonuclear X-Ray Bursts on Non-burst Emissions in the Soft State of 4U 1728-34.*” ApJ 860, 88
20. Karinkuzhi, D., Goswami, A., **Sridhar, N.**, et al. 2018. “*Chemical analysis of three barium stars: HD 51959, HD 88035, and HD 121447.*” MNRAS 476, 3086-3096

> 3rd author (15):

21. Uttarkar, P., Shannon, R., ···, **Sridhar, N.**, et al. 2026. “*A fast radio burst cyclone in technicolour: evidence of plasma lensing*” arXiv:2602.16409; Submitted to Nature.
22. Moroianu, A., Bhandari, S., ···, **Sridhar, N.**, et al. 2026. “*A Milliarcsecond Localization Associates FRB 20190417A with a Compact Persistent Radio Source and an Extreme Magnetoionic Environment*” ApJL 996, L16
23. Snelders, M. P., Hessels, J. W. T., ···, **Sridhar, N.**, et al. 2025. “*Revisiting FRB 20121102A: milliarcsecond localisation and a decreasing dispersion measure*” arXiv:2510.11352

24. Blanchard, P., Berger, E., ..., **Sridhar, N.**, et al. 2025. “*James Webb Space Telescope Observations of the Nearby and Precisely Localized FRB20250316A: A Potential Near-IR Counterpart and Implications for the Progenitors of Fast Radio Bursts*” ApJL 989, L49
25. Ibik, A., Drout, M., ..., **Sridhar, N.**, et al. 2024. “*A search for persistent radio sources toward repeating fast radio bursts discovered by CHIME/FRB*” ApJ 976, 199
26. Dong, Y., Eftekhari, T., ..., **Sridhar, N.**, et al. 2024. “*A Radio Study of Persistent Radio Sources in Nearby Dwarf Galaxies: Implications for Fast Radio Bursts*”, ApJ 973, 133
27. Sarin, N., Clarke, T. A., ..., **Sridhar, N.** 2024. “*The origin of the coherent radio flash potentially associated with GRB 201006A*”, ApJL 973, L20
28. AXIS TDAMM SWG., ..., incl. **Sridhar, N.**, et al. 2023. “*Prospects for Time-Domain and Multi-Messenger Science with AXIS*”, Universe, 10, 316
29. Connors, R. M. T., Tomsick, J. T., ..., **Sridhar, N.**, et al. 2023. “*The High Energy X-ray Probe (HEX-P): Probing Accretion onto Stellar Mass Black Holes*”, Front. Astron. Space Sci. 10:1292682
30. Kammoun, E., Lohfink, A. M., ..., **Sridhar, N.**, et al. 2023. “*The High Energy X-ray Probe (HEX-P): Probing the physics of the X-ray corona in active galactic nuclei*”, Front. Astron. Space Sci. 10:1308056
31. Dong, Y., Eftekhari, T., ..., **Sridhar, N.**, et al. 2023. “*Mapping Obscured Star Formation in the Host Galaxy of FRB 20201124A*”, ApJ 961, 44
32. Bhandari, S., Gordon, A. C., ..., **Sridhar, N.**, et al. 2023. “*A non-repeating fast radio burst in a dwarf host galaxy*”, ApJ 948, 67
33. Connors, R. M. T., García, J. A., ..., **Sridhar, N.**, et al. 2021. “*Reflection Modeling of Black Hole Binary 4U 1630–47: Disk Density and Returning Radiation*”, ApJ 909, 146
34. Connors, R. M. T., García, J. A., ..., **Sridhar, N.**, et al. 2020. “*Evidence for Returning Disk Radiation in the Black Hole X-Ray Binary XTE J1550–564.*” ApJ 892, 47
35. Connors, R. M. T., García, J. A., ..., **Sridhar, N.**, et al. 2019. “*Conflicting Disk Inclination Estimates for the Black Hole X-Ray Binary XTE J1550–564.*” ApJ 882, 179
36. Verdhan Chauhan, J., Yadav, J. S., ..., **Sridhar, N.**, et al. 2017. “*AstroSat/LAXPC Detection of Millisecond Phenomena in 4U 1728–34.*” ApJ 841, 41

Books and white papers (2):

37. Koss, M., ., incl. **Sridhar, N.**, et al. 2025. “*The Advanced X-ray Imaging Satellite Community Science Book*”, arXiv:2511.00253
38. Safi-Harb, S., Burdge, K., ..., incl. **Sridhar, N.**, et al. 2023. “*From Stellar Death to Cosmic Revelations: Zooming in on Compact Objects, Relativistic Outflows and Supernova Remnants with AXIS*”, arXiv:2311.07673

Astronomical Telegrams (2):

39. Blanchard, P., Berger, E., ..., **Sridhar, N.**, et al. 2015. “*Deep JWST/NIRCam Imaging of FRB 20250316A: Detection of Potential IR Counterparts.*” ATel #17195
40. García, J. A., Harrison, F., ..., **Sridhar, N.**, et al. 2017. “*NuSTAR Observation of GX 339–4 in the early stages of its 2017 outburst.*” ATel #10825

OBSERVING X-ray: 15 Ms; Radio: 142 ks; Optical: 65 ks; IR: 4.5 hr
 EXPERIENCE Total grant: \$624,935

As Principal Investigator:

1. NICER archival data of transitional ms pulsar (Cycle AO8; 1.2 Ms of data; US\$45,000).
2. Joint NICER and NuSTAR observations studying reflection features from X-ray binaries (Cycle AO3; 60 ks; US\$37,500).
3. uGMRT multi-band radio observations of Giant Radio Pulses (Cycle 34; 36 ks).
4. *AstroSat* observations of ~10 sources: accretion powered millisecond pulsars, neutron star type-I bursts, black hole X-ray binaries (Cycles A04-A08; cumulatively >300 ks).

As Co-Investigator:

1. JWST search for a transient NIR counterpart to FRB 20250316A (PI: Peter Blanchard; \$110,500 ; cycle 5, 2026).
2. JWST observation of FRB 20250316A (PI: Peter Blanchard; cycle 4, 2025).

3. Joint NuSTAR and NICER observation to study the reflection properties and evolution of accretion disks in black hole binaries (Cycle 10; 500 ks; PI: J. Garcia).
4. GBT observations to probe the dynamic environment of FRB 20180301A (Cycle 2024B; 108 ks; PI: P. Kumar).
5. Chandra observations to probe the engines of fast radio bursts (Cycle 25; 106 ks; PI: T. Eftekhari).
6. GBT observations to probe the local environment of FRB 20180301A (Cycle 2023B; 72 ks; PI: P. Kumar).
7. VLA observations to constrain FRB ‘persistent radio sources’ (Cycle 2023B; 10 ks; PI: Y. Dong).
8. NICER observations for amassing a comprehensive spectral timing archive of outbursting black holes (Cycle AO5; 200 ks; \$43,000; PI: J. Steiner).
9. Joint NICER and NuSTAR observation to study the reflection properties and evolution of accretion disks in black hole binaries (Cycle AO4; 110 ks; \$44,000 ; PI: J. Garcia).
10. Joint NICER and NuSTAR observation of XRBs during its outburst (Cycle AO4; 88 ks; \$44,000; PI: R. Connors).
11. NICER observations for black hole spin measurements using continuum fitting (Cycle AO4; 40 ks; \$37,500; PI: J. Steiner).
12. Joint NICER and NuSTAR observations for measuring black hole spin and mass through X-ray reflection spectra and reverberation lags (Cycle AO4; 30 ks; PI: G. Mastroserio).
13. Joint XMM-Newton and NuSTAR observations for studying truncated accretion disks in black holes (AO 21; 120 ks; \$50,656; PI: J. García).
14. Chandra observation of nearby Fast Radio Bursts (Cycle 23; 55 ks; \$52,519; PI: T. Eftekhari).
15. Joint NICER and NuSTAR observation of XRBs during its outburst (Cycle AO3; 88 ks; \$37,500; PI: R. Connors).
16. NICER observations for black hole spin measurements using continuum fitting (Cycle AO3; 40 ks; \$44,000; PI: J. Steiner).
17. Joint NICER and NuSTAR observations for measuring black hole spin and mass through X-ray reflection spectra and reverberation lags (Cycle AO3; 30 ks; \$37,500; PI: G. Mastroserio).
18. NICER observations monitoring the evolving thermal disk emission of LMC X-3 (Cycle AO2; 60 ks; \$20,229; PI: J. Steiner).
19. Joint NICER and NuSTAR observation of XRBs during its outburst (Cycle AO2; 90 ks; \$21,031; PI: R. Connors).

Others:

1. Mt. Palomar 200” Hale telescope: DBSP observations of 14 variable AGN (2 nights)
2. NRAO Green Bank Telescope: radio pulsar observations (24 ks)

DELIVERED

TALKS/

PRESENTATIONS

(*28 INVITED)

81. Talk at the BlackHolistic 2026 conference, **Oxford University**, UK (March 2026)
80. *Astrophysics seminar, **Washington University**, St. Louis, MO (Oct 2025)
79. 22nd AAS-High Energy Astrophysics Division meeting, St. Louis, MO (Oct 2025)
78. *Black-board talk, Frontiers of Relativistic Plasma Physics, **KITP**, USA (Sep 2025)
77. *Overview of FRB emission mechanisms, FRB 2025 conference, **McGill**, Canada (July 2025)
76. Seminar, **Inter-University Center for Astronomy & Astrophysics**, Pune (June 2025)
75. *Astrophysics colloquium, **Tata Institute of Fundamental Research**, Mumbai (May 2025)
74. Astrophysics and Relativity seminar, **International Center for Theoretical Sciences**, Bangalore (May 2025)
73. Relativistic Magnetospheres workshop, **Ecole De Physique Des Houches**, France (April 2025)
72. Magnetic fields around Compact Objects workshop, **Perimeter Institute**, Canada (March 2025)
71. Fast Radio Burst Frontiers workshop, **Carnegie Mellon University**, USA (March 2025)
70. *Talk at the XOC group meeting **Stanford**, CA (Sept 2024)
69. Talk at the High-energy plasma phenomena in astrophysics workshop **MIAPbP, Munich**, Germany (Sept 2024)
68. Graduating student colloquium, **Columbia University**, NY (April 2024)
67. ***AXIS** seminar series (April 2024)
66. 21st AAS-High Energy Astrophysics Division meeting, Texas (April 2024)

65. *Seminar, Simons Collaboration on Extreme Electrodynamics of Compact Object Sources (**SCEECs**) (Feb 2024)
64. *Astroplasma seminar, **Princeton University**, NJ (Dec 2023)
63. *CIERA Theory seminar, **Northwestern University**, IL (Nov 2023)
62. JSI workshop on ‘Winds throughout the Universe’, **Annapolis**, MD (Oct 2023)
61. *Theoretical astrophysics group board talk, **Carnegie Observatories**, CA (Sept 2023)
60. *Seminar, **Syracuse University**, NY (Sept 2023)
59. *Review talk at Astrophysics of Fast Radio Bursts II workshop (+session chair), **CCA, Flatiron Institute**, NY (Sept 2023)
58. *Colloquium, **National Center for Radio Astrophysics**, Pune, India (June 2023)
57. *Astrophysics seminar, **Tata Institute of Fundamental Research**, Mumbai (May 2023)
56. *‘Transient Tuesday’ talk, DARK, Niels Bohr Institute **Copenhagen**, Denmark (May 2023)
55. *Discussion chair, Fast Radio Burst Follow-Up workshop, **University of Toronto** (April 2023)
54. *High energy astrophysics seminar, **Hebrew University of Jerusalem**, Israel (March 2023)
53. *Seminar, Astrophysics Research Center of **The Open University**, Israel (March 2023)
52. *High energy astrophysics meeting, Black Hole Initiative, **Harvard**, MA (Feb 2023)
51. Cosmic transients lab seminar, Center for Astrophysics, **Harvard**, MA (Feb 2023)
50. High Energy Astrophysics seminar, Center for Astrophysics, **Harvard**, MA (Feb 2023)
49. FRB Taiwan 2023, National Chung Hsing University, Taichung **Taiwan** (Feb 2023)
48. *Workshop on ‘Overcoming disconnects in the understanding of accreting black holes’, **Lorentz Center, Leiden**, The Netherlands (Jan 2023)
47. HEX-P black hole binaries, **science working group** presentation (Dec 2022)
46. *CCAPP seminar, **Ohio State University**, OH (Nov 2022)
45. 64th APS Division of Plasma Physics annual meeting, **Spokane**, WA (Oct 2022)
44. Review talk on Observations of FRBs, **CCA, Flatiron Institute**, NY (Oct 2022)
43. ***AXIS** ‘compact objects and supernova remnants’ **science working group** (Oct 2022)
42. *Astrophysics seminar, **Cornell University**, NY (Sept 2022)
41. *AGN seminar at **NASA** Goddard Space Flight Center, MD (Sept 2022)
40. **NASA** Time Domain and Multi-Messenger (TDAMM) Initiative Workshop, **Annapolis**, MD (Aug 2022)
39. FRB 2022 meeting, IAUGA, **Busan**, South Korea (Aug 2022)
38. Summer BLAST workshop, Black Hole Initiative, **Harvard**, MA (July 2021)
37. **AXIS** ‘Time-Domain and Multi-Messenger Astronomy’ **science working group** (July 2022)
36. Special pizza lunch seminar, **Caltech**, CA (June 2022)
35. Seminar at **Carnegie Observatories**, CA (June 2022)
34. 240th meeting of the American Astronomical Society, **Pasadena**, CA (June 2022)
33. Workshop on Relativistic Plasma Astrophysics, **Purdue University**, IN (May 2022)
32. Compact objects group meeting at **CCA, Flatiron Institute**, NY (April 2022)
31. *Kapteyn Astronomical Institute, **Groningen**, The Netherlands (April 2022)
30. 19th AAS-High Energy Astrophysics Division meeting, **Pittsburgh**, PA (March 2022)
29. Brown bag lunch seminar, **Massachusetts Institute of Technology**, MA (Feb 2022)
28. Winter BLAST workshop, Black Hole Initiative, **Harvard**, MA (Dec 2021)
27. Gothamfest, **CCA, Flatiron Institute**, NY (Dec 2021)
26. Kavli-IPMU workshop on particle acceleration by reconnection, **Tokyo**, Japan (Nov 2021)
25. 9th Microquasar workshop, **Cagliari**, Italy (Sept 2021)
24. Astrofest, **Columbia University**, NY (Sept 2021)
23. High-energy plasma phenomena in astrophysics, **Munich**, Germany (July 2021)
22. FRB 2021 conference (online) (July-Aug 2021)
21. *Princeton astro-coffee, **Princeton**, NJ (July 2021)
20. ‘Midwest Magnetic Fields’ Workshop, **Wisconsin-Madison**, (June 2021)
19. *CHIME/FRB collaboration, **McGill**, Canada (May 2021)
18. *Seminar at the **Institute of Astrophysics - FORTH**, Greece (April 2021)
17. Compact objects group meeting at **CCA, Flatiron Institute**, NY (March 2021)
16. **Kyoto** FRB meeting, **Yukawa Institute for Theoretical Physics** (Feb 2021)
15. Compact object group meeting, **TIFR**, Mumbai (Dec 2020)
14. 62nd Annual Meeting of the **APS Division of Plasma Physics** (Nov 2020)
13. Compact objects group meeting, **CCA, Flatiron Institute**, NY (June, Oct, Nov 2020)
12. Plasma astrophysics summer program, **CCA, Flatiron Institute**, NY (July 2019)
11. Theoretical High Energy Astrophysics seminar, **Columbia University** (June 2019)

10. Graduate Seminar, **Columbia University**, NY (Feb, April 2019)
9. Research Seminar, **Columbia University**, NY (Dec 2018)
8. Pizza lunch talk, **Columbia University**, NY (Oct 2018,2022)
7. *NuSTAR* SOC group meeting, **Caltech**, CA (Sept 2017)
6. Group presentation at **NRAO Green Bank Observatory**, WV (Sept 2017)
5. 16th AAS-High Energy Astrophysics Division meeting, **Sun Valley**, ID (March 2022)
4. Visiting Student Program ceremony, **University of Alberta**, Canada (July 2017)
3. Lunch talk at **University of Alberta**, Canada (June 2017)
2. ‘Wide band X-ray spectro-temporal studies’, **TIFR**, Mumbai, India (Jan 2017)
1. **IISER Bhopal** Physics department symposium (Nov 2015)

MENTORING Total: 9 students

- *Ningyue Fan*; **Ph.D.** student, Stanford University (Fall 2025-)
 - *Christopher Farias*; **undergraduate** student, San Diego State University (Summer 2025)
 - *Kohki Uno*; **Ph.D.** student, Kyoto University (1 paper) → postdoc at Columbia University (Summer 2024)
 - *Arnab Kundu*; **masters** thesis student, IISER Kolkata (2021–2022)
 - *Akash Vani*; Pune University → Masters at Heidelberg University → Ph.D. student at MPA, Garching (2019–2020)
- At Columbia University:
- *Sanya Gupta*; **undergraduate** research projects (2 papers) → Ph.D. student at Stanford University (2022–2025)
 - *Shifra Mandel*; **graduate** mentor-mentee program (2021–2022)
 - *Shuhan Zhang*; Women in Science at Columbia **undergraduate** mentorship program → Ph.D. student at UC San Diego (2021)
 - *Bhairavi Chandrasekhar*; **undergraduate** summer internship (2020)

TEACHING

- At Columbia University:
- **Head TA** of the Astronomy department (2020–2021)
 - **Instructor** for undergraduate Intro to Astronomy lab courses (Fall 2019, Spring 2020)
 - **Teaching Assistant** for 2 undergraduate (non-major) courses (Fall 2018, Spring 2019)
 - **Guest lectured** for ASTR UN1403 (in lieu of Prof. David Helfand) (Feb 2020)
 - **Advanced track** in Columbia CTL’s [Teaching Development Program \(TDP\)](#) (2018–2024)
 - Completed CTL’s [Innovative Course Design Seminar](#) (2021)
- Outside Columbia University:
- Selected as a **Lead instructor** at the Yale Young Global Scholars (YYGS) program **Yale University**, New Haven, CT (Summer 2020; postponed due to Covid-19)
 - Trained to incorporate **inquiry-based learning techniques** in STEM education through the [ISEE—Professional Development Program \(PDP\)](#), **UC Santa Cruz** (March–Sept 2019)
 - [Designed and taught an inquiry activity](#) on statistics, **UC Los Angeles** (Sept 2019)

PROFESSIONAL LEADERSHIP

- Scientific Organizing Committee of symposium on *The birth, life and death of black holes*, European Astronomical Society annual meeting, Leiden, The Netherlands (June 2021)
- At Stanford University:
- Postbaccalaureate program admissions committee member (2025)
 - Ph.D. program admissions committee member (2024-2025)
 - Started the weekly KIPAC Compact Objects Group meetings (Oct 2024–)
- At Columbia University:
- Organized an eight-part lecture series titled *‘Science Policy for Scientists’* (Spring 2023)
 - Department representative, Arts and Sciences Graduate Council (2022-2023)
 - Graduate representative, faculty hiring committee, Astronomy department (2021–2022)
 - Graduate representative, colloquium committee, Astronomy department (2022-2023)
 - Graduate admissions committee member, Astronomy department (2021–2022)
 - Co-convenor of *Astrofest* (Sept 2020)
- At IISER Bhopal:
- Senate representative, Central Advisory Committee, Students Activity Council (2016-2017)
 - Elected Science Council secretary (2014-2016)
 - Convenor of *Singularity*, the Institute annual science festival (April 2015)
 - Founder of the Institute *Astronomy Club* (2014)
 - Founder of the Institute *Quiz Club* (2014)

- PROFESSIONAL SERVICE
- Invited to serve as a **referee** for:
 - Journal of Plasma Physics,
 - Proceedings of the National Academy of Sciences of the USA,
 - Nature,
 - The Astrophysical Journal,
 - Monthly Notices of Royal Astronomical Society,
 - Physical Review X,
 - Astronomy & Astrophysics.
 - Invited to serve as a **panelist** for:
 - NASA’s Chandra, NICER observatories
 - National Science Foundation,
 - AstroSat*,
 - NCRA-uGMRT,
 - Observer at Hubble Space Telescope time allocation committee.
 - **Science working group member** of:
 - NewAthena (2025–)
 - Advanced X-ray Imaging Satellite (**AXIS**) (2022–)
 - High-Energy X-ray Probe (**HEX-P**) (2022–)
 - Probe for far-Infrared Mission for Astrophysics (**PRIMA**) (2025–)
 - DEI committee member, Columbia Arts and Sciences Graduate Council (2022-2023)
 - **Judge**, Chambliss poster competition, American Astronomical Society meeting (2022)
 - **Webmaster**: (1) [Columbia Astronomy Department](#), (2) [Theoretical High-Energy Astrophysics group, Columbia](#), (3) [Simons Collaboration on Extreme Electrodynamics of Compact Sources](#)
 - Member of American Astronomical Society (2018–present)
 - Member of New York Academy of Sciences (2018–2023)
- SUMMER SCHOOLS
- **Multiscale modeling of astrophysical and space plasmas – 2019**
Center for Computer Astrophysics (CCA), Flatiron Institute, New York, NY
 - **Multiple approaches to plasma physics from laboratory to astrophysics – 2019**
Ecole de Physique Des Houches, Les Houches, France
 - **NRAO Green Bank Telescope observer training workshop – Fall 2017**
Green Bank Observatory, West Virginia
 - **Summer School on Gravitational Wave Astronomy – 2016**
International Center for Theoretical Sciences (ICTS), TIFR, Bangalore
 - **Summer school on relativity, black holes and neutron stars – 2015**
Indian Institute of Astrophysics (IIAp), Bangalore
- COMPUTING/ SOFTWARE EXPERIENCE
- Languages and tools: Python, git, FORTRAN, IRAF, gnuplot, DS9, L^AT_EX, *f-tools* (HEASoft): XSPEC, QDP, XRONOS
 - Supercomputers: NASA Pleiades, DoE-NERSC Cori, NSERC WestGrid, Flatiron Institute HPC cluster, Columbia University Habanero, Terremoto, Ginsburg clusters
 - Numerical tools: Particle-In-Cell, Magnetohydrodynamical simulations
 - Telescope data handling: *AstroSat*, *Swift*, *RXTE/PCA*, *NuSTAR*, *NICER*, *XMM-Newton*, *NCRA-GMRT*, *NRAO-GBT* (Astrid, CLEO)
- SCIENCE OUTREACH
1. Public outreach talk during KIPAC community day, Stanford University (April 2025)
 2. Research career in astrophysics for undergraduates at IISER Bhopal (Jan 2025)
 3. [KIPAC public outreach talk](#), Stanford University (Dec 2024)
 4. Co-organized [astronomy outreach activities](#) at Columbia University for the South African academic achievers program (750 high-school students) (Oct 2022)
 5. Talk on introduction/orientation to summer research, for undergraduate researchers at Columbia University (June 2022)
 6. Popular talk on black hole X-ray binaries at IISER Bhopal Astronomy club (Oct 2021)
 7. [Mentored the students of Democracy Prep High School](#), Harlem, NYC, on the foundations of computer coding (Fall 2021)
 8. Research career in astrophysics for undergraduates at IISER Bhopal (April 2021)

9. Delivered a lecture on science with space-based X-ray telescopes, for high-school students at *Frontiers of Science*—the annual outreach program at TIFR, Mumbai. (Nov 2017)
10. Organized a tour of GMRT for TIFR–Visiting Summer Research students (June 2016)

News coverage and appearances:

- *Super sharp images with EVN reveal another Fast Radio Burst Coming from a Hypernebula.* [[JIVE](#); 29-Nov-2023][[ASTRON](#); 01-Dec-2023][[Universe Today](#); 05-Dec-2023]
- *Astronomers caught a potent radio burst blasting at us from a dwarf galaxy 3 billion light-years away* [**Popular Science**; 09-June-2022]
- *AstroSat Catches Nuclear Reactions Spreading Across a Neutron Star* [**The Wire**; 07-October-2021]
- *Long burst short: an unexpected supernova* [**Research Matters**; 26-July-2021]
- *Fast Radio Bursts from globular clusters and what could power them* [**National Geographic**; 27-May-2021]
- *Digging the grave: In search of the remains of merging black holes and neutron stars* [**Research Matters**; 14-Sept-2021]
- *FRBs from Galactic magnetar* [**The Wire**; 03-June-2020] [[AAS Nova](#); 09-Sept-2020]
- *Black hole bends light on itself* [**Gizmodo**; 10-April-2020] [[Caltech News](#); 08-April-2020] [[SYFY](#); 09-July-2020]