Koushik Chatterjee

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Professional Experience

CITA Postdoctoral Fellow, University of Toronto — 2026–current
Postdoctoral Fellow, Department of Physics, University of Maryland — 2023–26
Black Hole Initiative Postdoctoral Prize Fellow, Harvard University — 2021–23

Education

Ph.D. in Astronomy, Universiteit van Amsterdam (Advisor: S. Markoff) — Amsterdam, NL
Thesis Title: Multi-scale numerical modeling of black hole accretion and jets — 2016 - 2020
Integrated B.Sc. & M.Sc. in Physics, *with honors*, IIT Kharagpur (Advisor: Sayan Kar) — Kharagpur, India
Thesis Title: Non-spherically symmetric Space-times in Gravity coupled to a scalar field — 2011 - 2016

Research Interests

Topics: compact objects, AGN, XRBs, relativistic outflows, accretion, turbulence, instabilities, general relativity (GR) effects, radiation, eruptions, flares, QPOs, time-resolved data, particle acceleration, resistivity, reconnection
Methods: GPU-accelerated GR resistive radiative magnetohydrodynamics code `H-AMR`, GR ray-tracing radiation transfer code `BHOSS` and Monte Carlo broadband code `GRMONTY`, parallel postprocessing with python and cython

Publication Summary

25,239 citations; h-index 46 (November 2, 2026).

101 refereed journal articles, including 9 first-author articles; 4 submitted manuscripts, including 1 first-author manuscript; 5 book chapters/proceedings, including 1 first-author contribution.

Full publication list on p. 3. | ADS publication list | ORCID: 0000-0002-2825-3590

Fellowships and Awards

CITA Postdoctoral Prize Fellowship, University of Toronto — 2026-29
EHT Early Career Award, Event Horizon Telescope Collaboration — 2025
Black Hole Initiative Postdoctoral Prize Fellowship, Harvard University; awarded for 2021–24 — 2021–23
Master's Thesis Prize, (top 1%), Indian Institute of Technology, Kharagpur — 2016
J. C. Ghosh Memorial Endowment Prize, Indian Institute of Technology, Kharagpur — 2015
S. N. Bose Scholars Program Fellowship (USD $6,000), Science & Engineering Board, DST, WINStep Forward & the Indo-U.S Science and Technology Forum — 2015
Summer Research Fellowship, Indian Academy of Sciences, Government of India — 2013
Innovation in Science Pursuit for Inspired Research scholarship, DST, Government of India — 2011-16

Awards as a member of the Event Horizon Telescope Collaboration

Frontiers of Science Award — 2025
Royal Astronomical Society Group Achievement Award — 2021
Einstein Medal, AAS Bruno Rossi Prize, Breakthrough Prize in Fundamental Physics — 2020
Nelson P. Jackson Aerospace Award — 2020
Smithsonian American Ingenuity Award, NSF Diamond Achievement Award — 2019

Research and Competitive HPC Grants

Competitive computing allocations

RRG Compute Canada, 1.5M GPU-hours, Co-PI, *Multiwavelength Variability in Sgr A* and Jet Propagation* — 2020-27

OLCF Summit, 1,500,000 GPU-hours, Collaborator, *Radiative MHD of bright transients from neutron stars* — 2023-24

ALCC OLCF Summit, 2,400,000 GPU-hours, Collaborator, *Simulating Collapsar Accretion Disks, Outflows, and Nucleosynthesis* — 2022-23

INCITE OLCF Summit, 11M GPU-hours, Collaborator, *Merger Remnant Disks and Tilted Disks* — 2019-24

LRAC Longhorn Frontera, 400,000 GPU-hours, Co-I, *Multi-scale Modeling of Accretion and Jets in Active Galactic Nuclei* — 2021-22

Frontera Texascale Days, 18,432 GPU-hours, Collaborator, *Thin Luminous Disks, TDEs and Plasmoids in global simulations* — 2021

Travel grants

Travel grants, 3 years totaling EUR 4,500, Leids Kerkhoven-Bosscha Fonds, Netherlands — 2018-20

Scientific Leadership and Service

Scientific leadership, review and community service

NS numerics/theory meeting organizer, Canadian Institute for Theoretical Astrophysics — 2026–

Member of Simons Collaboration on Extreme Electrodynamics of Compact Sources (SCEECS) — 2025-

Observational Proposal reviewer, Chandra Telescope Cycle 26 — 2024

Scientific Organizing Committee member, Event Horizon Telescope Collaboration Meeting — 2024

Theory meeting organizer, Black Hole Initiative, Harvard University — 2021–23

Electron Distribution Function Working Group Lead, EHTC; coordinated theoretical work to probe particle acceleration at EHT wavelengths — 2020-23

Peer Review: *ApJ*, *MNRAS*, *Nature*, *Physical Review D*, *Physical Review Letters*, *PASJ*, *Galaxies*; EHTC internal referee — 2019-

Local Organizing Committee member, Advancing Theoretical Astrophysics school, Amsterdam, The Netherlands — 2019

Member of Event Horizon Telescope Collaboration (EHTC) — 2018-

Public outreach

Interview as EHT scientist, YouTube interview — 2022

Created public-facing simulation images and movies for the Chandra X-ray Telescope (https://chandra.harvard.edu/photo/2022/sgra/), Event Horizon Telescope (https://eventhorizontelescope.org/), next-generation Event Horizon Telescope (https://www.ngeht.org/science) — 2019-

Invited speaker, Space India Webinar as an EHT scientist, followed by mentoring on physics and STEM pathways for school students across India — 2019

Volunteer organizer of middle school and public visits Anton Pannekoek Instituut, Universiteit van Amsterdam, The Netherlands — 2016-20

Student Volunteer National Service Scheme, IIT Kharagpur, India — 2011-13

Teaching Experience

Teaching assistantships

2. Extreme Astrophysics, master's level, Universiteit van Amsterdam — 2/2020–7/2020

1. Introduction to Cosmology, third-year undergraduate level, Universiteit van Amsterdam — 9/2017–10/2018

Lectures and computational training

Invited lectures on accretion theory at Caltech (2025); GRMHD code tutorials at workshops and schools. Designed research-led projects using stellar-orbit data and synchrotron/inverse-Compton emission models for Extreme Astrophysics.

Early Research Appointments

Visiting Research Fellow, University of Iowa, Astronomy; host: Philip Kaaret — May–July 2015

Visiting Research Fellow, IIT Kharagpur, Gravitation; host: Sayan Kar — May–July 2014

Visiting Research Fellow, Indian Institute of Science, Astrophysics; host: Banibrata Mukhopadhyay — May–July 2013

Complete Publication List

Citations: 25,239 | **h-index:** 46 | ORCID: 0000-0002-2825-3590 | ADS

First-author articles (11)

1. **Chatterjee, K.** et al. (2026). *Relativistic Magnetohydrodynamic Simulations of Giant Magnetar Bursts*. ApJL **1006**, L45.
2. **Chatterjee, K.** et al. (2025). *On the Universality of Energy Extraction from Black Hole Spacetimes*. ApJL **991**, L58.
3. **Chatterjee, K.** et al. (2025). *Misaligned magnetized accretion flows onto spinning black holes: Magneto-spin alignment, outflow power, and intermittent jets*. Phys. Rev. D **112**, 063013.
4. **Chatterjee, K.** et al. (2025). *Extreme Magnetic Fields Around Black Holes*. The Relativistic Universe: From Classical to Quantum **61**, 67–79 (conference proceeding).
5. **Chatterjee, K.**; Kocherlakota, P.; Younsi, Z.; et al. (2023). *Energy Extraction from Spinning Stringy Black Holes*. arXiv:2310.20040 (submitted).
6. **Chatterjee, K.** et al. (2023). *Accretion Flow Morphology in Numerical Simulations of Black Holes from the ngEHT Model Library: The Impact of Radiation Physics*. Galaxies **11**, 38.
7. **Chatterjee, K.**; Narayan, R. (2022). *Flux Eruption Events Drive Angular Momentum Transport in Magnetically Arrested Accretion Flows*. ApJ **941**, 30.
8. **Chatterjee, K.** et al. (2021). *General relativistic MHD simulations of non-thermal flaring in Sagittarius A**. MNRAS **507**, 5281–5302.
9. **Chatterjee, K.** et al. (2020). *Observational signatures of disc and jet misalignment in images of accreting black holes*. MNRAS **499**, 362–378.
10. **Chatterjee, K.** et al. (2019). *Accelerating AGN jets to parsec scales using general relativistic MHD simulations*. MNRAS **490**, 2200–2218.
11. **Chatterjee, K.** et al. (2016). *Searching for X-ray sources in nearby late-type galaxies with low-star formation rates*. MNRAS **456**, 2966–2973.

Coauthored articles (38)

† first-author student paper under my mentorship.

12. Feyan, S.; Prather, C.; Chang, D. O.; et al. (2026). *Image Morphology of Misaligned Magnetically Arrested Disks*. arXiv:2610.31754 (submitted).
13. Prasanna, T.; Parfrey, K.; Metzger, B. D.; et al. (2026). *GRMHD Simulations of Accreting Proto-Magnetars II. Implications for r-process Nucleosynthesis*. arXiv:2609.00190 (submitted).
14. Prasanna, T.; Parfrey, K.; Metzger, B. D.; et al. (2026). *GRMHD Simulations of Accreting Proto-Magnetars I. Implications for Gamma-Ray Burst Jets and Energetic Explosions*. arXiv:2609.00174 (submitted).

15. Raha, R.†; Mukhopadhyay, B.; **Chatterjee, K.** (2026). *GRMHD Simulations of Magnetized Accretion Disk/Jet: Variabilities of Black Holes and Spectral Energy Distributions in Magnetic States*. Universe **12**, 142.
16. Raha, R.†; Mukhopadhyay, B.; **Chatterjee, K.** (2026). *GRMHD simulations of black hole accretion variabilities: implications to hard state X-ray binary transients*. MNRAS **546**, stag148.
17. Emami, R.; Liska, M.; **Chatterjee, K.**; et al. (2026). *Novel Polarimetric Analysis of Near-horizon Flaring Episodes in M87* in Millimeter Wavelength*. ApJ **998**, 129.
18. Tsui, T.; Protopapas, P.; Garraffo, C.; et al. (2026). *A deep learning approach to image analysis of M87**. MNRAS **545**, staf2095.
19. Lalakos, A.†; Tchekhovskoy, A.; Most, E. R.; et al. (2025). *Universal radial scaling of large-scale black hole accretion for magnetically arrested and rocking accretion disks*. Phys. Rev. D **112**, 123044.
20. Salas, L. D. S.†; Liska, M. T. P.; Markoff, S. B.; et al. (2025). *Two-temperature treatments in magnetically arrested disc GRMHD simulations more accurately predict light curves of Sagittarius A**. MNRAS **538**, 698–710.
21. Galishnikova, A.; Philippov, A.; Quataert, E.; et al. (2025). *Strongly Magnetized Accretion with Low Angular Momentum Produces a Weak Jet*. ApJ **978**, 148.
22. Raha, R.†; Mukhopadhyay, B.; **Chatterjee, K.** (2025). *Magnetically Arrested Advective Accretion Flows and Jets/Outflows Around Stellar Mass Black Holes: Explaining Hard State ULXs with GRMHD Simulations*. The Relativistic Universe: From Classical to Quantum **61**, 177–188 (conference proceeding).
23. Salas, L. D. S.†; Musoke, G.; **Chatterjee, K.**; et al. (2024). *Resolution analysis of magnetically arrested disc simulations*. MNRAS **533**, 254–267.
24. Liska, M. T. P.; Kaaz, N.; **Chatterjee, K.**; et al. (2024). *Magnetic Flux Plays an Important Role during a Black Hole X-Ray Binary Outburst in Radiative Two-temperature General Relativistic Magnetohydrodynamic Simulations*. ApJ **966**, 47.
25. Manikantan, V.; Kaaz, N.; Jacquemin-Ide, J.; et al. (2024). *Winds and Disk Turbulence Exert Equal Torques on Thick Magnetically Arrested Disks*. ApJ **965**, 175.
26. Rohoza, V.†; Lalakos, A.; Paik, M.; et al. (2024). *How to Turn Jets into Cylinders near Supermassive Black Holes in 3D General Relativistic Magnetohydrodynamic Simulations*. ApJL **963**, L29.
27. Mohan, A.; Protopapas, P.; Kunnumkai, K.; et al. (2024). *Generating images of the M87* black hole using GANs*. MNRAS **527**, 10965–10974.
28. Jia, H.†; Ripperda, B.; Quataert, E.; et al. (2023). *Millimeter observational signatures of flares in magnetically arrested black hole accretion models*. MNRAS **526**, 2924–2941.
29. Cho, H.†; Prather, B. S.; Narayan, R.; et al. (2023). *Bridging Scales in Black Hole Accretion and Feedback: Magnetized Bondi Accretion in 3D GRMHD*. ApJL **959**, L22.
30. Davelaar, J.; Ripperda, B.; Sironi, L.; et al. (2023). *Synchrotron Polarization Signatures of Surface Waves in Supermassive Black Hole Jets*. ApJL **959**, L3.
31. Raha, R.†; Mukhopadhyay, B.; **Chatterjee, K.**; et al. (2023). *Magnetized Advective Accretion Disks and Jets: Harmpi Simulation*. Astron. Rep. **67**, S189–S198.
32. Fragile, P. C.; **Chatterjee, K.**; Ingram, A.; et al. (2023). *The luminous, hard state can't be MAD*. MNRAS **525**, L82–L86.
33. Kocherlakota, P.; Narayan, R.; **Chatterjee, K.**; et al. (2023). *Toward General Relativistic Magnetohydrodynamics Simulations in Stationary Nonvacuum Spacetimes*. ApJL **956**, L11.
34. Beskin, V. S.; Kniazev, F. A.; **Chatterjee, K.** (2023). *On the internal structure of relativistic jets with zero velocity along the axis*. MNRAS **524**, 4012–4018.
35. Emami, R.; Doeleman, S. S.; Wielgus, M.; et al. (2023). *The EB Correlation in Resolved Polarized Images: Connections to the Astrophysics of Black Holes*. ApJ **955**, 6.
36. Emami, R.; Ricarte, A.; Wong, G. N.; et al. (2023). *Unraveling Twisty Linear Polarization Morphologies in Black Hole Images*. ApJ **950**, 38.
37. Kaaz, N.†; Murguia-Berthier, A.; **Chatterjee, K.**; et al. (2023). *Jet Formation in 3D GRMHD Simulations of Bondi-Hoyle-Lyttleton Accretion*. ApJ **950**, 31.
38. Kantzas, D.; Markoff, S.; Lucchini, M.; et al. (2023). *Exploring the role of composition and mass loading on the properties of hadronic jets*. MNRAS **520**, 6017–6039.
39. Emami, R.; Tiede, P.; Doeleman, S. S.; et al. (2023). *Tracing Hot Spot Motion in Sagittarius A* Using the Next-Generation Event Horizon Telescope (ngEHT)*. Galaxies **11**, 23.
40. Roelofs, F.; Blackburn, L.; Lindahl, G.; et al. (2023). *The ngEHT Analysis Challenges*. Galaxies **11**, 12.
41. Liska, M. T. P.; **Chatterjee, K.**; Issa, D.; et al. (2022). *H-AMR: A New GPU-accelerated GRMHD Code for Exascale Computing with 3D Adaptive Mesh Refinement and Local Adaptive Time Stepping*. ApJS **263**, 26.
42. Gelles, Z.†; **Chatterjee, K.**; Johnson, M.; et al. (2022). *Relativistic Signatures of Flux Eruption Events near Black Holes*. Galaxies **10**, 107.

43. Lalakos, A.†; Gottlieb, O.; Kaaz, N.; et al. (2022). *Bridging the Bondi and Event Horizon Scales: 3D GRMHD Simulations Reveal X-shaped Radio Galaxy Morphology*. ApJL **936**, L5.
44. Narayan, R.; Chael, A.; **Chatterjee, K.**; et al. (2022). *Jets in magnetically arrested hot accretion flows: geometry, power, and black hole spin-down*. MNRAS **511**, 3795–3813.
45. Andrés, A.; van den Eijnden, J.; Degenaar, N.; et al. (2022). *A Swift study of long-term changes in the X-ray flaring properties of Sagittarius A*. MNRAS **510**, 2851–2863.
46. Ripperda, B.; Liska, M.; **Chatterjee, K.**; et al. (2022). *Black Hole Flares: Ejection of Accreted Magnetic Flux through 3D Plasmoid-mediated Reconnection*. ApJL **924**, L32.
47. Yoon, D.; **Chatterjee, K.**; Markoff, S. B.; et al. (2020). *Spectral and imaging properties of Sgr A* from high-resolution 3D GRMHD simulations with radiative cooling*. MNRAS **499**, 3178–3192.
48. Mukhopadhyay, B.; **Chatterjee, K.** (2018). *Removal of angular momentum by strong magnetic field stresses in advective accretion flows around black holes*. Fourteenth Marcel Grossmann Meeting - MG14, 1108–1113 (conference proceeding).
49. Mukhopadhyay, B.; **Chatterjee, K.** (2015). *Hydromagnetics of Advective Accretion Flows around Black Holes: Removal of Angular Momentum by Large-scale Magnetic Stresses*. ApJ **807**, 43.

Collaboration journal articles (59)

50. Müller, H. et al. (2026). *Dynamics and geometry of the inner sub-parsec-scale jet in 3C 279 observed with the Event Horizon Telescope*. A&A **713**, A274.
51. Principe, G. et al. (2026). *Broadband multiwavelength properties of the archetypal blazar 3C 279 during the 2017 Event Horizon Telescope campaign*. A&A **712**, A224.
52. Bernshteyn, V. et al. (2026). *Ring Asymmetry and Spin in M87**. ApJ **1000**, 231.
53. Georgiev, B. et al. (2026). *Locating the missing large-scale emission in the jet of M87* with short EHT baselines*. A&A **709**, A26.
54. Albentosa-Ruiz, E. et al. (2026). *Full-polarization millimeter wavelength variability of Sagittarius A* during the 2018 EHT campaign*. A&A **708**, A179.
55. Saurabh et al. (2026). *Probing jet base emission of M87* with the 2021 Event Horizon Telescope observations*. A&A **706**, A27.
56. Gómez, J. L. et al. (2026). *Spatially resolved polarization swings in the supermassive binary black hole candidate OJ 287 with first Event Horizon Telescope observations*. A&A **705**, A23.
57. EHT Collaboration (2025). *Horizon-scale variability of M87* from 2017–2021 EHT observations*. A&A **704**, A91.
58. Dahale, R. et al. (2025). *Origin of the ring ellipticity in the black hole images of M87**. A&A **699**, A279.
59. Goddi, C. et al. (2025). *First polarization study of the M87 jet and active galactic nuclei at submillimeter wavelengths with ALMA*. A&A **699**, A265.
60. Ayzenberg, D. et al. (2025). *Fundamental physics opportunities with the next-generation Event Horizon Telescope*. Living Rev. Relativ. **28**, 4.
61. Röder, J. et al. (2025). *A multifrequency study of sub-parsec jets with the Event Horizon Telescope*. A&A **695**, A233.
62. EHT Collaboration (2025). *The persistent shadow of the supermassive black hole of M87: II. Model comparisons and theoretical interpretations*. A&A **693**, A265.
63. Baczko, A.-K. et al. (2024). *The putative center in NGC 1052*. A&A **692**, A205.
64. Algaba, J. C. et al. (2024). *Broadband multi-wavelength properties of M87 during the 2018 EHT campaign including a very high energy flaring episode*. A&A **692**, A140.
65. Raymond, A. W. et al. (2024). *First Very Long Baseline Interferometry Detections at 870 μm*. AJ **168**, 130.
66. EHT Collaboration (2024). *First Sagittarius A* Event Horizon Telescope Results. VIII. Physical Interpretation of the Polarized Ring*. ApJL **964**, L26.
67. EHT Collaboration (2024). *First Sagittarius A* Event Horizon Telescope Results. VII. Polarization of the Ring*. ApJL **964**, L25.
68. Paraschos, G. F. et al. (2024). *Ordered magnetic fields around the 3C 84 central black hole*. A&A **682**, L3.
69. EHT Collaboration (2024). *The persistent shadow of the supermassive black hole of M 87. I. Observations, calibration, imaging, and analysis*. A&A **681**, A79.
70. Torne, P. et al. (2023). *A Search for Pulsars around Sgr A* in the First Event Horizon Telescope Data Set*. ApJ **959**, 14.
71. Roelofs, F. et al. (2023). *Polarimetric Geometric Modeling for mm-VLBI Observations of Black Holes*. ApJL **957**, L21.
72. EHT Collaboration (2023). *First M87 Event Horizon Telescope Results. IX. Detection of Near-horizon Circular Polarization*. ApJL **957**, L20.

73. Prather, B. S. et al. (2023). *Comparison of Polarized Radiative Transfer Codes Used by the EHT Collaboration*. ApJ **950**, 35.
74. Johnson, M. D. et al. (2023). *Key Science Goals for the Next-Generation Event Horizon Telescope*. Galaxies **11**, 61.
75. Jorstad, S. et al. (2023). *The Event Horizon Telescope Image of the Quasar NRAO 530*. ApJ **943**, 170.
76. Broderick, A. E. et al. (2022). *The Photon Ring in M87**. ApJ **935**, 61.
77. Issaoun, S. et al. (2022). *Resolving the Inner Parsec of the Blazar J1924–2914 with the Event Horizon Telescope*. ApJ **934**, 145.
78. Broderick, A. E. et al. (2022). *Characterizing and Mitigating Intraday Variability: Reconstructing Source Structure in Accreting Black Holes with mm-VLBI*. ApJL **930**, L21.
79. Georgiev, B. et al. (2022). *A Universal Power-law Prescription for Variability from Synthetic Images of Black Hole Accretion Flows*. ApJL **930**, L20.
80. Farah, J. et al. (2022). *Selective Dynamical Imaging of Interferometric Data*. ApJL **930**, L18.
81. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. VI. Testing the Black Hole Metric*. ApJL **930**, L17.
82. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. V. Testing Astrophysical Models of the Galactic Center Black Hole*. ApJL **930**, L16.
83. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. IV. Variability, Morphology, and Black Hole Mass*. ApJL **930**, L15.
84. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. III. Imaging of the Galactic Center Supermassive Black Hole*. ApJL **930**, L14.
85. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. II. EHT and Multiwavelength Observations, Data Processing, and Calibration*. ApJL **930**, L13.
86. EHT Collaboration (2022). *First Sagittarius A* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way*. ApJL **930**, L12.
87. Wielgus, M. et al. (2022). *Millimeter Light Curves of Sagittarius A* Observed during the 2017 Event Horizon Telescope Campaign*. ApJL **930**, L19.
88. Satapathy, K. et al. (2022). *The Variability of the Black Hole Image in M87 at the Dynamical Timescale*. ApJ **925**, 13.
89. Janssen, M. et al. (2021). *Event Horizon Telescope observations of the jet launching and collimation in Centaurus A*. Nature Astronomy **5**, 1017–1028.
90. Kocherlakota, P. et al. (2021). *Constraints on black-hole charges with the 2017 EHT observations of M87**. Phys. Rev. D **103**, 104047.
91. Narayan, R. et al. (2021). *The Polarized Image of a Synchrotron-emitting Ring of Gas Orbiting a Black Hole*. ApJ **912**, 35.
92. EHT MWL Science Working Group et al. (2021). *Broadband Multi-wavelength Properties of M87 during the 2017 Event Horizon Telescope Campaign*. ApJL **911**, L11.
93. Goddi, C. et al. (2021). *Polarimetric Properties of Event Horizon Telescope Targets from ALMA*. ApJL **910**, L14.
94. EHT Collaboration (2021). *First M87 Event Horizon Telescope Results. VIII. Magnetic Field Structure near The Event Horizon*. ApJL **910**, L13.
95. EHT Collaboration (2021). *First M87 Event Horizon Telescope Results. VII. Polarization of the Ring*. ApJL **910**, L12.
96. Psaltis, D. et al. (2020). *Gravitational Test beyond the First Post-Newtonian Order with the Shadow of the M87 Black Hole*. Physical Review Letters **125**, 141104.
97. Wielgus, M. et al. (2020). *Monitoring the Morphology of M87* in 2009-2017 with the Event Horizon Telescope*. ApJ **901**, 67.
98. Kim, J.-Y. et al. (2020). *Event Horizon Telescope imaging of the archetypal blazar 3C 279 at an extreme 20 microarcsecond resolution*. A&A **640**, A69.
99. Gold, R. et al. (2020). *Verification of Radiative Transfer Schemes for the EHT*. ApJ **897**, 148.
100. Broderick, A. E. et al. (2020). *THEMIS: A Parameter Estimation Framework for the Event Horizon Telescope*. ApJ **897**, 139.
101. Roelofs, F. et al. (2020). *SYMBA: An end-to-end VLBI synthetic data generation pipeline. Simulating Event Horizon Telescope observations of M 87*. A&A **636**, A5.
102. Porth, O. et al. (2019). *The Event Horizon General Relativistic Magnetohydrodynamic Code Comparison Project*. ApJS **243**, 26.
103. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. VI. The Shadow and Mass of the Central Black Hole*. ApJL **875**, L6.
104. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. V. Physical Origin of the Asymmetric Ring*. ApJL **875**, L5.

105. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. IV. Imaging the Central Supermassive Black Hole*. ApJL **875**, L4.
106. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. III. Data Processing and Calibration*. ApJL **875**, L3.
107. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. II. Array and Instrumentation*. ApJL **875**, L2.
108. EHT Collaboration (2019). *First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole*. ApJL **875**, L1.

Other collaboration publications and outputs (6)

109. Ayzenberg, D. et al. (2025). *Author Correction: Fundamental physics opportunities with the next-generation Event Horizon Telescope*. Living Rev. Relativ. **28**, 7.
110. Roeder, J. et al. (2025). *VizieR Online Data Catalog: VLBI core fluxes and brightness temperatures (Roeder+, 2025)*. Data catalog J/A+A/695/A233.
111. Peretz, E. et al. (2024). *The Black Hole Explorer: astrophysics mission concept engineering study report*. Proc. SPIE **13092**, 130922F.
112. EHT Collaboration (2024). *VizieR Online Data Catalog: M87* EHT image (Event Horizon Tel. Coll.+, 2024)*. Data catalog J/A+A/681/A79.
113. Kurczynski, P. et al. (2022). *The Event Horizon Explorer mission concept*. Proc. SPIE **12180**, 121800M.
114. Kim, J.-Y. et al. (2020). *VizieR Online Data Catalog: 3C 279 Event Horizon Telescope imaging (Kim+, 2020)*. Data catalog J/A+A/640/A69.

Authored and coauthored meeting abstracts (16)

115. Flors, N. et al. (incl. **K. Chatterjee**) (2026). *Neutron Star Drag Race: Simulating Common Envelope Evolution*. 46th COSPAR Scientific Assembly, abstract 1841.
116. Flors, N. et al. (incl. **K. Chatterjee**) (2026). *Neutron Star Drag Race: Extending Local Common Envelope Accretion Models with GRMHD Simulations*. American Astronomical Society Meeting Abstracts **247**, 334.01.
117. **Chatterjee, K.** (2025). *Advances in M87 near-horizon theory*. American Astronomical Society Meeting Abstracts #245, 236.04.
118. Jones, D. et al. (incl. **K. Chatterjee**) (2024). *Higher Order Images and Time Delays of Supermassive Black Holes*. American Astronomical Society Meeting Abstracts #243, 309.04.
119. Markoff, S. et al. (incl. **K. Chatterjee**) (2024). *Can two-temperature treatments in GRMHD simulations reduce the disparity between predicted lightcurves and observations of Sgr A*?*. American Astronomical Society Meeting Abstracts #243, 309.03.
120. Markoff, S. et al. (incl. **K. Chatterjee**) (2024). *Studying Convergence in GRMHD Simulations of Magnetically Arrested Black Hole Accretion Disks*. American Astronomical Society Meeting Abstracts #243, 206.05.
121. Rohoza, V. et al. (incl. **K. Chatterjee**) (2023). *How to Turn Jets into Cylinders near Supermassive Black Holes in 3D GRMHD Simulations*. AAS/High Energy Astrophysics Division **20**, 116.35.
122. Durodola, E.; **Chatterjee, K.** (2023). *Using EHT movies to constrain spin values of Super Massive Black Hole*. American Astronomical Society Meeting Abstracts #241, 351.07.
123. Rohoza, V. et al. (incl. **K. Chatterjee**) (2023). *How to Turn Jets into Cylinders near Supermassive Black Holes in 3D GRMHD Simulations*. American Astronomical Society Meeting Abstracts #241, 351.06.
124. Lalakos, A. et al. (incl. **K. Chatterjee**) (2022). *Bridging Bondi and Event Horizon Scales: 3D GRMHD Simulations Reveal X-Shaped Radio Galaxy Morphology*. EAS2022, European Astronomical Society Annual Meeting, 1245.
125. Kaaz, N. et al. (incl. **K. Chatterjee**) (2022). *Jet Formation in General-Relativistic, Magnetized Bondi-Hoyle-Lyttleton Accretion*. AAS/High Energy Astrophysics Division **19**, 110.30.
126. West, A. T. et al. (incl. **K. Chatterjee**) (2021). *The Observable X-ray Signatures of Misaligned Accretion Disks Predicted by General Relativistic Magnetohydrodynamic Simulations with Raytracing Post-Processing*. American Astronomical Society Meeting Abstracts #238, 125.06.
127. **Chatterjee, K.** et al. (2021). *Distorting AGN jets using GRMHD simulations of accreting black holes*. 43rd COSPAR Scientific Assembly, abstract 1434.
128. Markoff, S. et al. (incl. **K. Chatterjee**) (2020). *Spectral Properties of Sgr A* from 3D GRMHD Simulations with Radiative Cooling*. American Astronomical Society Meeting Abstracts #235, 425.04.
129. **Chatterjee, K.** et al. (2020). *Black hole AGN jets from the event horizon to parsec scales*. American Astronomical Society Meeting Abstracts #235, 411.05.
130. Markoff, S. et al. (incl. **K. Chatterjee**) (2017). *New methods to benchmark simulations of accreting black holes systems against observations*. AAS/High Energy Astrophysics Division #16, 106.37.

Talks, Seminars and Conferences

Invited talks

Invited seminar, GRANDMA Collaboration	Online, 2026
Invited talk, Simons Collaboration on Extreme Electrodynamics of Compact Sources	New York City, USA, 2026
Invited seminar, UCL-Mullard Space Science Laboratory	Holmbury St Mary, UK, 2025
Invited lectures (Accretion theory), California Institute of Technology	Pasadena, USA, 2025
Invited colloquium, Indian Institute of Science	Bengaluru, India, 2025
Invited seminar, Indian Institute of Science	Bengaluru, India, 2025
245th AAS Meeting: Advances in M87 near-horizon theory	National Harbor, USA, 2025
50 years of Narayan: The Event Horizon and Beyond	Cambridge, USA, 2024
UCSB Astrolunch	Santa Barbara, USA, 2024
Kavli Institute for Theoretical Physics	Santa Barbara, USA, 2024
Invited seminar, International Center for Theoretical Sciences, TIFR	Bengaluru, India, 2024
Invited seminar, Indian Institute of Science	Bengaluru, India, 2024
International Symposium on Recent Developments in Relativistic Astrophysics, SRM University	Gangtok, India, 2023
Indian Center for Space Physics	Kolkata, India, 2023
Boston Area Black Hole Accretion Meeting invited talk	Cambridge, USA, 2023
Canadian Institute for Theoretical Astrophysics invited talk	Toronto, Canada, 2023
Princeton PCTS workshop	Princeton, USA, 2023
Overcoming disconnects in understanding of accreting black holes	Leiden, Netherlands, 2023
Event Horizon Telescope (EHT) Conference invited talk	Online, 2022
IAU S375, The multimessenger chakra of blazar jets	Kathmandu, Nepal, 2022
CfA Seminar series, Harvard University	Cambridge, USA, 2022
Event Horizon Telescope (EHT) Conference invited talk	Granada, Spain, 2022
Indian Institute of Technology Kharagpur invited talk	Kharagpur, India, 2022
Black Hole Initiative Conference invited talk	Cambridge, USA, 2022
ngEHT Black Holes & their cosmic context meeting invited talk	Online, 2022
Indian Institute of Science invited talk	Bengaluru, India, 2021
PCTS Polarization workshop invited talk	Princeton, USA, 2021
ngEHT accretion & jets meeting invited talk	Online, 2021
Committee on Space Research (COSPAR) invited talk	Sydney, Australia, 2021
University of Michigan invited talk	Ann Arbor, USA, 2021

Contributed talks

CITA Plasma-Astro Meeting	Toronto, Canada, 2026
KITP Conference: Frontiers of Relativistic Plasma Physics	Santa Barbara, USA, 2025
RETCO VI Meeting	Indore, India, 2025
Mid-Atlantic Radio-Loud AGN Meeting	Baltimore, USA, 2022
Next-generation Event Horizon Telescope Conference	Granada, Spain, 2022
Event Horizon Telescope Collaboration Conference	Online, 2021
Next-generation Event Horizon Telescope November Conference	Online, 2021

Jets at all scales Conference	Heidelberg, Germany, 2021
Washington University in St. Louis	St. Louis, USA, 2020
University of Chicago	Chicago, USA, 2020
235th AAS Meeting Dissertation Talk	Honolulu, USA, 2020
20 years of Chandra Symposium	Boston, USA, 2019
Harvard University	Cambridge, USA, 2019
University of Colorado Boulder	Boulder, USA, 2019
University of California Berkeley	Berkeley, USA, 2019
Stanford University	Stanford, USA, 2019
University of California Santa Barbara Astrolunch seminar	Santa Barbara, USA, 2019
Princeton University Astroplasmas seminar	Princeton, USA, 2019
Center for Computational Astrophysics seminar	New York City, USA, 2019
University of Cambridge	Cambridge, UK, 2019
University of Oxford	Oxford, UK, 2019
Blue Waters Symposium	Sunriver, Oregon, USA, 2019
Northwestern University	Evanston, USA, 2019
Netherlands Astronomy Conference	Groningen, Netherlands, 2019
Time for Accretion Conference	Sigtuna, Sweden, 2018
School of Modern Astrophysics	Dolgoprudny, Russia, 2017

Contributed Posters

Supermassive Black Holes & Blue Notes	Montreal, Canada, 2026
European Astronomical Society Conference ePoster	Online, 2021
Third Purdue Workshop on Relativistic Plasma Astrophysics	West Lafayette, Indiana, USA, 2018
Netherlands Astronomy Conference	Nijmegen, Netherlands, 2017

Workshops

Event Horizon Telescope Collaboration meeting	Berlin, Germany, 2025
Future of X-ray Timing Conference	Amsterdam, NL, 2019
Outflows Conference	Amsterdam, Netherlands, 2019
Event Horizon Telescope Collaboration busy week/ PIRE winter school	Tucson, Arizona, USA, 2018
Event Horizon Telescope Collaboration meeting	Nijmegen, Netherlands, 2018
Tata Institute of Fundamental Research (TIFR) Conference	Mumbai, India, 2017