

# Wenbin Lu — Curriculum Vitae

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## CONTACT INFORMATION

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University of California Berkeley  
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## RESEARCH INTEREST

My research has been focused on understanding the underlying physics behind various high-energy transient phenomena, including *tidal disruption events*, *quasi-periodic eruptions*, *fast radio bursts*, *gamma-ray bursts*, *supernovae*, and *compact object mergers*. My areas of expertise include plasma physics, special/general relativity, hydrodynamics, radiative transfer, stellar dynamics, and (binary) stellar evolution.

## EMPLOYMENT

<b>Assistant Professor</b> , <i>University of California Berkeley</i> , California, USA	2022-
<b>Lyman Spitzer Fellow</b> , <i>Princeton University</i> , New Jersey, USA	2021-2022
<b>Burke Fellow</b> , <i>California Institute of Technology</i> , California, USA	2018-2021

## EDUCATION

<b>Ph.D.</b> in Astronomy, <i>University of Texas at Austin</i> , Texas, USA	2013-2018
<b>B.S.</b> in Physics, <i>Peking University</i> , Beijing, China	2009-2013

## HONORS & AWARDS

Scilog Fellow	2025-2026
Hellman Fellow	2024-2025
Rose Hills Innovator	2023-2024
Spitzer Postdoc Fellowship	2021-2022
Burke Postdoc Fellowship	2018-2021
David Alan Benfield Memorial Fellowship in Astronomy	2018

## PROFESSIONAL EXPERIENCES

*Teaching*

**Graduate Course:** Radiation (2022 Fall, 2023 Fall, 2025 Spring)

**Undergraduate Courses:** Astrophysical Origins of Chemical Elements (2023 Spring);  
Stellar Physics (2024 Fall)

**Mentoring**

**Graduate Students**

Kishore Patra (Astro → UCSC postdoc)	2022-2024
Dashiell Carrel (Physics)	2023-
Savannah Cary (Astro)	2023-
Howard H.-T. Huang (Astro)	2024-

**Postdocs**

Calvin Leung, Hubble Fellow	2023-
Yuhan Yao, Miller Fellow	2023-
Payel Mukhopadhyay, N3AS Fellow	2022-2023

**Undergraduate Students**

Darby McCauley (→ UIUC grad student)	2022-2024
Howard H.-T. Huang (→ UC Berkeley grad student)	2022
Gauri Batra (Cornell → Stanford grad student)	2021

**University Services (at UCB)**

Faculty Search Committee	2023
Grad Admission Committee (Chair)	2023, 2024

**Broader Services**

Referee for <i>Nature</i> , <i>MNRAS</i> , <i>ApJ</i> , <i>ApJL</i> , <i>PRL</i> , <i>PRD</i> , <i>Space Science Reviews</i> , <i>JHEAP</i> , <i>Universe</i>	2016-
Chair for panel discussion in FRB2022 Workshop, Cornell University	2022
Reviewer Panelist for proposals to NSF	
Reviewer Panelist for proposals to NASA	
Reviewer for observing proposals to FAST telescope	
Reviewer for consolidated grant application to the Science & Technology	

Facilities Council (STFC) of the UK  
 Local Organizing Committee for FRB2021 Conference, University of Amsterdam

**Involvement in Future Observing Facilities**

**UVEX** (PI Harrison): Co-I and Deep Synoptic Surveys WG 2022-  
**LS4** (PI Nugent): Multi-Messenger WG 2023-

**Colloquia**

Astronomy Colloquium, University of California Santa Cruz 04/2025  
 Astronomy Colloquium, University of Illinois Urbana-Champaign 11/2024  
 Physics Colloquium, University of Nevada Las Vegas 04/2024  
 Physics Colloquium, California State University Sacramento 09/2023  
 Astronomy Colloquium, Tsinghua University 03/2021  
 Astronomy Colloquium, University of California Berkeley 02/2021  
 Institute of Theory and Computation Colloquium Series, Harvard University 10/2020  
 McGill Space Institute Astrophysics Seminar 09/2020  
 Carnegie Observatories Colloquium 02/2020  
 Astronomy Colloquium, California Institute of Technology 01/2020  
 Physics and Astronomy Colloquium, University of Nevada at Las Vegas 11/2018  
 Kavli Institute for Astronomy and Astrophysics Colloquium, Peking University 09/2018  
 Black Hole Initiative Colloquium, Harvard University 04/2017

**Seminars**

TAPIR Seminar, Caltech, USA 03/2024  
 Online Seminar, Max-Planck-Institute for gravitational physics, Germany 05/2023  
 X-ray Binary Seminar, University of Southampton, UK 03/2023  
 THEA Seminar, Columbia University, USA 05/2022  
 Astroplasma Seminar, Princeton University, USA 02/2022  
 High-Energy Astrophysics Seminar, Hebrew University of Jerusalem, Israel 12/2021  
 Brown Bag Lunch, Massachusetts Institute of Technology, USA 05/2021  
 Theoretical Astrophysics Seminar, University of Florida, USA 10/2020  
 Astroplasmas Seminar, Princeton University, USA 10/2020  
 Astrophysics Lunch, Cornell University, USA 09/2020

(Blackboard) Carnegie Theory Talks, Pasadena, USA	07/2020
TAPIR Seminar, Caltech, USA	10/2018
(Blackboard) Carnegie Theory Talks, Pasadena, USA	09/2018
Astroplasmas Seminar, Princeton University, USA	12/2017
Astronomy Tea Talk, Caltech, USA	10/2017
Transient Lunch, UC Santa Cruz, USA	09/2017
Theoretical Astrophysics Center Seminar, UC Berkeley, USA	09/2017
(Blackboard) Institute of Theory and Computation, Harvard University, USA	04/2017
Lunch Talk, University of Kentucky, USA	10/2016
Astronomy Seminar, University of Science and Technology of China, China	05/2016
Lunch Talk, KIAA/Peking University, China	05/2016
Lunch Talk, University of Nevada at Las Vegas, USA	05/2015

### ***Invited Conference Talks***

<i>Broad-Brush Model for Quasi-Periodic Eruptions</i>	04/2024
TDE Workshop, UC Santa Barbara, USA	
<i>Late-time Accretion in Neutron Star Mergers</i>	12/2023
Gravitational Wave workshop, Tokyo University, Japan	
<i>Origin of Quasi-Period Eruptions</i>	12/2023
Texas Symposium, T.D. Lee Institute, China	
<i>Implications of the FRB source in the M81 Globular Cluster</i>	05/2023
FRB Workshop, University of Science and Technology of China, Hefei, China	
<i>Understanding the Fast Radio Bursts in our Local Universe</i>	10/2022
FRB2022 Workshop, Cornell University, Ithaca, NY	
<i>Towards Understanding of Fast Radio Bursts</i>	02/2021
FRB workshop, Yukawa Institute for Theoretical Physics, Kyoto University	
<i>General Constraints on the Emission Mechanisms of Fast Radio Bursts</i>	02/2020
FRB workshop, CCA Flatiron Institute, New York	
<i>Implications of Stream Self-Crossing in Tidal Disruption Events</i>	01/2020
TDE workshop, Yukawa Institute for Theoretical Physics, Kyoto University	
<i>Accretion Disk Evolution in Binary Neutron Star Mergers</i>	09/2019
ZTF Theory Network Meeting, San Luis Obispo, USA	

<i>Statistical and Polarization Properties of Fast Radio Bursts</i>	09/2019
Toronto FRB Day, CITA and University of Toronto	
<i>Energetics and Polarization Properties of Fast Radio Bursts</i>	01/2019
T. D. Lee Institute mini-workshop, Shanghai, China	
<i>Understanding the Polarization of Fast Radio Bursts</i>	07/2018
ZTF Theory Network Meeting, Santa Barbara, USA	
<b><u>Contributed Conference Talks</u></b>	
<i>Origin of Quasi-Periodic Eruptions</i>	03/2023
Aspen Winter Conference, Aspen Center for Physics, USA	
<i>Aftermath of white dwarf tidal capture</i>	01/2022
Aspen Winter Conference, Aspen Center for Physics, USA	
<i>Implications of a rapidly varying FRB in a globular cluster of M81</i>	08/2021
FRB2021 Conference, University of Amsterdam, the Netherlands	
<i>A Unified Picture of Galactic and Cosmological Fast Radio Bursts</i>	07/2020
FRB2020 Conference, West Virginia University, USA	
<i>The Radiation Mechanism of Fast Radio Bursts</i>	12/2017
Deciphering the Violent Universe, Playa del Carmen, Mexico	
<b><u>Public Talks</u></b>	
<i>How Gamma-Ray Bursts are Connected to Human Life</i>	02/2023
Chabot Space and Science Center, Oakland, CA	
<i>Endless hunt for black holes</i>	04/2021
Caltech Stargazing Lecture Series	
<i>Stories of black holes tearing apart stars at galactic centers</i>	02/2017
McDonald Observatory & DoA Board of Visitors Meeting, UT Austin	
<i>General relativity and black holes</i>	04/2016
Planetary Organization for Space Science and Exploration in Jackson School of Geosciences, UT Austin	

***Published*** (*h*-index 34, *m*-index 3.1, citations 3400+)

79. Somalwar, J., Ravi, V., Yao, Y., Guolo, M., Graham, M., et al. (**Lu, W.**), The First Systematically Identified Repeating Partial Tidal Disruption Event, *ApJ*, 985, 2, (2025)(jun) [PDF](#)
78. Tsuna, D., **Lu, W.**, Stellar Tidal Disruptions by Newborn Neutron Stars or Black Holes: A Mechanism for Hydrogen-poor (Super)luminous Supernovae and Fast Blue Optical Transients, *ApJ*, 986, 1, (2025)(jun) [PDF](#)
77. Yao, Y., Chornock, R., Ward, C., Hammerstein, E., Sfaradi, I., et al. (**Lu, W.**), A Massive Black Hole 0.8 kpc from the Host Nucleus Revealed by the Offset Tidal Disruption Event AT2024tvd, *ApJL*, 985, 2, (2025)(jun) [PDF](#)
76. Zheng, J., Zhu, J., **Lu, W.**, Zhang, B., EP240414a: Off-axis View of a Jet-cocoon System from an Expanded Progenitor Star, *ApJ*, 985, 1, (2025)(may) [PDF](#)
75. Somalwar, J., Ravi, V., **Lu, W.**, VLASS Tidal Disruption Events with Optical Flares. II. Discovery of Two TDEs with Intermediate Width Balmer Emission Lines and Connections to the Ambiguous Extreme Coronal Line Emitters, *ApJ*, 983, 2, (2025)(apr) [PDF](#)
74. Earl, N., French, K., Ramirez-Ruiz, E., Auchettl, K., Raimundo, S., et al. (**Lu, W.**), AT 2020nov: Evidence for Disk Reprocessing in a Rare Tidal Disruption Event, *ApJ*, 983, 1, (2025)(apr) [PDF](#)
73. Goodwin, A., Mummery, A., Laskar, T., Alexander, K., Anderson, G., et al. (**Lu, W.**), A Second Radio Flare from the Tidal Disruption Event AT2020vwl: A Delayed Outflow Ejection?, *ApJ*, 981, 2, (2025)(mar) [PDF](#)
72. Zhuang, J., Shen, R., Mou, G., **Lu, W.**, Interaction of an Outflow with Surrounding Gaseous Clouds as the Origin of Late-time Radio Flares in Tidal Disruption Events, *ApJ*, 979, 2, (2025)(feb) [PDF](#)
71. Yao, P., Quataert, E., Jiang, Y., **Lu, W.**, White, C., et al., Star-Disk Collisions: Implications for Quasi-periodic Eruptions and Other Transients near Supermassive Black Holes, *ApJ*, 978, 1, (2025)(jan) [PDF](#)
70. Yao, Y., Guolo, M., Tombesi, F., Li, R., Gezari, S., et al. (**Lu, W.**), Subrelativistic Outflow and Hours-timescale Large-amplitude X-Ray Dips during Super-Eddington Accretion onto a Low-mass Massive Black Hole in the Tidal Disruption Event AT2022lri, *ApJ*, 976, 1, (2024)(nov) [PDF](#)

69. Orr, M., Burkhart, B., **Lu, W.**, Ponnada, S., Hummels, C., et al., Objects May Be Closer than They Appear: Significant Host Galaxy Dispersion Measures of Fast Radio Bursts in Zoom-in Simulations, *ApJL*, 972, 2, (2024)(sep) [PDF](#)
68. **Lu, W.**, Matsumoto, T., Matzner, C., Misaligned precessing jets are choked by the accretion disc wind, *MNRAS*, 533, 1, (2024)(sep) [PDF](#)
67. Patra, K., **Lu, W.**, Ma, Y., Quataert, E., Miniutti, G., et al., Constraints on the narrow-line region of the X-ray quasi-periodic eruption source GSN 069, *MNRAS*, 530, 4, (2024)(jun) [PDF](#)
66. Yao, Y., **Lu, W.**, Harrison, F., Kulkarni, S., Gezari, S., et al., The On-axis Jetted Tidal Disruption Event AT2022cmc: X-Ray Observations and Broadband Spectral Modeling, *ApJ*, 965, 1, (2024)(apr) [PDF](#)
65. Kirsten, F., Ould-Boukattine, O., Herrmann, W., Gawroński, M., Hessels, J., et al. (**Lu, W.**), A link between repeating and non-repeating fast radio bursts through their energy distributions, *Nature Astronomy*, 8, (2024)(mar) [PDF](#)
64. Sheikh, S., Farah, W., Pollak, A., Siemion, A., Chamma, M., et al. (**Lu, W.**), Characterization of the repeating FRB 20220912A with the Allen Telescope Array, *MNRAS*, 527, 4, (2024)(feb) [PDF](#)
63. Huang, H., **Lu, W.**, Tidal disruption rate suppression by the event horizon of spinning black holes, *MNRAS*, 527, 2, (2024)(jan) [PDF](#)
62. Ryder, S., Bannister, K., Bhandari, S., Deller, A., Ekers, R., et al. (**Lu, W.**), A luminous fast radio burst that probes the Universe at redshift 1, *Science*, 382, 6668, (2023)(oct) [PDF](#)
61. **Lu, W.**, Quataert, E., Quasi-periodic eruptions from mildly eccentric unstable mass transfer in galactic nuclei, *MNRAS*, 524, 4, (2023)(oct) [PDF](#)
60. Yao, Y., Ravi, V., Gezari, S., van Velzen, S., **Lu, W.**, et al., Tidal Disruption Event Demographics with the Zwicky Transient Facility: Volumetric Rates, Luminosity Function, and Implications for the Local Black Hole Mass Function, *ApJL*, 955, 1, (2023)(sep) [PDF](#)
59. **Lu, W.**, Quataert, E., Late-time accretion in neutron star mergers: Implications for short gamma-ray bursts and kilonovae, *MNRAS*, 522, 4, (2023)(jul) [PDF](#)
58. Batra, G., **Lu, W.**, Bonnerot, C., Phinney, E., General relativistic stream crossing in tidal disruption events, *MNRAS*, 520, 4, (2023)(apr) [PDF](#)
57. **Lu, W.**, Fuller, J., Quataert, E., Bonnerot, C., On rapid binary mass transfer - I. Physical model, *MNRAS*, 519, 1, (2023)(feb) [PDF](#)
56. Wang, B., Xu, H., Jiang, J., Xu, J., Niu, J., et al. (**Lu, W.**), Atlas of dynamic spectra of fast radio burst FRB 20201124A, *Chinese Physics B*, 32, 2, (2023)(feb) [PDF](#)

55. Kremer, K., Li, D., **Lu, W.**, Piro, A., Zhang, B., et al., Prospects for Detecting Fast Radio Bursts in the Globular Clusters of Nearby Galaxies, *ApJ*, 944, 1, (2023)(feb) [PDF](#)
54. Andreoni, I., Coughlin, M., Perley, D., Yao, Y., **Lu, W.**, et al., A very luminous jet from the disruption of a star by a massive black hole, *Nature*, 612, 7940, (2022)(dec) [PDF](#)
53. Andreoni, I., **Lu, W.**, Grefenstette, B., Kasliwal, M., Yan, L., et al., Hard X-Ray Observations of the Hydrogen-poor Superluminous Supernova SN 2018hti with NuSTAR, *ApJL*, 941, 1, (2022)(dec) [PDF](#)
52. **Lu, W.**, Accretion Disk Evolution in Tidal Disruption Events, *Handbook of X-ray and Gamma-ray Astrophysics*, (2022)() [PDF](#)
51. Mooley, K., Anderson, J., **Lu, W.**, Optical superluminal motion measurement in the neutron-star merger GW170817, *Nature*, 610, 7931, (2022)(oct) [PDF](#)
50. Kumar, P., Gill, R., **Lu, W.**, Propagation of Alfvén waves in the charge starvation regime, *MNRAS*, 516, 2, (2022)(oct) [PDF](#)
49. Yao, Y., **Lu, W.**, Guolo, M., Pasham, D., Gezari, S., et al., The Tidal Disruption Event AT2021ehb: Evidence of Relativistic Disk Reflection, and Rapid Evolution of the Disk-Corona System, *ApJ*, 937, 1, (2022)(sep) [PDF](#)
48. Patra, K., **Lu, W.**, Brink, T., Yang, Y., Filippenko, A., et al., Spectropolarimetry of the tidal disruption event AT 2019qiz: a quasi-spherical reprocessing layer, *MNRAS*, 515, 1, (2022)(sep) [PDF](#)
47. Xu, H., Niu, J., Chen, P., Lee, K., Zhu, W., et al. (**Lu, W.**), A fast radio burst source at a complex magnetized site in a barred galaxy, *Nature*, 609, 7928, (2022)(sep) [PDF](#)
46. Kremer, K., Lombardi, J., **Lu, W.**, Piro, A., Rasio, F., et al., Hydrodynamics of Collisions and Close Encounters between Stellar Black Holes and Main-sequence Stars, *ApJ*, 933, 2, (2022)(jul) [PDF](#)
45. Bonnerot, C., Pessah, M., **Lu, W.**, From Pericenter and Back: Full Debris Stream Evolution in Tidal Disruption Events, *ApJL*, 931, 1, (2022)(may) [PDF](#)
44. Fuller, J., **Lu, W.**, The spins of compact objects born from helium stars in binary systems, *MNRAS*, 511, 3, (2022)(apr) [PDF](#)
43. Somalwar, J., Ravi, V., Dong, D., Graham, M., Hallinan, G., et al. (**Lu, W.**), The Nascent Milliquasar VT J154843.06+220812.6: Tidal Disruption Event or Extreme Accretion State Change?, *ApJ*, 929, 2, (2022)(apr) [PDF](#)
42. Bonnerot, C., **Lu, W.**, The nozzle shock in tidal disruption events, *MNRAS*, 511, 2, (2022)(apr) [PDF](#)



41. Yang, Y., **Lu, W.**, Feng, Y., Zhang, B., Li, D., et al., Temporal Scattering, Depolarization, and Persistent Radio Emission from Magnetized Inhomogeneous Environments near Repeating Fast Radio Burst Sources, *ApJL*, 928, 2, (2022)(apr) [PDF](#)
40. Feng, Y., Li, D., Yang, Y., Zhang, Y., Zhu, W., et al. (**Lu, W.**), Frequency-dependent polarization of repeating fast radio bursts—implications for their origin, *Science*, 375, 6586, (2022)(mar) [PDF](#)
39. **Lu, W.**, Beniamini, P., Kumar, P., Implications of a rapidly varying FRB in a globular cluster of M81, *MNRAS*, 510, 2, (2022)(feb) [PDF](#)
38. Makhathini, S., Mooley, K., Brightman, M., Hotokezaka, K., Nayana, A., et al. (**Lu, W.**), The Panchromatic Afterglow of GW170817: The Full Uniform Data Set, Modeling, Comparison with Previous Results, and Implications, *ApJ*, 922, 2, (2021)(dec) [PDF](#)
37. **Lu, W.**, McKee, C., Mooley, K., Infrared dust echoes from neutron star mergers, *MNRAS*, 507, 3, (2021)(nov) [PDF](#)
36. Bij, A., Lin, H., Li, D., van Kerkwijk, M., Pen, U., et al. (**Lu, W.**), Kinematics of Crab Giant Pulses, *ApJ*, 920, 1, (2021)(oct) [PDF](#)
35. Beniamini, P., **Lu, W.**, Survival Times of Supramassive Neutron Stars Resulting from Binary Neutron Star Mergers, *ApJ*, 920, 2, (2021)(oct) [PDF](#)
34. Connor, L., Shila, K., Kulkarni, S., Flygare, J., Hallinan, G., et al. (**Lu, W.**), Galactic Radio Explorer: An All-sky Monitor for Bright Radio Bursts, *passp*, 133, 1025, (2021)(jul) [PDF](#)
33. Bonnerot, C., **Lu, W.**, Hopkins, P., First light from tidal disruption events, *MNRAS*, 504, 4, (2021)(jul) [PDF](#)
32. **Lu, W.**, Fuller, J., Raveh, Y., Perets, H., Li, T., et al., The former companion of hyper-velocity star S5-HVS1, *MNRAS*, 503, 1, (2021)(may) [PDF](#)
31. Kremer, K., **Lu, W.**, Piro, A., Chatterjee, S., Rasio, F., et al., Fast Optical Transients from Stellar-mass Black Hole Tidal Disruption Events in Young Star Clusters, *ApJ*, 911, 2, (2021)(apr) [PDF](#)
30. **Lu, W.**, Beniamini, P., Bonnerot, C., On the formation of GW190814, *MNRAS*, 500, 2, (2021)(jan) [PDF](#)
29. **Lu, W.**, Piro, A., Waxman, E., Implications of Canadian Hydrogen Intensity Mapping Experiment repeating fast radio bursts, *MNRAS*, 498, 2, (2020)(oct) [PDF](#)
28. **Lu, W.**, Kumar, P., Zhang, B., A unified picture of Galactic and cosmological fast radio bursts, *MNRAS*, 498, 1, (2020)(oct) [PDF](#)

27. Kool, E., Reynolds, T., Mattila, S., Kankare, E., Pérez-Torres, M., et al. (**Lu, W.**), AT 2017gbl: a dust obscured TDE candidate in a luminous infrared galaxy, *MNRAS*, 498, 2, (2020)(oct) [PDF](#)
26. De Colle, F., **Lu, W.**, Jets from Tidal Disruption Events, *New Astronomy Reviews*, 89, (2020)(sep) [PDF](#)
25. **Lu, W.**, Phinney, E., Imprint of local environment on fast radio burst observations, *MNRAS*, 496, 3, (2020)(aug) [PDF](#)
24. Chen, G., Ravi, V., **Lu, W.**, The Multiwavelength Counterparts of Fast Radio Bursts, *ApJ*, 897, 2, (2020)(jul) [PDF](#)
23. Bonnerot, C., **Lu, W.**, Simulating disc formation in tidal disruption events, *MNRAS*, 495, 1, (2020)(jun) [PDF](#)
22. Andreoni, I., **Lu, W.**, Smith, R., Masci, F., Bellm, E., et al., Zwicky Transient Facility Constraints on the Optical Emission from the Nearby Repeating FRB 180916.J0158+65, *ApJL*, 896, 1, (2020)(jun) [PDF](#)
21. Kumar, P., **Lu, W.**, Radiation forces constrain the FRB mechanism, *MNRAS*, 494, 1, (2020)(may) [PDF](#)
20. Piro, A., **Lu, W.**, Wind-reprocessed Transients, *ApJ*, 894, 1, (2020)(may) [PDF](#)
19. **Lu, W.**, Bonnerot, C., Self-intersection of the fallback stream in tidal disruption events, *MNRAS*, 492, 1, (2020)(feb) [PDF](#)
18. **Lu, W.**, Piro, A., Implications from ASKAP Fast Radio Burst Statistics, *ApJ*, 883, 1, (2019)(sep) [PDF](#)
17. Kremer, K., **Lu, W.**, Rodriguez, C., Lachat, M., Rasio, F., et al., Tidal Disruptions of Stars by Black Hole Remnants in Dense Star Clusters, *ApJ*, 881, 1, (2019)(aug) [PDF](#)
16. **Lu, W.**, Kumar, P., Narayan, R., Fast radio burst source properties from polarization measurements, *MNRAS*, 483, 1, (2019)(feb) [PDF](#)
15. **Lu, W.**, Kumar, P., The maximum luminosity of fast radio bursts, *MNRAS*, 483, 1, (2019)(feb) [PDF](#)
14. **Lu, W.**, Kumar, P., On the Missing Energy Puzzle of Tidal Disruption Events, *ApJ*, 865, 2, (2018)(oct) [PDF](#)
13. De Colle, F., **Lu, W.**, Kumar, P., Ramirez-Ruiz, E., Smoot, G., et al., Thermal and non-thermal emission from the cocoon of a gamma-ray burst jet, *MNRAS*, 478, 4, (2018)(aug) [PDF](#)
12. Carballo-Rubio, R., Kumar, P., **Lu, W.**, Seeking observational evidence for the formation of trapping horizons in astrophysical black holes, *Phys. Rev. D*, 97, 12, (2018)(jun) [PDF](#)

11. **Lu, W.**, Kumar, P., On the radiation mechanism of repeating fast radio bursts, *MNRAS*, 477, 2, (2018)(jun) [PDF](#)
10. Bhattacharya, M., **Lu, W.**, Kumar, P., Santana, R., Monte Carlo Simulations of Photospheric Emission in Relativistic Outflows, *ApJ*, 852, 1, (2018)(jan) [PDF](#)
9. **Lu, W.**, Krolik, J., Crumley, P., Kumar, P., Radiative interaction between the relativistic jet and optically thick envelope in tidal disruption events, *MNRAS*, 471, 1, (2017)(oct) [PDF](#)
8. Dai, L., **Lu, W.**, Probing Motion of Fast Radio Burst Sources by Timing Strongly Lensed Repeaters, *ApJ*, 847, 1, (2017)(sep) [PDF](#)
7. Kumar, P., **Lu, W.**, Bhattacharya, M., Fast radio burst source properties and curvature radiation model, *MNRAS*, 468, 3, (2017)(jul) [PDF](#)
6. **Lu, W.**, Kumar, P., Narayan, R., Stellar disruption events support the existence of the black hole event horizon, *MNRAS*, 468, 1, (2017)(jun) [PDF](#)
5. **Lu, W.**, Kumar, P., A universal EDF for repeating fast radio bursts?, *MNRAS*, 461, 1, (2016)(sep) [PDF](#)
4. Crumley, P., **Lu, W.**, Santana, R., Hernández, R., Kumar, P., et al., Swift J1644+57: an ideal test bed of radiation mechanisms in a relativistic super-Eddington jet, *MNRAS*, 460, 1, (2016)(jul) [PDF](#)
3. **Lu, W.**, Kumar, P., Evans, N., Infrared emission from tidal disruption events - probing the pc-scale dust content around galactic nuclei, *MNRAS*, 458, 1, (2016)(may) [PDF](#)
2. **Lu, W.**, Kumar, P., External inverse-Compton emission from jetted tidal disruption events, *MNRAS*, 458, 1, (2016)(may) [PDF](#)
1. **Lu, W.**, Kumar, P., Smoot, G., Probing massive stars around gamma-ray burst progenitors, *MNRAS*, 453, 2, (2015)(oct) [PDF](#)

### **Submitted**

6. Somalwar, J., Ravi, V., Margutti, R., Chornock, R., Natarajan, P., et al. (**Lu, W.**), A luminous and hot infrared through X-ray transient at a 5 kpc offset from a dwarf galaxy, *submitted*, arXiv: 2505.11597, (2025)(may) [PDF](#)
5. Masterson, M., De, K., Panagiotou, C., Kara, E., **Lu, W.**, et al., JWST's First View of Tidal Disruption Events: Compact, Accretion-Driven Emission Lines & Strong Silicate Emission in an Infrared-selected Sample, *submitted*, arXiv: 2503.08647, (2025)(mar) [PDF](#)
4. Miller, A., Abrams, N., Aldering, G., Anand, S., Angus, C., et al. (**Lu, W.**), The La Silla Schmidt Southern Survey, *submitted*, arXiv: 2503.14579, (2025)(mar) [PDF](#)

3. Gayathri, V., Bartos, I., Rosswog, S., Miller, M., Veske, D., et al. **(Lu, W.)**, Do gravitational wave observations in the lower mass gap favor a hierarchical triple origin?, *submitted*, arXiv: 2307.09097, (2023)(jul) [PDF](#)
2. Kulkarni, S., Harrison, F., Grefenstette, B., Earnshaw, H., Andreoni, I., et al. **(Lu, W.)**, Science with the Ultraviolet Explorer (UVEX), *submitted*, arXiv: 2111.15608, (2021)(nov) [PDF](#)
1. **Lu, W.**, Beniamini, P., McDowell, A., Deceleration of relativistic jets with lateral expansion, *submitted*, arXiv: 2005.10313, (2020)(may) [PDF](#)