

# Curriculum Vitae

## Ore Gottlieb

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CONTACT INFORMATION	Department of Physics Massachusetts Institute of Technology	<i>E-mail:</i> <a href="mailto:ogot@mit.edu">ogot@mit.edu</a> <i>Web:</i> <a href="http://oregottlieb.com">http://oregottlieb.com</a>
RESEARCH INTERESTS	Multi-messenger Astrophysics, Black Holes, Core Collapse, Neutron Stars, Compact Binary Mergers, Supernovae, Gamma-ray Bursts, Fast Transients, Accretion Disks, Active Galactic Nuclei, Gravitational Waves, and Particle Emission. Areas of expertise: relativity, magnetohydrodynamics, radiation processes, and numerical simulations.	
ACADEMIC POSITIONS	2026-2025 Assistant Professor of Physics, Massachusetts Institute of Technology Visiting Scientist, Massachusetts Institute of Technology 2023-2025 Flatiron Research/THEA fellow, CCA & Columbia University 2021-2023 Rothschild/CIERA fellow, Northwestern University	
EDUCATION	2016-2021 Ph.D. in Physics and Astronomy, advised by Ehud Nakar, Tel Aviv University, Israel 2014-2016 M.Sc. in Physics, cum Laude, advised by Amiel Sternberg, Tel Aviv University, Israel 2011-2014 Additional B.Sc. in Physics, Tel Aviv University, Israel 2009-2011 B.Sc. in Computer Science, Technion, Haifa, Israel	
SCHOLARSHIPS, HONORS AND AWARDS	<ul style="list-style-type: none"> <li>• Blavatnik Regional Awards for Young Scientists Finalist in Physical Sciences &amp; Engineering (2025)</li> <li>• Flatiron Research Fellowship (2023)</li> <li>• THEA Postdoctoral Fellowship (2023)</li> <li>• CIERA Postdoctoral Fellowship (2021)</li> <li>• Rothschild Postdoctoral Fellowship (2021)</li> <li>• Israel Physical Society - Yoel Rakah Prize for Outstanding Theoretical Physics Student (2021)</li> <li>• Award for outstanding achievements in research, Tel Aviv University (2021)</li> <li>• Award for outstanding achievements in research, Tel Aviv University (2019)</li> <li>• The Yuval Ne'eman award for Outstanding academic achievement, Tel Aviv University (2019)</li> <li>• Award for outstanding achievements in research, Tel Aviv University (2018)</li> </ul>	
FUNDING & COMPUTATIONAL AWARDS	<ul style="list-style-type: none"> <li>• 2026: PI of ASCR ALCC time award, 4M GPU-hours (eq. <math>\sim</math> \$16M)</li> <li>• 2025: PI of ASCR ALCC time award, 2.4M GPU-hours (eq. <math>\sim</math> \$9.6M)</li> <li>• 2025: PI of Energy Research Computing Allocations Process award, 96K GPU-hours (eq. <math>\sim</math> \$200K)</li> <li>• 2024-2025: Science-PI of NASA Fermi Cycle 17 Guest Investigator program NNH23ZDA001N – \$80K</li> <li>• 2024: PI of Energy Research Computing Allocations Process award, 120K GPU-hours (eq. <math>\sim</math> \$260K)</li> <li>• 2022-2023: Co-PI of ASCR LCC time award, 2.6M GPU-hours (eq. <math>\sim</math> \$6.5M)</li> <li>• 2021-2022: Science-PI of NASA Fermi Cycle 14 Guest Investigator program 80NSSC22K0031 – \$80K</li> </ul>	
PROFESSIONAL ACTIVITIES	<ul style="list-style-type: none"> <li>• Panel Reviewer for NSF, BSF, ISF, NASA Postdoctoral Program, Fermi Guest Investigator Program, Argonne Leadership Computing Facility Awards</li> <li>• <b>Main organizer of a 2024 Summer Workshop in The Aspen Center for Physics:</b> "Multi-Messenger Binary Mergers &amp; Stellar Explosions"</li> <li>• <b>Special session organizer in AAS summer meeting 2025</b> "Beyond Mergers: Cataclysmic Events Powering r-Process Nucleosynthesis"</li> <li>• <b>Special session organizer in AAS High Energy Astrophysics Division (HEAD) meeting 2023</b> "Multi-messenger stripped-envelope supernovae"</li> <li>• Journal Reviewer for MNRAS, The Astrophysical Journal, Astronomy &amp; Astrophysics, Physical Review</li> </ul>	

### List of Publications

54 total papers, > 8000 citations, h-index 29.  
 28 lead author papers, > 2000 citations, h-index 21.  
 6 mentored student papers.  
 1 science letter.  
 1 research note.

28. **O. Gottlieb**, M. Cantiello, C. Norton, K. Van Tilburg, M. Kleban  
“The Life and Death of Stars That Capture Primordial Black Holes,” [arXiv, 2606.02700 \(2026\)](#).
27. **O. Gottlieb**, B. D. Metzger, D. Issa, S. E. Li, M. Renzo, M. Isi  
“Spinning into the Gap: Direct-Horizon Collapse as the Origin of GW231123 from End-to-End GRMHD Simulations,” [ApJL, 993, 54 \(2025\)](#).
26. **O. Gottlieb**  
“The Landscape of Collapsar Outflows: Structure, Signatures and Origins of Einstein Probe Relativistic Supernova Transients,” [ApJL, 992, 3 \(2025\)](#).
25. **O. Gottlieb**, B. D. Metzger, F. Foucart, E. Ramirez-Ruiz  
“A Unified Model of Kilonovae and GRBs in Binary Mergers Establishes Neutron Stars as the Central Engines of Short GRBs,” [ApJ, 984, 77 \(2025\)](#).
24. **O. Gottlieb**, M. Renzo, B. D. Metzger, J. A. Goldberg, M. Cantiello  
“She’s Got Her Mother’s Hair: End-to-End Collapsar Simulations Unveil the Origin of Black Holes’ Magnetic Field,” [ApJL, 976, 13 \(2024\)](#).
23. **O. Gottlieb**, B. D. Metzger  
“Late Jets, Early Sparks: Illuminating the Premaximum Bumps in Superluminous Supernovae,” [ApJL, 974, 1 \(2024\)](#).
22. **O. Gottlieb**, A. Levinson, Y. Levin  
“In LIGO’s Sight? Vigorous Coherent Gravitational Waves from Cooled Collapsar Disks,” [ApJL, 972, 4 \(2024\)](#).
21. **O. Gottlieb**, B. D. Metzger, E. Quataert, D. Issa, T. Martineau, F. Foucart, M. Duez, L. Kidder, H. Pfeiffer, M. Scheel  
“A Unified Picture of Short and Long Gamma-ray Bursts from Compact Binary Mergers,” [ApJL, 958, 33 \(2023\)](#).
20. **O. Gottlieb**<sup>†</sup>, D. Issa<sup>†</sup>, J. Jacquemin-Ide, M. Liska, F. Foucart, A. Tchekhovskoy, B. D. Metzger, E. Quataert, R. Perna, D. Kasen, M. D. Duez, L. E. Kidder, H. P. Pfeiffer, M. A. Scheel  
**†Contributed equally**  
“Large-scale Evolution of Seconds-long Relativistic Jets from Black Hole-Neutron Star Mergers,” [ApJL, 954, 21 \(2023\)](#).
19. **O. Gottlieb**, D. Issa, J. Jacquemin-Ide, M. Liska, A. Tchekhovskoy, F. Foucart, D. Kasen, R. Perna, E. Quataert, B. D. Metzger  
“Hourlong Near-UV/Optical Emission from Mildly Relativistic Outflows in Black Hole-Neutron Star Mergers,” [ApJL, 953, 11 \(2023\)](#).
18. **O. Gottlieb**, J. Jacquemin-Ide, B. Lowell, A. Tchekhovskoy, E. Ramirez-Ruiz  
“Collapsar Black Holes are Born Slowly Spinning,” [ApJL, 952, 32 \(2023\)](#).
17. **O. Gottlieb**, H. Nagakura, A. Tchekhovskoy, P. Natarajan, E. Ramirez-Ruiz, S. Banagiri, J. Jacquemin-Ide, N. Kaaz, V. Kalogera  
“Jet-Inflated Cocoons in Dying Stars: New LIGO-Detectable Gravitational Wave Sources,” [ApJL, 951, 30 \(2023\)](#).
16. **O. Gottlieb**, S. Moseley, T. Ramirez-Aguilar, A. Murguia-Berthier, M. Liska, A. Tchekhovskoy  
“On the jet-ejecta interaction in 3D GRMHD simulations of binary neutron star merger aftermath,” [ApJL, 933, 2 \(2022\)](#).
15. **O. Gottlieb**, M. Liska, A. Tchekhovskoy, O. Bromberg, A. Lalakos, D. Giannios, P. Mösta  
“Black hole to photosphere: 3D GRMHD simulations of collapsars reveal wobbling and hybrid composition jets,” [ApJL, 933, 9 \(2022\)](#).
14. **O. Gottlieb**, A. Tchekhovskoy, R. Margutti  
“Shocked jets in CCSNe can power the zoo of fast blue optical transients,” [MNRAS, 513, 3810 \(2022\)](#).
13. **O. Gottlieb**, A. Lalakos, O. Bromberg, M. Liska, A. Tchekhovskoy  
“Black hole to breakout: 3D GRMHD simulations of collapsar jets reveal a wide range of transients,” [MNRAS, 150, 4962 \(2022\)](#).
12. **O. Gottlieb**, E. Nakar  
“The propagation of relativistic jets in expanding media,” [MNRAS, 517, 1640 \(2022\)](#).

11. **O. Gottlieb**, N. Globus  
“The role of jet-cocoon mixing, magnetization and shock breakout in neutrino and cosmic-ray emission from short GRBs,” *ApJL*, **915**, 4 (2021).
  10. **O. Gottlieb**, O. Bromberg, A. Levinson, E. Nakar  
“Intermittent mildly magnetized jet as the source of GRBs,” *MNRAS*, **504**, 3947 (2021).
  9. **O. Gottlieb**, E. Nakar, O. Bromberg  
“The structure of hydrodynamic  $\gamma$ -ray burst jets,” *MNRAS*, **500**, 3511 (2021).
  8. **O. Gottlieb**, O. Bromberg, C.B. Singh, E. Nakar  
“The structure of weakly-magnetized  $\gamma$ -ray burst jets,” *MNRAS*, **498**, 3320 (2020).
  7. **O. Gottlieb**, A. Levinson, E. Nakar  
“Intermittent hydrodynamic jets in collapsars do not produce GRBs,” *MNRAS*, **495**, 570 (2020).
  6. **O. Gottlieb**, A. Loeb  
“Electromagnetic signals from the decay of free neutrons in the first hours of neutron star mergers,” *MNRAS*, **493**, 1753 (2020).
  5. **O. Gottlieb**, A. Levinson, E. Nakar  
“High efficiency photospheric emission entailed by formation of a collimation shock in gamma-ray bursts,” *MNRAS*, **488**, 1416 (2019).
  4. **O. Gottlieb**, E. Nakar, T. Piran  
“Detectability of neutron star merger afterglows,” *MNRAS*, **488**, 2405 (2019).
  3. K. P. Mooley<sup>†</sup>, A. T. Deller<sup>†</sup>, **O. Gottlieb**<sup>†</sup>, E. Nakar, G. Hallinan, S. Bourke, D. A. Frail, A. Horesh, A. Corsi, K. Hotokezaka  
<sup>†</sup>**Contributed equally**  
“Superluminal motion of a relativistic jet in the neutron star merger GW170817,” *Nature*, **561**, 355 (2018).
  2. **O. Gottlieb**, E. Nakar, T. Piran, K. Hotokezaka  
“A cocoon shock breakout as the origin of the  $\gamma$ -ray emission in GW170817,” *MNRAS*, **479**, 588 (2018).
  1. **O. Gottlieb**, E. Nakar, T. Piran  
“The cocoon emission - an electromagnetic counterpart to gravitational waves from neutron star mergers,” *MNRAS*, **473**, 576 (2018).
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6. H. Chan, **O. Gottlieb**, J. Jacquemin-Ide, M. Cantiello, M. Renzo  
“Jets from Scratch: A 3D Dynamo Origin of Long Gamma-Ray Burst Jets,” *arXiv*, 2605.12931 (2026).
  5. J. Bopp, **O. Gottlieb**  
“Fast Transients Fueled by Magnetic Fury from Slow-Spinning Collapsar Black Hole Accretion Disks,” *ApJL*, **982** 56 (2025).
  4. D. Issa, **O. Gottlieb**, B. D. Metzger, J. Jacquemin-Ide, M. Liska, F. Foucart, G. Halevi, A. Tchekhovskoy  
“Magnetically Driven Neutron-rich Ejecta Unleashed: Global 3D Neutrino-General Relativistic Magnetohydrodynamic Simulations of Collapsars Probe the Conditions for r-process Nucleosynthesis,” *ApJL*, **985** 26 (2025).
  3. E. Guarini, I. Tamborra, **O. Gottlieb**  
“State-of-the-Art Collapsar Jet Simulations Imply Undetectable Subphotospheric Neutrinos,” *PhRvD*, **107**, 023001 (2023).
  2. A. Lalakos, **O. Gottlieb**, N. Kaaz, K. Chatterjee, M. Liska, I. Christie, A. Tchekhovskoy, I. Zhuravleva, E. Nokhrina  
“Bridging Bondi and Event Horizon Scales: 3D GRMHD Simulations Reveal X-Shaped Radio Galaxy Morphology,” *ApJL*, **936**, 5 (2022).
  1. M. Eisenberg, **O. Gottlieb**, E. Nakar  
“Observational signatures of stellar explosions driven by relativistic jets,” *MNRAS*, **517**, 582 (2022).

1. **O. Gottlieb**  
“Detecting Gravitational-waves from Collapsar Cocoons with the Cosmic Explorer,” *Cosmic Explorer Science Letter* (2023)
20. M. Cantiello, **O. Gottlieb**, C. Norton, M. Kleban, K. Van Tilburg  
“Accretion of Primordial Black Holes in Stellar Interiors ,” *arXiv*, 2606.02726 (2026).
19. H. Wang, **O. Gottlieb**, A. Katira, M. Yadav, L. Lei, Y. Fan, D. Wei  
“The Very Late Time Afterglow of GW170817 Favors a Wobbling Jet ,” *arXiv*, 2605.13719 (2026).
18. G. P. Srinivasaragavan, D. Li, X. J. Hall, **O. Gottlieb**, and 90 coauthors  
“EP250827b/SN 2025wkm: An X-ray Flash-Supernova Powered by a Central Engine and Circumstellar Interaction,” *arXiv*, 2512.10239 (2025).
17. H. Chen, **O. Gottlieb**  
“Inferring Neutron Star Nuclear Properties from Gravitational-Wave and Gamma-Ray Burst Observations,” *arXiv*, 2506.18151 (2025).
16. M. R. Izquierdo, C. Palenzuela, S. Liebling, **O. Gottlieb**, M. Bezares  
“Implications of Magnetic Flux-Disk Mass Correlation in Black Hole-Neutron Star Mergers for GRB sub-populations,” *PhRvD*, 112, 063027 (2025).
15. A. Perna, **O. Gottlieb**, E. Shukla, D. Radice  
“Connecting GRBs from Binary Neutron Star Mergers to Nuclear Properties of Neutron Stars,” *PhRvD*, 111, 063015 (2025).
14. A. Rudolph, I. Tamborra, **O. Gottlieb**  
“Subphotospheric Emission from Short Gamma-Ray Bursts. II. Signatures of Non-Thermal Dissipation in the Multi-Messenger Signals,” *ApJ*, 983, 34 (2025).
13. A. Lalakos, A. Tchekhovskoy, O. Bromberg, **O. Gottlieb**, J. Jacquemin-Ide, M. Liska, H. Zhang  
“Jets with a Twist: Emergence of FR0 Jets in 3D GRMHD Simulation of Zero Angular Momentum Black Hole Accretion,” *ApJ*, 964, 79 (2024).
12. V. Rohoza, A. Lalakos, M. Paik, K. Chatterjee, M. Liska, A. Tchekhovskoy, **O. Gottlieb**  
“How to Turn Jets into Cylinders near Supermassive Black Holes in 3D GRMHD Simulations,” *ApJ*, 963, 29 (2024).
11. A. Rudolph, I. Tamborra, **O. Gottlieb**  
“Subphotospheric emission from short gamma-ray bursts: Protons mold the multi-messenger signals,” *ApJ*, 961, 7 (2024).
10. J. Jacquemin-Ide, **O. Gottlieb**, B. Lowell, A. Tchekhovskoy  
“Collapsar GRBs Grind their BHs to a Halt,” *ApJ*, 961, 212 (2024).
9. G. Halevi, B. Wu, P. Mösta, **O. Gottlieb**, A. Tchekhovskoy, D. R. Aguilera-Dena  
“Density Profiles of Collapsed Rotating Massive Stars Favor Long Gamma-Ray Bursts,” *ApJL*, 944, 38 (2023).
8. A. Hajela, R. Margutti, J. S. Bright, K. D. Alexander, B. D. Metzger, V. Nedora, A. Kathirgamaraju, B. Margalit, D. Radice, E. Berger, A. MacFadyen, D. Giannios, R. Chornock, I. Heywood, L. Sironi, **O. Gottlieb**, and 20 coauthors  
“Evidence for X-Ray Emission in Excess to the Jet-afterglow Decay 3.5 yr after the Binary Neutron Star Merger GW 170817: A New Emission Component,” *ApJL*, 927, 17 (2022).
7. K. Hotokezaka, E. Nakar, **O. Gottlieb**, S. Nissanke, K. Masuda, G. Hallinan, K. P. Mooley, A. T. Deller  
“A Hubble constant measurement from superluminal motion of the jet in GW170817,” *Nature Astronomy*, 3, 940 (2019).
6. E. Nakar, **O. Gottlieb**, T. Piran, M. Kasliwal, G. Hallinan  
“From  $\gamma$  to radio - The electromagnetic counterpart of GW170817,” *ApJ*, 867, 18 (2018).
5. K. P. Mooley, E. Nakar, K. Hotokezaka , G. Hallinan, A. Corsi, D. A. Frail, A. Horesh, T. Murphy, E. Lenc, D. L. Kaplan, K. De, D. Dobie, P. Chandra, A. T. Deller, **O. Gottlieb**, and 10 coauthors  
“A mildly relativistic wide-angle outflow in the neutron star merger GW170817,” *Nature*, 554, 207 (2018).

4. O. Bromberg, A. Tchekhovskoy, **O. Gottlieb**, E. Nakar, T. Piran  
“The gamma-rays that accompanied GW170817 and the observational signature of a magnetic jet breaking out of NS merger ejecta,” *MNRAS*, **475**, 2971 (2018).
3. R. Harrison, **O. Gottlieb**, E. Nakar  
“Numerically calibrated model for propagation of a relativistic unmagnetized jet in dense media,” *MNRAS*, **477**, 2128 (2018).
2. M. M. Kasliwal, E. Nakar, L. P. Singer, D. L. Kaplan, D. O. Cook, A. Van Sistine, R. M. Lau, C. Fremling, **O. Gottlieb**, and 72 coauthors  
“Illuminating Gravitational Waves: A Concordant Picture of Photons from a Neutron Star Merger,” *Science*, **358**, 1559 (2017).
1. B. P. Abbott et al.  
“Multi-messenger Observations of a Binary Neutron Star Merger,” *ApJL*, **848**, 12 (2017).

RESEARCH NOTE

1. M. Renzo, J. A. Goldberg, A. Grichener, **O. Gottlieb**, M. Cantiello  
“Progenitor with small reaction networks should not be used as initial conditions for core collapse,” *RNAAS*, **AAS55519** (2024)

INVITED  
CONFERENCE  
TALKS

- APS GPS 2026, Denver, CO, USA - March 2026
- AstroNuc 2026, Tucson, AZ, USA - March 2026
- The 4th TDAMM Workshop, Huntsville, AL, USA - October 2025
- Relativistic fluids around compact objects, Warsaw, Poland - May 2025
- Workshop on GRBs and Central Engine Powered Transients, Playa Del Carmen, Mexico - December 2024
- GRB Forum 2024, Athens, Greece - July 2024
- Thinkshop on Fast Evolving Transients, Bormio, Italy - February 2024
- RESCEU-NBIA workshop on gravitational-wave sources, Tokyo, Japan - December 2023
- AAS High Energy Astrophysics Division (HEAD) meeting 2023, Waikōloa, Hawaii, USA - March 2023
- Growing black holes: accretion and mergers, Kathmandu, Nepal - May 2022
- Seventh physics & astrophysics at the extreme (PAX-VII) workshop, *introductory talk*, PSU, PA, USA - August 2021
- 2021 Israel Physical Society Conference, Nuclear Research Center Negev, Israel - February 2021
- Sixteenth Marcel Grossmann Meeting, Rome, Italy - July 2021
- 43rd COSPAR Scientific Assembly, Sydney, Australia - January 2021
- High Energy Astrophysics Japan Israel Workshop, RIKEN, Tokyo & Kobe, Japan - July 2019
- TeV Particle Astrophysics 2018, Langenbeck-Virchow-Haus, Berlin, Germany - August 2018

INVITED  
SEMINARS/  
COLLOQUIA

- Columbia Physics Colloquium, Columbia University, New York, NY, USA - November 2025
- COLIBRI seminar, COLIBRI Consortium, Online - September 2025
- Warsaw Colloquium for Theoretical Physics, Center for Theoretical Physics, Warsaw, Poland - May 2025
- Princeton Gravity Initiative seminar, Princeton University, Princeton, NJ, USA - April 2025
- Astrophysics seminar, Hebrew University, Jerusalem, Israel - April 2025
- Astrophysics seminar, Technion, Haifa, Israel - April 2025
- Institute for Fundamental Science seminar, University of Oregon, Eugene, OR, USA - March 2025
- Astronomy seminar, Stony Brook, New York, NY, USA - February 2025
- MIT Physics Colloquium, MIT, Cambridge, MA, USA - February 2025
- ZTF MMA Call, Zoom meeting - December 2024
- Galaxy lunch talk, Yale University, New Haven, CT, USA - November 2024
- Easytalk seminar, Goddard Space Flight Center, Greenbelt, MD, USA - October 2024
- Strong Gravity seminar, Perimeter Institute, Waterloo, Canada - October 2024
- Astroparticle seminar, Niels Bohr Institute, University of Copenhagen, Copenhagen, Denmark - September 2024
- LIGO–Virgo–KAGRA burst group, Online - June 2024
- Pizza Lunch Talk, Columbia University, New York, NY, USA - April 2024
- Simons Collaboration on Extreme Electrodynamics of Compact Sources Seminar, Zoom meeting - March 2024
- Cosmic Explorer Science Letter call, Zoom meeting - February 2024
- Astrophysics seminar, CRA, Georgia Tech, Atlanta, Georgia, USA - February 2024

- Theoretical Astrophysics seminar, UC Berkeley, Berkeley, CA, USA - February 2024
- Stars & Plasma group, CCA, Flatiron Institute, New York, NY, USA - November 2023
- CITA seminar, CITA, University of Toronto, Toronto, Ontario, Canada - October 2023
- Thursday lunch seminar, CCA, Flatiron Institute, New York, NY, USA - September 2023
- UND physics Colloquium, UND, Grand Forks, ND, USA - April 2023
- Theory seminar, Northwestern University, Evanston, IL, USA - March 2023
- UW physics Colloquium, University of Washington, Seattle, WA, USA - February 2023
- Thunch seminar, Princeton University, Princeton, NJ, USA - December 2022
- Astrophysics seminar, Technion, Haifa, Israel - July 2022
- Computational Relativistic Astrophysics seminar, Max-Planck Institute for Gravitational Physics, Potsdam, Germany - February 2022
- Explosive Astro Talk, UC Berkeley, Berkeley, CA, USA - January 2022
- High Energy AstroPhysics, UNAM, Mexico City, Mexico - January 2022
- Explosive Astro Talk, UC Berkeley, Berkeley, CA, USA - November 2021
- High-energy seminar, Sorbonne Universite, Paris, France - May 2021
- Theoretical Astroparticle Physics seminar, DESY Zeuthen, Berlin, Germany - April 2021
- Astrophysics Seminar, The Hebrew University, Jerusalem - June 2020
- Astrophysics Seminar, Tel Aviv University, Tel Aviv - June 2020
- LIGO Group seminar, MIT, Cambridge, MA, USA - September 2019
- Technion, Haifa, Israel - February 2019
- High Energy Astrophysics Seminar, The Hebrew University, Jerusalem - June 2017
- Astrophysics Seminar, Tel Aviv University, Tel Aviv - November 2015

CONTRIBUTED  
TALKS

- High Energy Phenomena in Relativistic Outflows IX, Rio de Janeiro, Brazil - August 2025
- Stellar black hole formation and detection, Kyoto, Japan - March 2025
- Stars & Plasma group, CCA, Flatiron Institute, New York, NY, USA - February 2025
- Stars & Plasma group, CCA, Flatiron Institute, New York, NY, USA - June 2024
- High-Energy Phenomena in Relativistic Outflows VI, Paris, France - October 2023
- GRB50: The Past, Present, and Future of GRBs, Warrenton, VA, USA - August 2023
- The Transient and Variable Universe, Urbana, IL, USA - June 2023
- APS April meeting, Minneapolis, MN, USA - April 2023
- THEA seminar, Columbia University, New York, NY, USA - December 2022
- Stars & Plasma group, CCA, Flatiron Institute, New York, NY, USA - December 2022
- Theoretical Astrophysics seminar, UC Berkeley, Berkeley, CA, USA - October 2019
- Tea talk, Stanford University, Stanford, CA, USA - October 2019
- Special Seminar, UC Santa Cruz, Santa Cruz, CA, USA - October 2019
- TAPIR seminar, Caltech, Pasadena, CA, USA - October 2019
- Theory group, Carnegie Observatory, Pasadena, CA, USA - October 2019
- Astrophysics seminar, UC Los Angeles, Los Angeles, CA, USA - October 2019
- Astrophysics seminar, Northwestern University, Evanston, IL, USA - October 2019
- Astrophysics seminar, Columbia University, New York, NY, USA - September 2019
- High Energy group, University of Chicago, Chicago, IL, USA - September 2019
- Astroplasma group, Princeton University, Princeton, NJ, USA - September 2019
- Astrophysics seminar, NYU, New York, NY, USA - September 2019
- Compact Objects group, CCA, Flatiron Institute, New York, NY, USA - September 2019
- BBL seminar, MIT, Cambridge, MA, USA - September 2019
- ITC seminar, CfA, Harvard University, Cambridge, MA, USA - September 2019
- GRBs and Related Astrophysics in Multi-Messenger Era, Nanjing University, Nanjing, China - May 2019
- FOE19 Fifty-one Erg, North Carolina State University, Raleigh, NC, USA - May 2019
- KITP seminar, University of California, Santa Barbara, California, USA - August 2018
- Astrophysics seminar, Caltech, CA, USA - August 2018
- High-Energy Phenomena in Relativistic Outflows VI, Space Research Institute of Moscow, Russia - September 2017
- National Israeli Astronomy Seminar Day, Tel Aviv University, Israel - January 2017
- 2016 Israel Physical Society Conference, Tel Aviv University, Israel - December 2016
- Eighth Huntsville Gamma-Ray Burst Symposium, Huntsville, AL, USA - October 2016
- National Israeli Astronomy Seminar Day, Hebrew University, Israel - February 2016

## MENTORING

### *Mentored Postdocs and Students*

- Danat Issa (MIT, postdoctoral scholar)
- Nikola Bukowiecka (University of Rhode Island, graduate student)
- Leon Chan (University of Colorado, Boulder, graduate student as intern)
- Justin Bopp (CUNY, M.Sc. student)
- Teresita Ramirez-Aguilar (Northwestern University, graduate student)
- Serena Moseley (Northwestern University, graduate student)
- Tejus Deo-Dixit (MIT, undergraduate student)
- Maggie Sun (MIT, undergraduate student)
- Ayush Bansal (high school student)

### *Co-mentored Students*

- Sean Li (Columbia University, graduate student)
- Aretaios Lalakos (Northwestern University, graduate student)
- Ersilia Guarini (University of Copenhagen, graduate student)
- Gal Birenbaum (Tel Aviv University, graduate student)
- Krishna Kumar (IISER Thiruvananthapuram, M.Sc. student)
- Moshe Eisenberg (Tel Aviv University, M.Sc. student)

## TEACHING EXPERIENCE

- 2026: Recitation Teacher: MIT 8.022: Electricity and Magnetism
- 2022-2023: Guest Lecturer: Northwestern University & Columbia University undergraduate courses.
- 2018-2019: Teaching Assistant: "Introduction to Astrophysics" - course for physics majors.
- 2016-2020: Teaching Assistant: "General Physics B1" - course for chemistry and geophysics majors.
- 2016: *Initiator & developer of the "Dark Matter experiment" for physics sophomores at Tel Aviv University.*
- 2015-2020: Instructor in second-year undergraduate physics teaching laboratories.
- 2014-2015: Instructor in first-year undergraduate physics teaching laboratories.

## OUTREACH ACTIVITY

- 2020: Co-author of a high-school textbook on space and astrophysics for final exams in Israel.
- 2014 - 2021: Science-oriented-youth program at Tel Aviv University  
Half-day seminars in selected topics in physics and astrophysics to middle- and high-school classes.  
Physics and astrophysics full-semester courses to middle- and high-school kids.
- 2014 - 2018: Tel Aviv University Astronomy Club ("TAU AstroClub")  
Taking part in monthly public lectures, guided night sky observations, observatory "open house" evenings, and other outreach activities.
- 2014 - 2015: Netivim to the University  
Science education in high schools of low socioeconomic status, including the development of the educational programs.
- 2011 - 2016: Perach  
Science education in elementary schools and therapeutic boarding school.  
*Technion excelling mentor.*

## SELECTED PRESS RELEASE

- 'Impossible' black hole collision pushed relativity to its breaking point — and scientists finally understand how, *Live Science*, 2025
- Astronomers solve cosmic mystery surrounding two massive black holes that shouldn't exist, *Yahoo!*, 2025
- Scientists solve the mystery of 'impossible' merger of 'forbidden' black holes, *SPACE*, 2025
- Simulations reveal black holes inherit magnetic fields from parent stars, *Phys*, 2024
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