Last Updated: Mar 3, 2025

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Education

Ph.D. in Physics	Georgia Institute of Technology	2017-2023
M.Sc. (Hons.) in Physics	Birla Institute of Technology-Pilani	2011-2016
B.E. (Hons.) in Computer Science	Birla Institute of Technology-Pilani	2011-2016

Employment History

Post-Doc Fellow	Indiana University, Bloomington	2025-
Post-Doc Fellow	Technion-Israel Institute of Technology	2023-2024
Associate Engineer	Qualcomm India Pvt. Ltd.	2016-2017

Research Interests

Planetary dynamics; compact object dynamics; gravitational wave progenitors; exoplanets; solar system; astrophysics theory and computation.

Awards

Junior Research Fellowship (declined)	Council of Scientific and Industrial Research, India	2016
Summer Research Fellowship	Indian Academy of Sciences	2014

Teaching

- Teaching Assistant for Classical Mechanics I (graduate level), Intro Physics I (undergraduate level), Intro Physics II (undergraduate level)

Mentoring

- **Undergraduate Students**
  Dennis Dong, Georgia Tech, 2019; Now a grad student at Stanford.
  Jingyu Zhang, Agnes Scott College, 2019; Now a grad student at Michigan State.

Professional Service

- Member of the Scientific Organizing Committee of 56th Annual Meeting of DDA.
- Referee for MNRAS; ApJ, ApJ Letters; SciPost Physics

Outreach

- Public talk at Atlanta Journal Club, Atlanta, Georgia.
- Public talk at Alpharetta Library, Fulton County, Atlanta, Georgia.
- Organized physics quizzes for the general public at BITS-Pilani, Hyderabad Campus

Publications

- **Under Review**
  1. ***Journal Article:*** **Bhaskar, H. G.**, and Hagai Perets. Properties of Free Floating Planets Ejected through Planet-Planet Scattering, Submitted to The Astrophysical Journal.
     URL:https://arxiv.org/abs/2501.13166.
  2. ***Journal Article:*** Peter Lott, Christian Faulhaber, Joshua Brandt, Gongjie Li**, Bhaskar, H.G.**, and Laura Cadonati**,** Scattering of stellar-mass black holes and gravitational wave bremsstrahlung radiation in AGN disks, Submitted to The Astrophysical Journal.
- **Published**
  1. ***Journal Article:*** TOI-6038 A b: A dense sub-Saturn in the transition regime between the Neptunian ridge and savanna, Baliwal, S., Sharma, R., Chakraborty, A., Nikitha, K.J., Castro-Gonzalez, A., **Bhaskar, H.G**., and, ...: 2025, The Astronomical Journal, 169:147
     URL: https://ui.adsabs.harvard.edu/abs/2025AJ....169..147B/abstract
  2. ***Journal Article:*** **Bhaskar, H. G**., and Hagai Perets. Dynamical and Secular Stability of Mutually Inclined Planetary Systems, The Astrophysical Journal. URL: https://arxiv.org/abs/2404.07264.
  3. ***Journal Article:*** **Bhaskar, H. G.**, Gongjie Li, and Douglas N. C. Lin. Black hole mergers through evection resonances. The Astrophysical Journal, 934(2):141, Aug 2022.
     URL: https://ui.adsabs.harvard.edu/abs/2022ApJ...934..141B/abstract
  4. ***Journal Article:*** **Bhaskar, H. G.**, Gongjie Li, Sam Hadden, Matthew

J. Payne, and Matthew J. Holman. Mildly hierarchical triple dynamics and applications to the outer solar system. The Astronomical Journal, 161:48, Jan 2021.
URL: https://ui.adsabs.harvard.edu/abs/2021AJ....161...48B/abstract

5. ***Journal Article:*** G. Li, **Bhaskar, H. G.**, B. Kocsis, and D. N. C. Lin. Spin Variations of Black Hole Binaries in AGN Disks. The Astrophysical Journal, 950:48, June 2023.
URL: https://ui.adsabs.harvard.edu/abs/2022arXiv220211739L/abstract
6. ***Journal Article:*** **Bhaskar, H. G.**, Gongjie Li, and Douglas N. C. Lin. Enhanced Blackhole mergers in AGN discs due to Precession induced resonances, The Astrophysical Journal, 952:98, Aug 2023.
URL: https://ui.adsabs.harvard.edu/abs/2023arXiv230312539G/abstract.

- **Accepted for publication**
  1. ***Book chapter:*** **Bhaskar H.G.**, Nathaniel W. H. Moore, Jiapeng Gao, Gongjie Li and Billy Quarles. Main-sequence systems: orbital stability around single star hosts, Exoplanets, Encyclopedia of Astrophysics 1st Edition, Editor-in-Chief: Ilya Mandel, Section Editor: Dimitri Veras, Elsevier. 2024.
  URL: https://arxiv.org/abs/2407.13901.
  2. ***Book chapter:*** Billy Quarles, **Bhaskar H.G.** and Gongjie Li. Main-sequence systems: orbital stability in stellar binaries, Exoplanets, Encyclopedia of Astrophysics 1st Edition, Editor-in-Chief: Ilya Mandel, Section Editor: Dimitri Veras, Elsevier. 2024.
  URL: https://arxiv.org/abs/2407.13899.

Presentations

1. Bhaskar, H. G., Hagai Perets, Gongjie Li, and Douglas Li. "Resonant and Secular Evolution of Three Body Systems", National Physical Laboratory, Sept. 2024.
2. Bhaskar, H. G. and Li, G. "Effects of Galactic tide on the formation of hot-Jupiters", Extreme Solar System V, Christchurch, NZ, March. 2024.
3. Bhaskar, H. G., Gongjie Li, Douglas Lin and Bence Kocsis. "Resonant and Secular Evolution of Three Body Systems", Indian Institute of Astrophysics, Sept. 2023.
4. Bhaskar, H. G., Gongjie Li, Douglas Lin and Bence Kocsis. "Resonant and Secular Evolution of Three Body Systems", Indian Institute of Science, Sept. 2023.

5. Bhaskar, H. G., Gongjie Li, Douglas Lin and Bence Kocsis. “Resonant and Secular Evolution of Three Body Systems”, Tata Institute of Fundamental Research, Mumbai, Sept. 2023.
6. Bhaskar, H. G., Gongjie Li, Douglas Lin and Bence Kocsis. “Blackhole mergers through precession induced resonances in AGN Discs”, AGN Santa Fe: Where are the Objects in AGN Disks? 2023.
7. Bhaskar, H. G., Gongjie Li, and Douglas Lin. “Blackhole mergers through resonant interactions in AGN disc”, AAS 241st Annual Meeting, 2023
8. Bhaskar, H. G., G. Li, S. Hadden, M. Payne, and M. Holman. “Mildly-Hierarchical triple dynamics and applications to the outer solar system”, CEHW Seminar, Pennsylvania State University, 2022
9. Bhaskar, H. G., Gongjie Li, and Douglas Lin. “Blackhole mergers through resonant interactions in AGN disc”, Perets Group Meeting, Technion–Israel Institute of Technology, 2022
10. Bhaskar, H. G., Gongjie Li, and Douglas Lin. “Blackhole mergers through resonant interactions in AGN disc”, Theory Group meeting, Northwestern University, 2022
11. Bhaskar, H. G., Gongjie Li, and Douglas Lin. “Black Hole Mergers Through Evection Resonances”, AAS/Division of Dynamical Astronomy Meeting, 54, May 2022.
    URL: https://ui.adsabs.harvard.edu/abs/2022DDA....5330003B
12. Bhaskar, H. G., Gongjie Li, and Douglas Lin. Black hole mergers through evection resonances. “Black Hole Mergers Through Evection Resonances”, Aspen Winter Conference, January 2022. URL: https://sites.northwestern.edu/aspengw2022/scientific-program/
13. Bhaskar, H. G., G. Li, S. Hadden, M. Payne, and M. Holman. “Mildly-Hierarchical Triple Dynamics and Applications to the Outer Solar System”, Triple Evolution and Dynamics 3, March 2021. URL: https://sites.northwestern.edu/trendy3/scientific-program/
14. Bhaskar, H. G., G. Li, S. Hadden, M. Payne, and M. Holman. “Mildly-Hierarchical Triple Dynamics and Applications to the Outer Solar System”, AAS/Division for Planetary Sciences Meeting Abstracts, 52, Oct 2020. URL: https://ui.adsabs.harvard.edu/abs/2020DPS....5230406B
15. Bhaskar, H. G., G. Li, S. Hadden, M. Payne, and M. Holman. “Non-hierarchical Triple Dynamics and Applications to Planet Nine”, AAS/Division of Dynamical Astronomy Meeting, 51:P14, jun 2019. URL: https://ui.adsabs.harvard.edu/abs/2019DDA....50P..14B

References

1. Cristobal Petrovich, Associate Professor, Indiana University, Bloomington. Email: cpetrovi@iu.edu
2. Hagai Perets, Professor, Technion-Israel Institute of Technology. Email: hperets@physics.technion.ac.il
3. Gongjie Li, Associate Professor. Georgia Institute of Technology, Email: gongjie.li@physics.gatech.edu
4. Douglas Lin, Professor, University of California-Santa Cruz. Email: lin@ucolick.org