

# Aditya Vijaykumar

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EMPLOYMENT	CITA Postdoctoral Fellow <b>Canadian Institute for Theoretical Astrophysics (CITA), Toronto</b>	Sep 2023 - Present
	Graduate Student <b>International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru</b>	Aug 2018 - Aug 2023
	Fulbright-Nehru Doctoral Research Fellow <b>Department of Physics, The University of Chicago</b>	Aug 2022 - Mar 2023
EDUCATION	<b>International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru</b> PhD in Physics. Mentor: Prof. Ajith Parameswaran. Thesis Title: <i>Exploring gravity, astrophysics, and cosmology with gravitational waves</i>	2018 - 2023
	<b>Birla Institute of Technology and Science (BITS), Pilani</b> M.Sc. (Hons.) Physics and B.E. (Hons.) Mechanical Engineering	2013 - 2018
GRANTS AND AWARDS	1. <b>Justice Oak Award for Outstanding thesis in Astronomy 2024</b> , Astronomical Society of India (ASI) 2. <b>V. V. Narlikar Best Thesis Award 2024</b> , Indian Association for General Relativity and Gravitation (IAGRG) 3. <b>Fulbright-Nehru Doctoral Research Fellowship 2022</b> , US Department of State and Government of India 4. <b>Co-PI, IndiaBioscience Outreach Grant 2022</b> , <i>Communicating Science Through Theatre</i> , (100,000 INR) 5. <b>Graduate Fellowship 2018-2023</b> , ICTS-TIFR 6. <b>S.N. Bhatt Memorial Excellence Fellowship 2018</b> , ICTS-TIFR 7. <b>Summer Research Fellowship 2016</b> , Indian Academy of Sciences 8. <b>INSPIRE-DST Scholarship for Higher Education 2013-2018</b> , Government of India	
PUBLICATION SUMMARY	• <a href="#">NASA-ADS Library</a> • <b>25 short-author list papers</b> , including <b>18 as first/second author</b> . • <b>6 LIGO-Virgo-KAGRA Collaboration papers</b> with significant contributions, including <b>1 as chair of the paper writing team</b>	
TALKS SUMMARY	• <b>9 invited conference talks</b> • <b>20 seminars</b> • <b>10 contributed talks</b>	
SELECTED SERVICE	<b>LIGO-Virgo-KAGRA Collaboration</b> • Paper writing team chair for the GWTC-4.0 populations paper • Parameter estimation study team lead for the GW231123 massive binary black hole • Developer of <code>bilby</code> and <code>bilby_pipe</code> software packages • Eccentric parameter estimation taskforce member • Low-latency parameter estimation expert rota • Elected postdoctoral member, LIGO Academic Advisory Committee (LAAC)	
	<b>Journal Referee</b> • Nature • Physical Review D • Astrophysical Journal Letters • Astrophysical Journal • Machine Learning: Science and Technology	

INVITED CONFERENCE TALKS	<ol style="list-style-type: none"> <li>1. Gravitational Wave Physics and Astrophysics Workshop, Atlanta</li> <li>2. The Lifecycle of Stellar Black Holes, KITP, Santa Barbara</li> <li>3. Future of Gravitational Wave Astronomy, ICTS, Bengaluru</li> <li>4. European Physical Society Conference on High Energy Physics, Marseille (virtual)</li> <li>5. Scientific Machine Learning in Gravitational Wave Astronomy, ICERM, Providence</li> <li>6. Lyman Break Galaxies Workshop, Toronto</li> <li>7. PAX Meeting, London, UK (panelist)</li> <li>8. The Quest for Precision Gravitational-wave Cosmology, KICP, Chicago</li> <li>9. Second Chennai Symposium on Gravitation and Cosmology, Chennai (virtual)</li> </ol>	December 2025 November 2025 October 2025 July 2025 June 2025 May 2025 July 2024 September 2022 February 2022
LIST OF SEMINARS	<ol style="list-style-type: none"> <li>1. Weinberg Institute Seminar, UT Austin</li> <li>2. Astrophysics and Relativity Seminar, ICTS</li> <li>3. TAPIR Seminar, Caltech</li> <li>4. Seminar, UCLA</li> <li>5. IGC seminar, Penn State University</li> <li>6. Gravitational wave seminar, IUCAA</li> <li>7. Gravity Exploration Institute seminar, Cardiff University</li> <li>8. CIERA seminar, Northwestern University</li> <li>9. GRAPPA seminar, University of Amsterdam</li> <li>10. Strong seminar, Niels Bohr Institute</li> <li>11. CITA Seminar, University of Toronto</li> <li>12. TASTY Seminar, University of Toronto</li> <li>13. IUCAA gravitational wave seminar, Pune</li> <li>14. Physics seminar, IISER Pune</li> <li>15. Physics seminar, IIT Gandhinagar</li> <li>16. Gravitational wave seminar, Seoul National University (virtual)</li> <li>17. IGC seminar, Penn State University</li> <li>18. Lorentz Institute seminar, Leiden (virtual)</li> <li>19. IUCAA gravitational wave seminar, Pune</li> <li>20. Albert Einstein Institute seminar, Hannover</li> </ol>	November 2025 July 2025 March 2025 March 2025 October 2024 August 2024 July 2024 June 2024 May 2024 April 2024 January 2024 January 2024 July 2023 July 2023 June 2023 October 2022 August 2022 June 2020 September 2019 July 2019
CONTRIBUTED TALKS	<ol style="list-style-type: none"> <li>1. APS Meeting, Anaheim, CA</li> <li>2. Midwest Relativity Meeting, Ann Arbor, MI</li> <li>3. CASCA Meeting, Toronto</li> <li>4. Gravitational waves: A new ear on the chemistry of galaxies, Leiden</li> <li>5. Globular Clusters and their Tidal Tails, Toronto</li> <li>6. Joint CITA-PI Gravitational waves meeting</li> <li>7. Pune-Mumbai Cosmology Meeting</li> <li>8. ICTS In-house Symposium, Bengaluru</li> <li>9. International Conference on Gravitation &amp; Cosmology, Mohali</li> <li>10. GR22 and Amaldi13, Valencia</li> </ol>	March 2025 November 2024 June 2024 April 2024 May 2024 October 2023 August 2023 February 2020 December 2019 July 2019
MENTORSHIP	<ol style="list-style-type: none"> <li>1. Sarah Han (University of Toronto)</li> <li>2. Cissy Kuang (University of Toronto)</li> <li>3. Ben Stadel (University of Alberta)</li> <li>4. Neha Sharma (ICTS, Bengaluru)</li> <li>5. Avinash Tiwari (IUCAA, Pune)</li> <li>6. Kaustubh Gupta (IISER, Pune → Swinburne University)</li> <li>7. Adhrit Ravichandran (IIT Roorkee → UMass Dartmouth)</li> <li>8. Kruthi Krishna (IISc → Radboud University)</li> <li>9. Harsh Narola (IISER, Tirupati → Utrecht University)</li> </ol>	May 2025 - Present May 2025 - Present May 2024 - Present Oct 2023 - Present May 2023 - Present May 2022 - May 2023 Sep 2021 - Aug 2022 Sep 2020 - Aug 2021 Sep 2020 - Aug 2021

## TEACHING

- Instructor and organizer, **LIGO-Virgo Collaboration Gravitational-Wave Open Data Workshop #5 and #6** at ICTS.
- Tutor for the **Numerical Relativity** graduate course, ICTS, Jan-April 2022.
- Co-organizer and tutor, **ICTS Workshop on Parameter Estimation with bilby**, ICTS, Bengaluru, India, August 2020 (Online)
- Tutor, **Light and Beyond—Summer Course for Undergraduate Students by Prof. Rajaram Nityananda**, June 2020 (Online)
- Tutor, **LIGO-Virgo Collaboration Gravitational-Wave Open Data Workshop #3**, May 2020 (Online)
- Tutor for the following mini-courses, **ICTS Summer Schools on Gravitational Wave Astronomy**, ICTS, Bengaluru, India:
  1. *Compact binary evolution, rates and population modelling*, June 2022.
  2. *Astrophysical Stochastic GW Foreground*, July 2021.
  3. *Numerical Hydrodynamics*, May 2020.
  4. *Advanced General Relativity*, July 2019.

## OUTREACH

- Interactive session with school students, The Academy School, Pune, August 2025.
- Talk on gravitational-wave astronomy, ASX Symposium, University of Toronto, March 2025.
- Talk on gravitational-wave astronomy, University of Toronto Undergraduate Astronomy Union Seminar, November 2024.
- Co-PI of the *IndiaBioscience Outreach Grant* to communicate science using stage theatre.
- Panelist at the *Bengaluru: The Astronomy City*, a Q&A event organized for **National Science Day**, February 2022.
- Mediator for the **Contagion Exhibition**, Science Gallery Bengaluru, April-July 2021.
- Moderated a discussion with Prof. Smitha Vishveshwara on her collaborative science theatre project *Quantum Voyages* as a part of **Cosmic Zoom Online Exhibition**, April 2021
- Articles on the **ICTS blog**:
  1. [A Conversation with ICTS Scientists Studying the Indian Monsoon](#), November 2019
  2. [Summer School on Gravitational Wave Astronomy](#), November 2019
- Talk titled *The Whats, Whys and Hows of Gravitational-wave Astronomy*, **BMS College of Engineering, Bengaluru**, November 2019
- Talk titled *Gravitational Waves - A New Tool for Cosmology!* at **Vigyan Samagam**, Visvesvaraya Industrial and Technological Museum, Bengaluru, India, August 2019
- Biweekly interactive outreach sessions in rural primary schools, 2019

## REFERENCES

1. Prof. Maya Fishbach, CITA, [fishbach@cita.utoronto.ca](mailto:fishbach@cita.utoronto.ca)
2. Prof. Parameswaran Ajith, ICTS-TIFR, [ajith@icts.res.in](mailto:ajith@icts.res.in)
3. Prof. Daniel E. Holz, The University of Chicago, [holz@uchicago.edu](mailto:holz@uchicago.edu)
4. Prof. Benjamin Farr, University of Oregon, [bfarr@uoregon.edu](mailto:bfarr@uoregon.edu)
5. Prof. Shasvath J. Kapadia, IUCAA, [shasvath.kapadia@iucaa.in](mailto:shasvath.kapadia@iucaa.in)