

Aditya Vijaykumar

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| RESEARCH INTERESTS | Gravitational Wave Astronomy and Astrophysics, Tests of General Relativity and Cosmology | | |
| EDUCATION | International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru Research Scholar and Graduate Student in Physics | 2018 - <i>Present</i> | |
| | Birla Institute of Technology and Science (BITS), Pilani M.Sc. (Hons.) Physics and B.E. (Hons.) Mechanical Engineering | 2013 - 2018 | |
| EMPLOYMENT | Graduate Student International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru <i>Mentored by Prof. Parameswaran Ajith</i> <i>Member of the LIGO Scientific Collaboration and the LIGO-India Scientific Collaboration</i> | Aug 2018 - <i>Present</i> | |
| | Summer Research Intern International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru <i>Mentored by Prof. Parameswaran Ajith</i> <i>Topic - Cosmological Large-scale Structure probes using gravitational-wave observations</i> | May 2018 - July 2018 | |
| | Visiting Student (Masters Thesis) Centre for High Energy Physics (CHEP), Indian Institute of Science (IISc), Bengaluru, India <i>Mentored by Prof. Chethan Krishnan</i> <i>Topic - Complexity in context of Locality, Entanglement and Quantum Gravity</i> | July 2017 - April 2018 | |
| | Summer Research Intern The Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India <i>Mentored by Prof. Raghunathan Srianand</i> <i>Topic - Analysis of Quasar Absorption Lines from SDSS Photometric Data</i> | May 2016 - July 2016 | |
| | Summer Research Intern The National Centre for Radio Astrophysics (NCRA-TIFR), Pune, India <i>Mentored by Prof. Yashwant Gupta</i> <i>Topic - Testing and Debugging the Transient Detection Pipeline of GMRT</i> | May 2015 - July 2015 | |
| PROJECTS | <ul style="list-style-type: none">• Aditya Vijaykumar, MV Saketh, Sumit Kumar, Parameswaran Ajith, Tirthankar Roy Choudhury. <i>Probing the cosmological large-scale structure using gravitational-wave observations (manuscript in preparation)</i>• Aditya Vijaykumar, Shasvath Kapadia, Parameswaran Ajith. <i>Constraining the time-variation of the Gravitational constant using gravitational-wave observations of binary neutron stars (manuscript in preparation)</i>• Aditya Vijaykumar, Nathan Johnson-McDaniel, Rahul Kashyap, Arunava Mukherjee, Parameswaran Ajith. <i>Constraints on Black Hole Mimickers from the Gravitational-wave Transient Catalog (GWTC) -1</i> | | |
| CONFERENCES, SCHOOLS AND TALKS | <ul style="list-style-type: none">• Poster titled <i>Constraints on Black Hole Mimickers from GWTC-1</i> at ICTS In-House Meeting, ICTS, Bengaluru, India, February 2020• Talk titled <i>Probing Large Scale Structure using Binary Black Hole Observations</i> at ICTS In-House Meeting, ICTS, Bengaluru, India, February 2020• Participant, Discussion Meeting - Astrophysics of Supermassive Black Holes, ICTS, Bengaluru, India, December 2019 | | |

- Invited outreach talk titled *The Whats, Whys and Hows of Gravitational-wave Astronomy*, **BMS College of Engineering, Bengaluru**, November 2019
- Participant, **Discussion Meeting - Future of Gravitational Wave Astronomy**, ICTS, Bengaluru, India, August 2019
- Talk titled *Probing Large Scale Structure using Binary Black Hole Observations* at **The Inter-University Centre for Astronomy and Astrophysics (IUCAA)**, Pune, India, September 2019
- Outreach talk titled *Gravitational Waves - A New Tool for Cosmology!* at **Vigyan Samagam**, Visvesvaraya Industrial and Technological Museum, Bengaluru, India, August 2019
- Participant and Tutor for the *Advanced General Relativity* mini-course, **ICTS Summer School on Gravitational Wave Astronomy**, ICTS, Bengaluru, India, July 2019
- Talk titled *Probing Large Scale Structure using Binary Black Hole Observations* at **GR22 and Amaldi13**, Valencia, Spain, July 2019
- Talk titled *Probing Large Scale Structure using Binary Black Hole Observations* at **Max Planck Institute for Gravitational Physics**, Hannover, Germany, June 2019
- Participant, **ICTS Summer School on Gravitational Wave Astronomy**, ICTS, Bengaluru, India, July 2018
- Participant, **ICTS Summer School on Gravitational Wave Astronomy**, ICTS, Bengaluru, India, July 2017
- Talk titled *Gravitational Lensing from Orbiting Binary* at the **Paper Presentation competition of APOGEE 2017**, BITS Pilani, India (*First runner-up*)

TECHNICAL SKILLS

Programming Languages - Python, C, C++, Shell Script
Softwares - MATLAB, Mathematica
Tools/Frameworks - L^AT_EX, Git

SCORES AND AWARDS

- Scored 960/990 on the [Subject GRE in Physics](#), October 2017
- Secured all-India rank 21 in the [Joint Entrance Screening Test \(JEST\)](#), 2018 for admission into Physics PhD programmes in India
- Awarded the [ICTS S.N. Bhatt Memorial Excellence Fellowship](#), 2018
- Selected for the [Summer Research Fellowship](#) of the Indian Academy of Sciences in 2016
- Recipient of the [INSPIRE-DST Scholarship for Higher Education](#) for the period 2013 to 2018