

# Aditya Vijaykumar

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RESEARCH INTERESTS	Gravitational Wave Astronomy and Astrophysics, Tests of General Relativity and Cosmology		
EDUCATION	<b>International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru</b>	Research Scholar and Graduate Student in Physics	2018 - <i>Present</i>
	<b>Birla Institute of Technology and Science (BITS), Pilani</b>	M.Sc. (Hons.) Physics and B.E. (Hons.) Mechanical Engineering	2013 - 2018
EMPLOYMENT	<b>Graduate Student</b>	<b>International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru</b>	
	<i>Mentored by Prof. Parameswaran Ajith</i>		Aug 2018 - <i>Present</i>
	<b>Summer Research Intern</b>	<b>International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru</b>	
	<i>Mentored by Prof. Parameswaran Ajith</i>		May 2018 - July 2018
	<i>Topic - Cosmological Large-scale Structure probes using gravitational-wave observations</i>		
	<b>Visiting Student (Masters Thesis)</b>	<b>Centre for High Energy Physics (CHEP), Indian Institute of Science (IISc), Bengaluru, India</b>	
	<i>Mentored by Prof. Chethan Krishnan</i>		July 2017 - April 2018
	<i>Topic - Complexity in context of Locality, Entanglement and Quantum Gravity</i>		
	<b>Summer Research Intern</b>	<b>The Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India</b>	
	<i>Mentored by Prof. Raghunathan Srianand</i>		May 2016 - July 2016
	<b>Summer Research Intern</b>	<b>The National Centre for Radio Astrophysics (NCRA-TIFR), Pune, India</b>	
	<i>Mentored by Prof. Yashwant Gupta</i>		May 2015 - July 2015
	<i>Topic - Testing and Debugging the Transient Detection Pipeline of GMRT</i>		
PROJECTS	<ul style="list-style-type: none"><li>• <b>Aditya Vijaykumar</b>, MV Saketh, Sumit Kumar, Parameswaran Ajith, Tirthankar Roy Chowdhury. <i>Probing the cosmological large-scale structure using gravitational-wave observations (manuscript in preparation)</i></li></ul>		
	<ul style="list-style-type: none"><li>• <b>Aditya Vijaykumar</b>, 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></li></ul>		
	<ul style="list-style-type: none"><li>• <b>Aditya Vijaykumar</b>, Nathan Johnson-McDaniel, Rahul Kashyap, Arunava Mukherjee, Parameswaran Ajith. <i>Constraints on Black Hole Mimickers from the Gravitational-wave Transient Catalog (GWTC) -1</i></li></ul>		
CONFERENCES, SCHOOLS AND TALKS	<ul style="list-style-type: none"><li>• Participant, <b>Discussion Meeting - Astrophysics of Supermassive Black Holes</b>, ICTS, Bengaluru, India, December 2019</li></ul>		
	<ul style="list-style-type: none"><li>• Invited outreach talk titled <i>The Whats, Whys and Hows of Gravitational-wave Astronomy</i>, <b>BMS College of Engineering, Bengaluru</b>, November 2019</li></ul>		
	<ul style="list-style-type: none"><li>• Participant, <b>Discussion Meeting - Future of Gravitational Wave Astronomy</b>, ICTS, Bengaluru, India, August 2019</li></ul>		

- 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, Maple  
**Tools/Frameworks** -  $\text{\LaTeX}$ , 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