

CONTACT INFORMATION	627A Science and Research 1 Houston, TX, USA - 77204 Mob: +1-3465451497, +91-9871756332,	Website: <a href="http://bhavaytyagi.com">bhavaytyagi.com</a> Linkedin: <a href="http://www.linkedin.com/bhavaytyagi">www.linkedin.com/bhavaytyagi</a> ✉ E-mail: <a href="mailto:bhavaysaarangtyagi@gmail.com">bhavaysaarangtyagi@gmail.com</a>
EDUCATION	<p><b>University of Houston</b>, College of Natural Sciences and Mathematics 2022–Present</p> <ul style="list-style-type: none"> <li>• PhD Candidate (Quantum Gravity and Quantum Information Group)</li> </ul> <p><b>Durham University</b>, Ustinov College, Durham, UK 2018–2019</p> <ul style="list-style-type: none"> <li>• M.Sc. in Particles, Strings and Cosmology, Result: <b>Merit</b> – 180 credits.</li> </ul> <p><b>Amity University Noida</b>, India. 2015–2018</p> <ul style="list-style-type: none"> <li>• B.Sc. (Honours) Physics, CGPA: <b>8.05/10 (First Division)</b> – 176 credits.</li> </ul> <p><b>Sanskriti School</b>, India. 2014–2015</p> <ul style="list-style-type: none"> <li>• Higher Secondary -Major: Science -Result: <b>94% (First Division)</b></li> </ul>	
ADDITIONAL COURSES	<ul style="list-style-type: none"> <li>• <b>Qiskit Global Summer School 2023</b> July–August 2023 <i>IBM Quantum</i></li> <li>• <b>Kavli Asian Winter School on Strings, Particles and Cosmology</b> 10–23 January 2022 <i>International Center for Theoretical Sciences, TIFR</i></li> <li>• <b>Dualities in Topology and Algebra.</b> 1–13 February 2021 <i>International Center for Theoretical Sciences, TIFR</i></li> <li>• <b>Non-Perturbative and Numerical Approaches to Quantum Gravity, String Theory and Holography.</b> 18–22 January 2021 <i>International Center for Theoretical Sciences, TIFR</i></li> </ul>	
RESEARCH EXPERIENCE	<ul style="list-style-type: none"> <li>• <b>The SYK Model, Schwarzian Action and Conformal Quantum Mechanics</b> May 2023–Present</li> <li>• <b>Spin-2 Spectra (Consistent Metric Fluctuations) in <math>AdS_6/CFT_5</math>.</b> June 2021–Jan 2022 Advisor: Prof. Carlos Nunez, <i>University of Swansea, Wales, UK</i></li> <li>• <b>Computation of the Hilbert Series for the coulomb branch of <math>3d N = 4 U(1)</math> gauge theory with <math>n</math> flavours and for the quiver <math>[1] - 1 - 1 - [1]</math> (framed <math>A_2</math>).</b> June 2021–July 2021 Advisor: Prof. Amihay Hanany, <i>Imperial College London, UK</i></li> <li>• <b>Masters Thesis</b> 2018–2019 <i>Durham University, UK</i> Title: <b>An Introduction to AdS/CFT and the Holographic Entanglement Entropy.</b> Supervisor: Prof. Simon F. Ross, Reader: Prof. Nabil Iqbal</li> <li>• <b>Undergraduate Project 2</b> 2018 <i>Amity Institute of Applied Sciences, Amity University Noida, India</i> Title: <b>Predictions of the General Theory of Relativity.</b> Supervisor: Prof. S. Chandra</li> <li>• <b>Summer Project</b> 2018 <i>International Astronomical Union Symposium 340, Jaipur, India</i> Title: <b>Long Term Data Sets for Understanding of Solar and Stellar Magnetic Cycles.</b></li> </ul>	

	<ul style="list-style-type: none"> <li>• <b>Visiting Research Student</b> 2017  <i>Harish Chandra Research Institute, Center for String Interactions, Prayagraj</i>  Title: <b>Mathematics of Fundamental Physical Systems.</b>  Supervisor: Dr. Anirban Basu</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>International Asteroid Search Campaign</b> 2017  <i>IASC and PAN-STARRS, Hawaii, USA</i>  Advisor: Dr. Patrick Miller, Hardin-Simmons University, Texas, USA</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Undergraduate Project 1</b> 2016  <i>Amity Institute of Applied Sciences, Amity University Noida, India</i>  Title: <b>The Fundamentals of String Theory.</b></li> </ul>
TEACHING EXPERIENCE	<ul style="list-style-type: none"> <li>• Physics 2125 (University Level classical Mechanics) 2023–2024</li> <li>• Physics 1101 (College Level Classical Mechanics) 2022–2023</li> <li>• Physics 2126 (Wave Optics, Quantum Mechanics, Nuclear Physics) Summer 2023</li> </ul>
TECHNICAL SKILLS	<ul style="list-style-type: none"> <li>• Queuing systems, Cluster Architecture August–October 2023</li> <li>• <i>Programming Languages:</i> C, Python, Linux, shell scripting</li> <li>• <i>Technical Softwares:</i> Mathematica, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Final Cut Pro X, Logic Pro X, Qiskit Architecture</li> </ul>
PUBLIC TALKS	<ol style="list-style-type: none"> <li>1. <b>Quantum Photonics Physics Forum</b> September 2021  <i>Online: Social Media Platform</i>  Title: <b>Black Hole Information Problem &amp; Recent Developments</b></li> <li>2. <b>Amity Alumni Lecture Series</b> August 2021  <i>Amity Institute of Applied Sciences, Amity University Noida, India</i>  Title: <b>Open Problems in Theoretical Physics.</b></li> <li>3. <b>Christ University Physics Club</b> 2020  <i>Christ University Bangalore, India</i>  Title: <b>On Quantum Entanglement and the Interpretation of Quantum Mechanics.</b></li> <li>4. <b>Beyond Portals Lecture Series</b> 2018  <i>Beyond Portals HQ, New Delhi, India</i>  Title: <b>On Relativity and Gravitation: Applications to Modern Physics.</b></li> </ol>
ACHIEVEMENTS	<ul style="list-style-type: none"> <li>• Awarded Distinction for Masters Thesis.</li> <li>• Outstanding Project Award ‘The Fundamentals of String Theory’ at Amity University.</li> <li>• Preliminary Asteroid Discovery 1, Phase 2 (P10BPsc).</li> <li>• 33 Preliminary Asteroid Discovery 2, IASC 2017.</li> <li>• The Global Education and Leadership Foundation – Completed 3 Years of Life Skills and Leadership.</li> </ul>
EXTRA-CURRICULAR ACTIVITIES	<ul style="list-style-type: none"> <li>• <a href="#">Music Channel</a></li> <li>• <a href="#">The Knowmads Podcast</a></li> <li>• Sports and Fitness: Sports Captain of Amity University from 2016-2018.  –Won Numerous Tournaments in Cricket, Football, Kabaddi and Chess</li> <li>• Head of Organising Committee of Amity University from 2016-2018.  –Organised Various National and International Events in Amity University.</li> <li>• Frequently Participate in Political/ Policy Making Debates  –Have won many prizes in debates about policy making and strategy in India.</li> </ul>

HUMAN  
VALUES AND  
COMMUNITY  
SERVICE

- Volunteered during COVID-19 Pandemic (during the nationwide lockdown) and helped in distribution of food supplies, PPE kits and other necessary goods to migrant laborers and the underprivileged.
- Volunteer at the Sanjay Gandhi Animal Health Care Center
- Regular Volunteer and Educator at the Slums of New Delhi, India; to help the underprivileged lead a better life.
- Awareness program Prahvah: Visited ‘Lapodia’, a primitive village in Rajasthan to study the lifestyle and culture of the rural residents of India.

SCIENCE COM-  
MUNICATION

- Co-founder of ‘*Beyond Portals*’, an Organization to Promote, Popularize and Support research in fundamental sciences. Outreach events are announced online on social media platforms.