Bhavay S. Tyagi Last update: April 14th, 2022 Contact WZ-119. Linktree: https://linktr.ee/bhavaystyagi Information Basai Dara Pur, Linkedin:www.linkedin.com/in/bhavay-s-tyagi New Delhi, India - 110015 ⊠ E-mail:bhavaysaarangtyagi@gmail.com Mob: +91-9871756332 **EDUCATION** University of Houston, College of Natural Sciences and Mathematics 2022-Present • PhD in Theoretical Physics. Durham University, Ustinov College, Durham, UK 2018 - 2019• M.Sc. in Particles, Strings and Cosmology, Result: Merit – via 180 credits. Amity University Noida, India. 2015-2018 • B.Sc. (Honours) Physics, CGPA: 8.05/10 (First Division) – via 176 credits. Sanskriti School, India. 2014 - 2015• Higher Secondary -Major: Science -Result: 94% (First Division) • Kavli Asian Winter School on Strings, Particles and Cosmology 10-23 January 2022 Additional Internation Center for Theoretical Sciences, TIFR Courses • Dualities in Topology and Algebra. 1–13 February 2021 International Center for Theoretical Sciences, TIFR Non-Perturbative and Numerical Approaches to Quantum Gravity, String Theory and Holography. 18-22 January 2021 International Center for Theoretical Sciences, TIFR • Spin-2 Spectra (Consistent Metric Fluctuations) in  $AdS_6/CFT_5$ . June 2021–Jan 2022 Research Advisor: Prof. Carlos Nunez, University of Swansea, Wales, UK EXPERIENCE • Computation of the Hilbert Series for the coulomb branch of 3d N = 4 U(1) gauge theory with n flavours and for the quiver [1] - 1 - 1 - [1] (framed  $A_2$ ). June 2021-July 2021 Advisor: Prof. Amihay Hanany, Imperial College London, UK • Masters Thesis 2018-2019 Durham University, UK Title: An Introduction to AdS/CFT and the Holographic Entanglement Entropy. Supervisor: Prof. Simon F. Ross, Reader: Dr. Nabil Iqbal 2018

• Undergradute Project 2

Amity Institute of Applied Sciences, Amity University Noida, India

Title:Predictions of the General Theory of Relativity.

Supervisor: Prof. S. Chandra

• Summer Project

International Astronomical Union Symposium 340, Jaipur, India Title: Long Term Data Sets for Understanding of Solar and Stellar Magnetic Cycles.

• Visiting Research Student

2017

2018

Harish Chandra Research Institute, Center for String Interactions, Prayagraj

Title: Mathematics of Fundamental Physical Systems.

Supervisor: Dr. Anirban Basu

• International Asteroid Search Campaign

2017

IASC and PAN-STARRS, Hawaii, USA

Advisor: Dr. Patrick Miller, Hardin-Simmons University, Texas, USA

• Undergraduate Project 1

2016

Amity Institute of Applied Sciences, Amity University Noida, India Title: The Fundamentals of String Theory.

TECHNICAL SKILLS

- Programming Languages: C/C++, Python
- Technical Softwares: Mathematica, MATLAB, LATEX, Final Cut Pro X, Logic Pro X

Public Talks

## 1. Quantum Photonics Physics Forum

September 2021

Online: Social Media Platform

Title: Black Hole Information Problem & Recent Developments

## 2. Amity Alumni Lecture Series

August 2021

Amity Institute of Apllied Sciences, Amity University Noida, India

Title: Open Problems in Theoretical Physics.

## 3. Christ University Physics Club

2020

 $Christ\ University\ Bangalore,\ India$ 

Title:On Quantum Entanglement

and the Interpretation of Quantum Mechanics.

### 4. Beyond Portals Lecture Series

2018

Beyond Portals HQ, New Delhi, India

Title:On Relativity and Gravitation: Applications to Modern Physics.

#### ACHIEVEMENTS

- Awarded Distinction for Masters Thesis.
- Outstanding Project Award 'The Fundamentals of String Theory' at Amity University.
- Successfully passed various National Science and Mathematics Olympiads.
- Preliminary Asteroid Discovery 1, Phase 2 (P10BPsc).
- 33 Preliminary Asteroid Discovery 2, IASC 2017.
- The Global Education and Leadership Foundation Completed 3 Years of Life Skills and Leadership.
- Excellence in Web Technology.
- Successfully passed the National Problem Solving Assessment organized by CBSE.
- Won 2nd Prize at Amity University's Battle of the Bands.

# EXTRA-CURRICULAR ACTIVITIES

- Music Channel
- Travel Vlogging and Lifestyle Channel
- Sports and Fitness: Sports Captain of Amity University from 2016-2018.
   Won Numerous Medals and Trophies in Cricket, Football, Kabaddi, Chess etc.
- Head of Organising Committee of Amity University from 2016-2018.
   Organised Various National and International Events in Amity University.
- Frequently Participate in Political/ Policy Making Debates
  -Have won many prizes in debates about policy making and strategy in India.

# 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. Weekly seminars are help on social media platforms including Instagram, Facebook and Clubhouse.

ENGLISH LANGUAGE QUALIFICA-TIONS • IELTS

-Score: 7.5/9.0

Listening: 7.5, Reading:7.0, Writing:6.5, Speaking:8.0

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