

CURRICULUM VITAE

Alipriyo Hoory

Graduate student

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ABOUT ME

Currently, I am a M.Sc-Ph.D. Dual degree, tenth semester student at the Indian Institute of Technology Madras (IIT Madras), India working under the supervision of Prof. L. Sriramkumar.

PERSONAL DETAILS

Nationality Indian

Date-of-
Birth February 12, 1999

EDUCATIONAL QUALIFICATIONS

Class X 2015, Marks: 92%

Ranaghat Pal chowdhury High school, West Bengal Board of Secondary Education

Class XII 2017, Marks: 88%

Ranaghat Pal chowdhury High school, West Bengal Council of Higher Secondary Education

BSc. in Physics 2017–2020 CGPA:7.71 of 10, First Class

Ramakrishna Mission Residential College, Kolkata, India

Subsidiary subjects: Mathematics, Computer Science, English, Bengali, Environmental Science.

DETAILS ABOUT ONGOING PHD:

M.Sc –Ph.D Dual degree in Physics 2020–Present CGPA:8.48 of 10

Indian Institute of Technology Madras, Chennai, India

Ph.D supervisor: Prof. L. Sriramkumar.

Title of PhD work: Probing the observational imprints of the scalar and tensor perturbations from inflation to preheating

PhD starting month and year: 1st February, 2022

PhD ending (month/year) estimated: January, 2027

RESEARCH INTERESTS

- Reconstructing primordial features on large scales using machine learning.
- Behavior of the power spectrum of scalar perturbation and primary gravitational waves in the ultra-violet limit.
- Understanding reheating inflationary dynamics.
- Understanding the formation and evolution of the primordial black holes during preheating.

LIST OF PUBLICATIONS IN REVERSE CHRONOLOGICAL ORDER

1. Alipriyo Hoory, Jérôme Martin, Arnab Paul, and L. Sriramkumar, *Primary gravitational waves at high frequencies I: Origin of suppression in the power spectrum*, arXiv:2512.03959 [astro-ph.CO].

TALKS DELIVERED AT CONFERENCES

1. Delivered a talk titled “*Effects of regularization and smooth transitions on primary gravitational waves*” at the **National Meeting in Cosmology: Cosmic Connections: Bridging the Early and Late Universe** in **The Institute of Mathematical Sciences (IMSc), Chennai** during July 28-August 1, 2025.

PROJECT

Title : Quantum Phase Transition and Loschmidt Echo 2019–2020
Presidency University, Kolkata
Guide: Dr. Atanu Rajak

Title : Traversable Wormholes 2021–2022
Indian Institute of Technology, Madras
Guide: Dr. Prasanta Kumar Tripathy

FELLOWSHIP AND AWARDS

1. Received a Fellowship of **Swami Vivekananda Merit Cum Means scholarship** in 2017-2020.
2. Received a Fellowship of **Merit-cum Means Scholarship (Indian Institute of Technology Madras, Chennai)** in 2020-2022.
3. Awarded with **International Immersion Experience (IIE) Award** from IIT Madras and visited **Institut d'Astrophysique de Paris, France**, May 6–July 5, 2025.

INVITED TALKS

- Delivered a talk on “*Effects of regularization and smooth transitions on primary gravitational waves*”, in **Institut de Ciéncias del Cosmos Universitat de Barcelona (ICCUB), Barcelona, Spain**, on 10th June, 2025.

TEACHING ASSISTANCE EXPERIENCE

1. Worked as a teaching assistant in the Introduction to General Relativity (PH5870) at IIT Madras in the Winter semester (July-Nov) of 2022.
2. Worked as a teaching assistant in the Advanced General Relativity (PH5875) at IIT Madras in the Summer semester (Jan-May) of 2023.
3. Worked as a teaching assistant in the Computational Physics using Python (PH5720) at IIT Madras in the Summer semester (Jan-May) of 2023.

SKILLS

Software Python, Fortran, MATHEMATICA, L^AT_EX
Languages Bengali (mother tongue), English, Hindi

EXAMS QUALIFIED

1. Qualified as a JRF in UGC-CSIR NET (National Eligibility Test) in 2021 June conducted by Council of Scientific and Industrial Research, Human Resource Development Group, India.
 2. Qualified as a JRF in UGC-CSIR NET (National Eligibility Test) in 2022 June conducted by Council of Scientific and Industrial Research, Human Resource Development Group, India.
 3. Qualified Joint Admission for M.Sc. (JAM) in 2020.

WORKSHOPS ATTENDED

1. Attended **Indian Association for General Relativity and Gravitation (IAGRG) school on Gravitation and Cosmology**, International Centre for Theoretical Science, Bengaluru, India, October 14–October 25, 2024.
 2. Attended **Vigyan Pathshala, on ‘Physics of inflation and reheating’** at the Raman Research Institute, Bengaluru, India, July 13–July 25, 2024.
 3. Attended **Technical and Scientific Writing Workshop**, Indian institute of technology, Madras, India, November 27–December 1, 2023.
 4. Attended **Statistical Methods and Machine Learning in High Energy Physics**, International centre for theoretical science, Bengaluru, India, August 28–September 9, 2023.
 5. Attended **Physics of the Early Universe (hybrid)**, International centre for theoretical science, Bengaluru, India, January 3–12, 2022.

REFERENCES