Aswin N

Curriculum vitæ (9th Jan 2025)

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EDUCATION

Indian Institute of Science Education and Research (IISER) Berhampur   Expected May 2027
BS-MS,Physics   *Berhampur, Odisha*
- **Relevant Coursework:** Mathematical methods, Mechanics, Electromagnetism, Calculus of one variable, Waves and introductory optics, Linear algebra, Quantum physics, Multivariable calculus, Technical writing, Classical mechanics, Quantum mechanics - I, Thermal physics, Numerical methods and analysis (computational).

RESEARCH INTERESTS

I am interested in many facets of theoretical physics, particularly general relativity, its applications in astrophysics and quantum field theories, alongside some string related theories.

RESEARCH EXPERIENCE

QSO's as tracers of our Universe   Jun 2024 - Present

Advisor: Dr.Shadab Alam, TIFR Mumbai   *Mumbai, Mahrashtra*
- ∗ Worked on arriving at the projected correlated function to validate theory with respect to observed data from surveys like eBOSS and eROSITA.
- ∗ Working on a relation between LSS traced by QSO's and the underlying dark matter halo mass distribution.
- ∗ Investigating possible signatures of black hole mergers, by creating the mass merger history, to be further correlated with kick velocities in LSS.

LEADERSHIP AND OUTREACH

TEDx   May 2024 - Sep 2024
Core member + Website lead   *Berhampur, Odisha*
- Lead the tech team, worked on integration with the main fest's website.
- Coordinated with tedx speakers, gained insights with regards to their expertise in their various fields.

Episteme - science magazine   May 2024 - Present
Core member + Website lead   *Berhampur, Odisha*
- Managing, structuring, publishing and proof reading science communication material to be added to the magazine
- Remade the website, after a catastrophic loss of the prior one, due to hosting service migration problems.
- Handling maintenance, upkeep and updates to the website as well.

Science Sub-council   Feb 2024 - Present
Member   *Berhampur, Odisha*
- Hosted and participated in multiple meetings related to improvement of scientific temperament across campus students.
- Formed communication channels for active communication between the student body and the various active clubs.

Stream - Outreach   Jan 2024 - Feb 2024
Member of Organizing committee   *Berhampur, Odisha*
- Was an outreach event aimed at developing a scientific temperament in young school students.
- Created multiple engaging presentations and experiments, that were showcased to the students, to foster their growth and interest in the fields of astronomy, physics and programming.
- Arranged food, and other basic necessities for the visiting students.

Naxatra - Astronomy club   Dec 2023 - Present
Core member   *Berhampur, Odisha*

- Organized events aimed at increasing interest in, and awareness about astronomy, in a holistic and engaging manner.
- Organized telescope sessions, especially during celestial events, aimed at teaching the population of the university about the inner workings of a telescope and the skills necessary to operate one.
- Hosted multiple online and offline talks presented by both students and professors.

Lovelace society - Coding and robotics club Sep 2023 - Present

Coordinator *Berhampur, Odisha*

- Organized events and workshops to test and improve the coding skills of the participants.

137 Inverse - Physics club Sep 2023 - Present

Core member *Berhampur, Odisha*

- Organized educational and fun events to foster a scientific approach to thinking amongst college students, like,"Pandora's box" and "2024:A Space Odyssey"
- Managed the club-run physics newsletter,"Matter matters", to ensure routine and timely publishing, along with quality and reach of articles.
- Hosted, arranged and organized multiple online and offline talks presented by both professors and students.

Covid care teens - NGO May 2021 - Dec 2021

Core member *Chennai, Tamil Nadu*

- Organized and created easy access mechanisms for the large amounts of data regarding the available government and private health services during the pandemic.
- Participated in upkeep of website and management of communication channels.

COURSES AND PROJECTS

- Supervised Machine Learning: Regression and Classification | *Stanford Online*
- From big bang to dark energy | *University of Tokyo*
- Holographic Principle - Report

SKILLS

Programming: LaTeX,Python,HTML,CSS,JS,Jupyter,Git,Linux
Other: Microsoft Office, Adobe Creative Suite