

Debarshi Mukherjee

BS-MS STUDENT · Physics Enthusiast

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Research Interest and Objective

I am an undergraduate student studying 4th year BSMS at the Indian Institute of Science Education and Research (IISER), Berhampur, India. I am currently looking for a Masters's thesis position in computational or observational cosmology or high-energy astroparticle physics.

Education

IISER Berhampur (Indian Institute of Science Education and Research)

BS-MS STUDENT (8TH SEM)

- Majoring in Physics, currently in 8th semester with a CGPA of 7.9/10

Berhampur, Odisha

2021 - PRESENT

G.S.M.S Boys Taki House

CLASS 11-12

- 12th Board Exam Marks percentage (WBCHSE) - **92%**

Kolkata, West Bengal

2019-2021

G.S.M.S Boys Taki House

CLASS 5-10

- 10th Board Exam Marks percentage (WBBSE) - **95%**

Kolkata, West Bengal

2013-2019

Experience

IISER Berhampur

LONG TERM RESEARCH PROJECT UNDER SUPERVISION OF **Dr. Sandeep Chatterjee**

- Studying of Quantum Chromodynamics of Neutron star matter .

Berhampur, India

December 2024 - April 2025 (Expected)

TIFR-Mumbai (Tata Institute of Fundamental Research)

Online SUMMER RESEARCH PROJECT UNDER SUPERVISION OF **Dr. Sadab Alam**

- Estimating Black Hole Masses from QSO Line Widths Using Stacked Spectra .

Mumbai, India

May 2024 - August 2024

IIT Guwahati (Indian Institute of Technology)

SUMMER RESEARCH PROJECT UNDER SUPERVISION OF **Dr. Subhaditya Bhattacharya**

- Done calculation on Thermal Dark Matter via Weakly Interacting Massive particles (Specific Case of Scalar Singlet)

Guwahati, India

July 2024 – August 2024

SINP-Kolkata (Saha Institute of Nuclear Physics)

PROJECT STUDENT UNDER SUPERVISION OF **Prof. Prateek Majumdar**

- Long-term Fermi-LAT data analysis of the GeV blazar OP313 from November 2023 till May 2024 to obtain Light curve and SED

Kolkata, India

June 2024 – July 2024

SNBNCBS-Kolkata (SN Bose National Center for Basic Sciences)

SUMMER PROJECT STUDENT UNDER SUPERVISION OF **Prof. Punyabrata Pradhan**

- Study of Simple and interacting random walk in a Simple Symmetric Exclusion Process for N-particles in periodic Boundary Conditions.

Kolkata, India

May 2024 – July 2024

TIFR-Mumbai (Tata Institute of Fundamental Research)

SUMMER PROJECT STUDENT UNDER SUPERVISION OF **Prof. Rudrajyoti Palit**

- Study of Position-sensitive gamma-ray detector and its application in imaging using Geant4 Software.

Mumbai, India

May 2023-July 2023

IIT BHUBANESHWAR (Indian Institute of Technology)

WINTER INTERNSHIP UNDER SUPERVISION OF **Dr. Nirmalendu Acharya**

- Done some mathematical study on "SUPERSYMMETRY IN QUANTUM MECHANICS"

Bhubaneswar, India

Dec 2022 - Jan 2023

Skills

Operating System Windows, Linux

Programming Language Python, C++,

Machine Learning

Softwares Qiskit, Fermipy, LaTeX, Fermitools, Matlab Geant4, Trento

Honors & Awards

- 2024 **Centre Topper**, NGPE (NATIONAL GRADUATE PHYSICS EXAMINATION)
- 2022 **Silver Honor**, IAAC (INTERNATIONAL ASTRONOMY AND ASTROPHYSICS COMPETITION)
- 2022 **3rd Prize**, ISRO Poster Competition
- 2021 **Recipient**, INSPIRE Scholarship(Stipendiary) - DST,Govt of India
- 2021 **Senior Scholar**, JBNSTS(Jagadish Bose National Science Talent Search)

Conference & Workshops

IISER Berhampur

Berhampur

ATHIC: Asian Triangle Heavy Ion Conference

Jan 2025

- Conference On Hadronic physics and QCD

IUCAA (INTER UNIVERSITY CENTER OF ASTRONOMY AND ASTROPHYSICS)

Kolkata

COBRA: HIGH-ENERGY VIEW

July 2024

- Conference On Blazar and Restless AGN .

IISC (INDIAN INSTITUTE OF SCIENCE)

Bangalore

RADIO ASTRONOMY

September 2022

- Prestigious Winter workshop on astronomy especially radio astronomy conducted by IISC.

SAGAN EXOPLANET SUMMER WORKSHOP

India(virtually)

NASA EXOPLANET SCIENCE INSTITUTE

Aug 2022

- Summer workshop organized by NASA EXSCI

IIA (INDIAN INSTITUTE OF ASTROPHYSICS)

Bangalore

Summer school

July 2022

- Learnt about solar astrophysics, selected among various applicants from all over India

IISER KOLKATA (INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH)

Kolkata

QIQT Summer School

July 2022

- Summer school on various topic of quantum computation like quantum cryptography, quantum metrology

LIGO

India(virtually)

Gravitational Wave Open Data Workshop

July 2022

- Attended open data workshop and solved some data analysis problem.

ICTS-TIFR (INTERNATIONAL CENTRE FOR THEORETICAL SCIENCES)

Bangalore

Summer School

May 2022

- Attended two week long summer school on the topic of "CURVES AND SURFACES: GEOMETRY AND PHYSICAL APPLICATION"