

Dhiyanesh Gowrisankar

Curriculum vitae

Experience

Projects/Internships

2023–2024 **Study of Helicity Amplitude Formalism**

Mentor - Prof. Anuradha Misra (CETACS, Mumbai)

I am currently working on a theoretical project in particle physics on the Helicity Amplitude Formalism. In the first part of the project (May 2023 to Dec 2023) I had learnt to do **tree level amplitude** calculations for **QED** processes using trace theorems.

In the second part of the project, I will be learning the Helicity Amplitude Method and two-component spinor techniques and will be using these techniques to calculate the cross section for some processes.

Education

2021–Present **Integrated MSc in Physics**, *UM-DAE-CEBS*, Mumbai, CGPA-9.41/10.

Currently a third year Integrated MSc student majoring in Physics.

2021 **SSCE (Senior School Certificate Examination)**, *Aditya Vidyashram Residential School (CBSE board)*, Puducherry, 485/500 marks

2019 **AISSE (All India Secondary School Examination)**, *Aditya Vidyashram Residential School (CBSE board)*, Puducherry, 481/500 marks

Programming languages and Computer skills

Programming I had taken a course on **Fortran** and learnt **Python** on my own.

Numerical methods Attended a **Numerical Methods course** taught in Fortran.

Latex Familiar with writing reports, articles and beamer presentations on latex.

Languages

English Native proficiency

French Elementary proficiency (Currently learning)

Tamil Mother tongue

Hindi Elementary proficiency

*Takshashila Hostel, UM-DAE Centre for Excellence in Basic Sciences, University of Mumbai
Vidyanagari, Mumbai-400098, Maharashtra – India*

✉ gdhiyanesh1@gmail.com

Achievements

- NGPE **National topper** (top 1 percent) of 2023 National Graduate Physics Exam (NGPE), conducted by Indian Association of Physics Teachers (IAPT).
- NIUS fellow Selected for the National Initiative on Undergraduate Sciences (NIUS) camp 2022, organised by **HBCSE-TIFR**.
- KVPY fellow Ranked **650** out of the around **50,000** students in the 2021 KVPY (Kishore Vaigyanik Protsahan Yojana) exam and currently a KVPY fellow.
- NEET 2021 Ranked **894** out of the around **1.5 million** students in National Eligibility cum Entrance Test (UG) 2021.

Activities and Societies

- Clubs Member of CEBS Science club and CEBS instagram handle, Editor of Inventa science magazine .
- Hobbies Football, Table tennis, Chess and Speed Cubing.