

Rishik Perugu

UG Fourth Year

Indian Institute of Science

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EDUCATION

Indian Institute of Science

B.S.(Research) in Physics, CGPA: 9.1/10

Bangalore

2019–Current

Sri Chaitanya Narayana Jr College

Intermediate/+2, Marks: 980/1000

Hyderabad

2017–2019

Shine High School

Matriculation, CGPA: 9.8/10

Warangal

2016–2017

SCHOLASTIC ACHIEVEMENTS

- Recipient of the prestigious **KVPY Fellowship and Scholarship** by DST, Govt. of India 2019–Current
- Secured **ALL INDIA RANK 135** in **JEE ADVANCED** examination among 0.16 million candidates 2019
- Secured **ALL INDIA RANK 147** in **JEE Mains** examination among 1.2 million candidates 2019
- Bagged **37th rank** in **TS EAMCET** examination among 0.14 million candidates across TS and AP 2019
- Bagged **62th rank** in **AP EAMCET** examination among 0.18 million candidates across TS and AP 2019
- Achieved **AIR 8 (NISER)** in **NEST** examination among 0.04 million candidates 2019
- Achieved **AIR 12 (UM-DAE CEBS)** in **NEST** examination among 0.04 million candidates 2019

PROJECTS

Plasma Physics

Feb 2021 - Sept 2021

Guide: *Prof. Animesh Kuley, IISc Bangalore*

- Studied basics of plasma physics and trajectories of charged particles in electromagnetic fields.
- Studied and implemented numerical methods to solve for trajectories of charged particle in electromagnetic fields such as Euler method, RK methods, Boris Push method.

Molecular Aggregate Photophysics

June 2021 - Current

Guide: *Dr. Jayashree Nagesh, IISc Bangalore*

- Studied Frenkel Exciton states in molecular aggregates from literature and implemented code to simulate the properties of these states.
- Currently exploring Charge Transfer states in molecular aggregates.

POSITIONS OF RESPONSIBILITY

Decoherence Coordinator

Pravega '21

Among a group of 45 people of Science and Tech Pravega '21 team

July 2020 - August 2021

- **Spooky Quizzes**
Organized two rounds of quizzes spanned over 6 weeks where about 200+ high school and UG students participated in these physics based quizzes
- **Coherence Lecture Series**
Organized 10 lectures where eminent physicists from all over the world talked about their research work and/or their areas of expertise
- **Decoherence 2021**
Organized the physics flagship event of Pravega for the year 2021. There were about 700 registrations across India, few from universities abroad. I was involved with the organization and question making for the competition.

TECHNICAL SKILLS

- **Programming:** C, Python, MATLAB, Octave
- **Packages and Tools:** L^AT_EX, Matplotlib, NumPy

KEY COURSES UNDERTAKEN

- **Maths:** Real analysis, Linear Algebra, Multivariable Calculus, Probability and Statistics
- **Physics:** Mechanics, Electricity and Magnetism, Thermal and Modern Physics, Intermediate Mechanics, Oscillations and Waves, Intermediate Electromagnetism and the Quantum Physics of Radiation, Intermediate Thermal Physics and the Physics of Materials, Introduction to Quantum Measurement and Control, Classical Mechanics, Quantum Mechanics 1, Mathematical Methods of Physics, Nuclear and Particle Physics, Quantum Mechanics 2, Statistical Mechanics, General Relativity, Condensed Matter Physics 1, Introduction to Materials for Quantum Technologies
- **Misc:** Computers in Chemistry

EXTRACURRICULAR ACTIVITIES

- Volunteered for an event called Exhibition in Pravega '20, Annual Cultural, Science and Tech fest of Indian Institute of Science, Bangalore
- Demonstrated Chladni plates experiment during Open Day 2020, Indian Institute of Science, Bangalore. Approximate footfall was 50k
- Participated in many Annual Science Fairs during my schooling