Pritam Acharya

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Education

Indian Institute of Science Education and Research (IISER) — Pune, Maharashtra
BS-MS, Math GPA: 8.6/10.0, CGPA: 8.2/10.0 — *Aug. 2020 – Dec. 2025*

D.A.V. Public School — Cuttack, Odisha
Intermediate, C.B.S.E. (95.2%) [Marksheet] — *Apr. 2019 – Mar. 2020*

D.A.V. Public School — Cuttack, Odisha
Matriculation, C.B.S.E. (96.6%) [Marksheet] — *Apr. 2017 – Mar. 2018*

Experience

Project on Multidimensional Random Walks [Report] — May 2022 – Jul. 2022
Guide: Dr. Anup Biswas — *Pune, Maharashtra*

- Examined "Simple Random Walks", their first visits, first returns, and 'Gambler's Ruin' problem using geometrical and combinatorial techniques.
- Examined multi dimensional random walks. Estimated asymptotically, the number of points a walk passes through using combinatorial and analytical techniques.
- Estimated the rate of escape to infinity of a random walk in more than 3 dimensions. Involved usage of involved analysis techniques, combinatorics, and measure theory.

Reading Project on Modern Dynamics — Jun. 2021 – Jul. 2021
Guide: Dr. Rejish Nath — *Pune, Maharashtra*

- Covered part 1 of "Introduction to Modern Dynamics" by David D. Nolte.
- Focused mainly on building the foundations of modern classical mechanics (Hamiltonian formalism, Lagrangian formalism).

Student Mentor — Sept. 2020 – Feb. 2021
D.A.V. Public School — *Cuttack, Odisha*

- Mentored a select group of individuals in their senior year for science and math olympiads.
- Responsibilities included conducting mock tests, grading them, and providing students with necessary inputs. Encouraged students to come up with unique and different solutions to the same problem.

Skills

Programming Languages: Python, and SageMath.
Frameworks: NumPy, Pandas, Tensorflow and matplotlib.
Miscellaneous: Proficient in LaTeX, git, MATLAB, MS Excel and gnuplot.
Front-End: HTML, CSS, and JavaScript.

Scholastic Achievements

- Among the 30 individuals to be invited to attend the **Radio Astronomy Winter School**. Could not attend due to scheduling conflict. *Dec. 2021*
- **Bronze Medalist** in **OPhO** (Online Physics Olympiad). World rank 10 in the open round, and world rank 17 in the invitational round. [Certificate] *Jul. 2020*
- Scored **53/119** in **Indian National Chemistry Olympiad.** The median score was 32, qualifying marks for the next stage were 54.5. [Marksheet] *Feb. 2020*
- Scored **35.5/80** in **Indian National Physics Olympiad.** The median score was 28.5. [Marksheet] *Feb. 2020*
- Among the **Top 1% (National Level)** to qualify National Standard Examination in Chemistry (**NSEC**). Invited to appear in INChO. [Invitation] *Jan. 2020*
- Among the **Top 1% (State Level)** to qualify National Standard Examination in Physics (**NSEP**). Invited to appear in INPhO. [Invitation] *Jan. 2020*
- **Gold Medalist** in **Technothlon**, an exam of logic organized by IIT-Guwahati students, awarded with an **All India Rank of 5** among 50,000 candidates. [Certificate] *Oct. 2019*
- Awarded with the **Kishore Vaigyanik Protsahan Yojana** Fellowship by Dept. of Science and Technology, Government of India. [Certificate] *Feb. 2019*

Key Courses Undertaken

Physics: Introductory Mechanics, Electrostatics, Introduction to Quantum Mechanics, Thermal and Statistical Physics, Classical Mechanics
Mathematics: Single Variable Calculus, Multi Variable Calculus, Linear Algebra, Introduction to Probability, Advanced Linear Algebra, Discrete Structures, Real Analysis 1, Group Theory, Graph Theory*, Ordinary Differential Equations*, Point Set Topology*, Rings & Modules*, Statistical Inference*, Real Analysis 2*

(marked courses to be completed by Dec. 2022)*

Co-scholastic Achievements

- Co-founder and convener of FinStreet, the finance club of IISER Pune. *2021*
- Semi-finalist in the **PCRA Saksham Quiz**. Represented the state of Odisha in the South Zonal Finals. *2018*
- Runners-up in **Mettle Meet Quiz**. Awarded with a cash prize of ₹50,000. *2018*