Satvik Saha

Curriculum Vitae

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Education

2019 – Present	**BS-MS**, *Indian Institute of Science Education and Research*, Kolkata Current CGPA – 9.56/10 SGPA for Semester I – 9.69, II – 9.38, III – 9.58, IV – 9.56, V – 9.60, VI – 9.60 **Major courses**: Algebra I-II, Analysis I-IV, Graph theory and Combinatorics, Linear Algebra I-II, Numerical Analysis, Probability I, Statistics I, Topology
2019	**ISC**, *Delhi Public School, Megacity*, Kolkata Class 12 – 93.5%, Indian School Certificate (ISC)
2017	**ICSE**, *Delhi Public School, Megacity*, Kolkata Class 10 – 94.2%, Indian Certificate of Secondary Education (ICSE)

Scholarships

2018	Awarded the *Kishore Vaigyanik Protsahan Yojana* scholarship, with rank 649 (SA).

Projects

July 2021	**The Stone-Weierstrass Theorem** *Supervisor:* Dr Somnath Basu, IISER Kolkata Studied topics in introductory group theory, analysis, and topology. Presented a generously illustrated proof of the Stone-Weierstrass theorem (notes, presentation).
April 2020	**Age stratified SIQR model for the COVID-19 pandemic** *Supervisor:* Prof. Ranjit Kumar Upadhyay, IIT Dhanbad Studied the basic SIQR compartmental model in epidemiology, in the context of the emerging COVID-19 pandemic. Modified this model by subdividing each compartment into age groups, with varying degrees of interaction amongst each other. Applied this model (using numerical simulations in python) to understand the different trends in infection rates/mortality in countries with different age structures in their population.

Publications

2020 Upadhyay, R.K., Chatterjee, S., Saha, S. et al. "Age-group-targeted testing for COVID-19 as a new prevention strategy." *Nonlinear Dynamics.* DOI: `10.1007/s11071-020-05879-x`

Software skills

Languages Proficient in Python, MATLAB, C

Familiar with Java, Go, C++

Tools Git, HTML/CSS/JS, LaTeX, Numpy/Scipy

Student interests

Chess Played for the IISER Kolkata Chess Team in the Inter IISER Sports Meet (IISM) 2019, as well as Revival 2021.

Coding Contributed to writing and maintaining the welearn-bot project, a command line interface for my institute's learning platform.

Wrote and designed the website of Identity, the Maths Club of IISER Kolkata, current maintainer.

Others Active member of Identity, the Maths Club of IISER Kolkata, organized several events, contributed articles and blog posts.

Part of the winning team in the Mathematics Treasure Hunt, 2020 organized by IISER Pune.