Nilava Metya

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Education

Rutgers, the State University of New Jersey - New Brunswick	**Sep '22 –**
Doctor of Philosophy in Mathematics | *CGPA:* 4.0/4.0	
Master of Science in Mathematics | *CGPA:* 4.0/4.0 | **2022 - '24**	*Piscataway, New Jersey, USA*
passed written qualifying exams in first attempt just before program started	
Chennai Mathematical Institute	**Aug '19 – May '22**
Bachelor of Science (Honours) in Mathematics and Computer Science | *CGPA:* 9.72/10	
Third (out of 55 students), completed degree requirements in 2.5 years	*Chennai, Tamil Nadu, India*
Don Bosco School, Liluah	**Apr '06 – Mar '19**
Indian School Certificate (ISC) 2019 | *Percentage:* 97.25%	
Position: **First** in science stream ($\sim$ 55 students), **second** overall ($\sim$ 180 students)	
Indian Certificate of Secondary Education (ICSE) 2017 | *Percentage:* 96.6%	*Howrah, West Bengal, India*
Position: **First** in school ($\sim$ 180 students)	

Publications/Preprints

1. DePaul, Hoşten, **Metya**, Nometa. Degrees of the Wasserstein distance to small toric models. *Journal of Algebraic Statistics*

Projects/Experience

Higher order MDS codes | *with A Sengupta*	**current**
Distributionally Robust Games | *with B Gangwani and A Sinha*	**current**
Protein symmetry prediction (with certificate) | *Data Science Bootcamp at the Erdös Institute*	**Feb - Apr '24**
Inference on growth process of a network | *Data Mining course*	**Sep - Dec '23**
Principal Components along Quiver representations | *Computational Topology course*	**Sep - Dec '23**

Selection/Attendance in conferences/workshops

Princeton Machine Learning Theory Summer School | *Summer School* | Princeton	**Aug '24**
Efficient Algorithms for High Dimensional Metrics | *Workshop* | DIMACS, Rutgers, NB	**May '24**
Bayesian Statistics and Statistical Learning | *Workshop* | IMSI, Chicago	**Dec '23**
Algebraic Methods in Biochemical Reaction Networks | *Workshop* | MPI, Leipzig	**Jun '23**

Honours and Awards

Nominated by Rutgers Math department for SLMath summer school	**Jun '23**
Summer school at Leipzig - awarded full travel funding. Only two students from Rutgers Math were fully funded by SLMath.	
Academic Excellence Award at Rutgers	**Sep '22**
Received a certificate and $100 based on performance in Written Qualifying Exams.	
Shriram Scholarship at CMI	**'19 – '22**
Received institutional fee waiver and monthly stipend (based on entrance exam).	
Ranked 4th nationally at the *Bachelor of Statistics* (B.Stat.) entrance examination of ISI	**'19**
Selected among (approx) top 100-130 school students in India in *Zonal Informatics Olympiad*	**'17, '18, '19**
Selected for Indian National Mathematical Olympiad Training Camp among 30 students in West Bengal.	**Jan '18**
Tara and Jasubhai Mehta Fellowship for PROMYS	**'18, '19, '20, '21**

Others

- Qualified for **International Collegiate Programming Contest** (ICPC) Kharagpur regionals and Amritapuri regionals in 2019 and secured rank 35 among (approx) 90 university teams at Kharagpur.
- Selected among top 30 students in India to participate in **Scholastic Test of Excellence in Mathematical Sciences** (STEMS) camp at CMI in 2018 (grades $9 - 12$ and across Math, Physics, Computer Science).
- Secured the **third position** in **Mathematics Talent Reward Programme** (MTRP) 2016, organized by ISI Kolkata.

Skills

Research	Optimization and AI/ML in game theory, mathematics of optimization
Languages	Bengali (mother tongue), English (fluent), Hindi (fluent), German (beginner)
Tech	Python, C++, R, Haskell, MATLAB, JAVA, HTML, LaTeX, Microsoft Word, Unix
Relevant Courses	Optimization, Theoretical Machine Learning, Data Mining, Probability, Algorithms, Functional Programming

Selected Teaching/Grading experience

Teaching Assistant / Grader | Rutgers **Sep '22 –**
TA/grader for undergraduate courses like calculus, topology, number theory, statistics, abstract algebra, real analysis

Head Counselor at PROMYS India | IISc Bangalore **May – Jun '23**

Teaching Assistant | CMI **May '20 – May '22**
TA/grader for (under)graduate courses like linear algebra, discrete math, Haskell, probability, algorithms