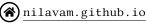
NILAVA METYA

Highland Park, NJ - 08904, USA

milava.metya@rutgers.edu nilavam.github.io



Education		
		Sep '22 – (expected) '27
Doctor of Philosophy in Mathematics $CGPA$: $4.0/4.0$ Master of Science in Mathematics $CGPA$: $4.0/4.0$ 2022 - '24 Piscatar (passed written qualifying exams in first attempt just before program started)		Piscataway, New Jersey, USA
Chennai Mathematical Institute		Aug '19 – May '22
Bachelor of Science (Honours) in Mathematics and Computer Science CGPA: 9.72/1 Position: Third (out of 55 students) (completed degree requirements in 2.5 years)		Chennai, Tamil Nadu, India
Don Bosco School, Liluah	02.0404	Apr '06 – Mar '19
Indian School Certificate (ISC) 2019 Percentage: 97.25% Position: First in science stream (~ 55 students), second overall (~ 180 students) Indian Certificate of Secondary Education (ICSE) 2017 Percentage: 96.6% Position: First in school (~ 180 students)		Howrah, West Bengal, India
RELEVANT COURSEWORK		
 Matrix Computations Differential Equations Haskell, Python Object Oriented Programming Algorithm Design + Analysis 	 Automata Theory Lambda Calculus Newtonian, Lagrangian, Co 	eaves and Schemes Princeton obability Rutgers ta Mining Rutgers nvex Optimization Princeton L. Theory Rutgers
Publications/Preprints		
1. G DePaul, S Hoşten, N Metya , I Non Journal of Algebraic Statistics	neta. Degrees of the Wasserstein distance to sm	nall toric models.
Projects/Experience		
Distributionally Robust optimization	on over dynamical systems with A Sinha	current
Distributionally Robust Games wit		current
Protein symmetry prediction Data Science Bootcamp at the Erdös Institute		Feb - Apr '23
Wasserstein distances to toric mode	ls with G DePaul, S Hoşten, I Nometa	July '23 - Feb '24
Inference on growth process of a ne	twork Data Mining course at Rutgers	Sep - Dec '23
Principal Components along Quive	r representations Computational Topology co	ourse at Rutgers Sep - Dec '23
SELECTION/ATTENDANCE II	n conferences/workshops	
Princeton Machine Learning Theory	y Summer School Summer School Princetor	n Aug '24
Equilibrium Summer School Summ	ner School Rutgers University, NB	July '24
Frontiers in Complexity Theory: A Graduate Workshop Workshop DIMACS, Rutgers, NB		Rutgers, NB July '24
Efficient Algorithms for High Dime	nsional Metrics Workshop DIMACS, Rutger	rs, NB May '24
Bayesian Statistics and Statistical Le	earning Workshop IMSI, Chicago	Dec '23
Algebraic Statistics for Ecological an	nd Biological Systems Workshop IMSI, Chie	cago Oct '23
Invitation to Algebraic Statistics and	d Applications Workshop IMSI, Chicago	Sep '23

Permutation and Causal Inference: Connections and Applications | Workshop | IMSI, Chicago

Algebraic Methods in Biochemical Reaction Networks | Workshop | MPI, Leipzig

Aug '23

Jun '23

RELEVANT TALKS DELIVERED

$\textbf{Principal Components along Quiver representations} \mid 1 \ \textit{talk} \mid \text{Rutgers course} : \textit{Computational Topology}$	Dec '23
Inference on growth process of a network $\mid 1 \ talk \mid$ Rutgers course: Data Mining	Dec '23
Complexity of Optimization 1 talk Rutgers Pizza Seminar	Oct '23
Complexity of Computing Wasserstein Distance 1 talk Apprenticeship Week at IMSI, Chicago	Oct '23
Kneser graph coloring $\mid 1 \; talk \mid$ Rutgers Graduate Combinatorics Seminar	Oct '22
Fiedler vector method $\mid 1 \; talk \mid$ CMI course: Matrix Computations	May '22
$ \textbf{Markov Chain Monte Carlo} \mid 1 \ \textit{talk} \mid \text{Internship with } \textit{Prof Ramamoorthi} $	Sep '21

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 4^{th} nationally at the *Bachelor of Statistics* (B.Stat.) entrance examination

'19

Indian Statistical Institute (ISI)

Informatics Olympiad

'17, '18, '19

Selected among (approx) top 100-130 school students in India in **Zonal Informatics Olympiad** (ZIO).

Mathematical Olympiad

Jan '18

Selected for Indian National Mathematical Olympiad (INMO) Training Camp | top 30 school students in West Bengal.

Program in Mathematics for Young Scientists (PROMYS)

'18 '10 '20 '21

Awarded the **Tara and Jasubhai Mehta Fellowship** to PROMYS (among 5 Indian school students in 2018) based on a competitive process. Participated twice as a student ('18, '19) and twice as a counselor ('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, based on a competitive exam (across grades 9-12 and across Math, Physics, Computer Science).
- Secured the **third position** in **Mathematics Talent Reward Programme** (MTRP) 2016, organized by ISI Kolkata, based on a competitive exam and quizzes at a camp.

SELECTED TEACHING/GRADING EXPERIENCE

Head Counselor at PROMYS India IISc Bangalore	May – Jun '23
Grader Rutgers University	Sep '22 – May '24
Teaching Assistant Chennai Mathematical Institute	Dec '20 – May '22
Faculty at Ramanujan School of Mathematics Kolkata	May '19 – July '22
Taught high-school students competitive math for math olympiad, CMI, ISI entrance exams	

SKILLS

Research	Optimization and AI/ML in game theory, especially distributionally robust optimization
Soft-skills	"Can learn it" attitude, Active team-worker, collaborative problem solver,
Languages	Bengali (mother tongue), English (fluent), Hindi (fluent)
Programming	Python, C++, R, Haskell, MATLAB, JAVA, HTML, SageMath, Macaulay2
Documentation	MTeX. Microsoft Word