

Satya Prakash Nayak

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Objective

Grad student with special interests in the intersection of Mathematics and Theoretical Computer Science. Has interests in fields of Automata theory, Formal Logic and Algorithms.

Education

Master of Science (Hons.) in Computer Science Chennai Mathematical Institute , Chennai CGPA: 9.88	Aug 2019 - Present
Bachelor of Science (Hons.) in Mathematics and Computer Science Chennai Mathematical Institute , Chennai CGPA: 8.47	Aug 2016 - Aug 2019
Senior School Certificate Examination- Std 12 BJB Junior College , Bhubaneswar, Odisha 510/600 in CHSE, Odisha	2014 - 2016
Secondary School Examination- Std 10 Rtapalli Vidyapitha , Bhubaneswar, Odisha 573/600 in BSE, Odisha	2009 - 2016

Research Experience

Master's Thesis Project on <i>Adaptive Strategies for rLTL Games</i> Under the guidance of Prof. Martin Zimmermann , University of Liverpool, England and Prof. Daniel Neider , Max Planck Institute for Software Systems, Germany	July - Dec 2020
Summer Research Internship on <i>Minimization of visibly Pushdown Automata</i> at Aix-Marseille University , Marseille, France Under the guidance of Prof. Jean Marc Talbot	May - July 2019
Reading Project on <i>Metric Embeddings and their Algorithmic Applications</i> with Prof. Prajakta Nimborkar at Chennai Mathematical Institute, Chennai	Aug - Dec 2020
Reading Project on <i>Games on Graphs (Parity Games)</i> with Prof. B Srivathsan at Chennai Mathematical Institute, Chennai	Aug - Dec 2019

Teaching Assistant

Teaching Assistant at CMI: Data Mining and Machine Learning Design and Analysis of Algorithms	Aug - Nov 2019 Aug - Nov 2020
Faculty at Rtapalli Vidyapitha: Calculus (for 12th standard) Olympiad Preparation	Sep 2017 - Aug 2018 June 2014 - April 2016

Coursework

Post-graduation

Games on Graphs II, Concurrency Theory, Advanced Algorithms, Complexity Theory I, Mathcings and Network flows, Linear Optimization, Coding Theory, Graph Theory, Metric Embeddings and their Algorithmic Applications, Quantum Computing

Under-graduation

Computer Science :

Discrete Mathematics, Design and Analysis of Algorithms, Programming Language Concepts, Functional Programming (Haskell), Advanced Programming (Python), Theory of Computation, Games on Graphs, Mathematical Logic, Data Mining and Machine Learning, Optimization Techniques, Logic Automata and Games, Weighted Automata, Timed Automata

Mathematics :

Real Analysis, Complex Analysis, Linear Algebra, Abstract Algebra[Group, Ring, Field Theory], Linear Groups, Topology, Calculus, Differential Equations, Probability, Game Theory

Computer Language Skills

Programming Languages: Python, Java, Haskell

Other Languages: HTML, L^AT_EX

Achievements

2016 Selected to appear in *Asian Pacific Mathematical Olympiad (APMO)* ↗

2015 *Zonal Informatics Olympiad (ZIO)* conducted by Indian Association for Research in Computing Sciences (IARCS) ↗

2015 *Indian National Mathematics Olympiad (INMO)* conducted by National Board of Higher Mathematics (NBHM) ↗

2015 *National Standard Examination in Astronomy (NSEA)* organized by Homi Bhabha Centre for Science Education (HBCSE) ↗

2015 *American Mathematics Competition (AMC) 12* and selected to participate in the *American Invitational Mathematics Examination (AIME)* organized by Mathematical Association of America ↗

2014 *Regional Mathematics Olympiad (RMO)* (State Topper) conducted by National Board of Higher Mathematics (NBHM) ↗

Camps and Talks Attended

Complexity, Algorithms, Automata and Logic Meet ↗
Chennai Mathematical Institute, Chennai

21st - 25th January, 2019

Training Program in Mathematics ↗
National Institute of Science Education and Research, Bhubaneswar

May - June 2018

International Mathematics Olympiad Training Camp
Homi Bhabha Centre for Science Education, Mumbai

April - May 2015, 2016