Dhrubajyoti Ghosh

Curriculum Vitae

Personal

Year of Birth:	2002
Country of Origin:	India
Email:	dghosh@ens-paris-saclay.fr
Home Page:	https://ghoshdhruba.github.io/
Language:	English (fluent), Bengali (mother tongue), French (basic)

Education

Apr 2019-Jul 2020	**Kendriya Vidyalaya IIT Kharagpur, West Bengal, India** Senior Secondary Education, Marks: 95.6%
Dec 2020-Jul 2023	**Chennai Mathematical Institute, India** B.Sc. Mathematics and Computer Science, CGPA: 9.26/10
Sep 2023-Sep 2024	**ENS Paris-Saclay** M1 Master Parisien de Recherche en Informatique Marks: 16.86/20, Rank: 4 out of 27, Mention: Très Bien / summa cum laude
Sep 2024-Sep 2025	**ENS Paris-Saclay** M2 Master Parisien de Recherche en Informatique

Internships, Projects

Apr - Aug 2025	**M2 Internship at ENS Paris-Saclay** Continuation of the work done on the problem of my M1 internship.
Feb - June 2024	**M1 Internship at ENS Paris-Saclay** Worked under Prof. Thomas Nowak on finding a synchronous message passing model equivalent to the asynchronous message passing model with process faults. Collaborated with researchers from Technion, Israel and UNAM, Mexico.
Sep - Dec 2023	**Reading project in distributed computing, ENS Paris-Saclay** Read and presented two recent results (here, here) using topological methods to characterize task solvability in various distributed computing models
May - July 2023	**Internship at Max Planck Institute for Informatics, Saarbrücken** Worked under Dr. Christoph Lenzen on efficient synchronous counting. The aim was to improve the communication complexity of an existing algorithm.
May - July 2022	**Summer Internship at IIT Kharagpur, India** Studied Nakamoto consensus [slides] and parts of the Paxos protocol under Prof. Sudebkumar Pal.

Research Interests

Broadly interested in distributed computing, and in particular, fault tolerance, applications of topological methods, and clock synchronization.

Selected Coursework

Mathematics:

(At CMI):
Topology
Differential Equations
Probability Theory
Real Analysis
Complex Analysis
Ring and Field Theory
Group Theory
Linear Algebra

Computer Science:

(In MPRI M1 & M2):
Distributed algorithms on networks
Advanced graph theory
Theory of practical graph algorithms
Quantum information and applications
Randomness in Complexity
Analytic Combinatorics (course: Analysis of Algorithms)
Efficient Algorithms in Computer Algebra
Probabilistic Aspects of Computer Science
Lambda-calculus and categories

(At CISPA, Saarbrücken, unofficial):
Clock Synchronization and Adversarial Fault Tolerance

(At CMI):
Concurrent Programming
Programming Language Concepts
Infinite State Verification
Theory of Computation
Design and Analysis of Algorithms
Computational Complexity
Discrete Mathematics

Achievements, Awards

2019 **Indian National Mathematical Olympiad**
Among top 31 students nationwide chosen for IMO Training Camp in 2019, 2020

2023-2025 **Université Paris-Saclay IDEX Scholarship**
Monthly grant of 1000€ for attending the MPRI program at ENS Paris-Saclay

Software Knowledge

Programming Languages: C++ (fluent), Python (fluent), Haskell (basic)
Misc. : Unix, Vim, Z3, PyTorch, LaTeX
Unix Experience: Basic experience with GNU utilities (`grep`, `find`, `sed`, etc.). Able to write basic shell scripts, e.g., filtering specific emails, notifying after completion of long processes, etc.