Sagnik Chatterjee

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Biography

Affiliation:	Doctoral student in the BraQIIIT lab at IIIT-Delhi.
Advisor:	Debajyoti Bera
Research Interests:	Quantum Computing, Learning Theory, Classical & Quantum Complexity Theory.

Education

Jul'19 - present Ph.D. CSE	Indraprastha Institute of Information Technology, Delhi (**IIITD**) **CGPA**: 8.78
Aug'13 - Aug'17 B.Tech CSE	Maulana Abul Kalam Azad University of Technology, Kolkata (**MAKAUT**; formerly **WBUT**) **CGPA**: 8.10

Research Visits

Jul-Sep '23	IDA research group, Czech Technical University, Prague (**CTU**) Hosted by Jakub Marecek and Vyachselav Kungurtsev.

Research

Journal Publications

1. **SC**, Rohan Bhatia, Parmeet Singh Chani, and Debajyoti Bera. *"Quantum boosting using domain-partitioning hypotheses."* Quantum Machine Intelligence 5, no. 2 (2023): 33. [DOI].
   - Talk at QTML 2022.

Conference Publications

1. Efficient Quantum Agnostic Improper Learning of Decision Trees. [AISTATS 2024]
   SC, Tharrmashastha SAPV, and Debajyoti Bera.

Manuscripts and Preprints

1. Generalization Bounds for Dependent Data using Online-to-Batch conversion.
   SC, Manuj Mukherjee, and Alhad Sethi. *Under submission.*

2. Quantum Solutions to the Privacy vs. Utility Tradeoff.
   SC and Vyacheslav Kungurtsev. *Under submission.*

3. Applying the Quantum Alternating Operator Ansatz to the Graph Matching Problem.
   SC and Debajyoti Bera.
   (Poster) AQIS 2020; QIP 2021.

Service

Conference Reviewing: NeurIPS (2024).
Journal Reviewing: Quantum, Scientific Reports.

Invited and Contributed Talks

Recent Trends in Algorithms 2024	July 2024
ACMU seminar, Indian Statistical Institute	June 2024
Quantum Computing Semester, Chennai Mathematical Institute	February 2024
University of Latvia	September 2023
IDA Seminar, Czech Technical University	September 2023

Short Talk at QTML 2022	November 2022
Theory Seminar, Indian Institute of Information Technology Delhi	March 2022
QISE Workshop	December 2021
Faculty Development Programme, JNTU Anantapur	December 2020

Awards and Scholarships

AISTATS 2024 Registration Grant	April 2024
Runners Up, IBMQ Awards - Teach Me Quantum 2019	February 2020

Teaching

CMI QC Semester (2024)	**Instructor**	Quantum Algorithms for Linear Algebra
IIIT-D Winter Semester (2020, 2021, 2024)	Teaching Assistant	Theory of Computation
IIIT-D Winter Semester (2023)	Teaching Assistant	Introduction to Quantum Computing
IIIT-D Refresher Module (2022)	**Instructor**	Introduction to C Programming
IIIT-D Summer Semester (2022)	Teaching Assistant	Data Structures and Algorithms
IIIT-D Monsoon Semester (2020, 2021)	Teaching Assistant	Modern Algorithm Design

Workshops and Schools

IACS Kolkata	Recent Trends in Algorithms, 2024
IISc Bangalore	JTG/IEEE ITSoc Summer School 2023
FSTTCS'21 (*Online*)	Quantum Information Science and Engineering (QISE) 2022
IIIT Delhi	Indo-German Spring School on ALgorithms for Big Data 2020
ISI Kolkata	Workshop on Boolean Functions 2020
IIAS Jerusalem	The 4th Advanced Winter School in Computer Science and Engineering 2019

Selected Extra-Curricular Activities

Mar'23-Present	Organizer and coordinator for Talks on Quantum Computing talks, at IIIT-D.
Aug'22-Present	Organizer and coordinator for Theory Reading Group talks, at IIIT-D.
Aug'22-Dec'22	Organizer and coordinator for "Ketchup talks", at IIIT-D. https://twitter.com/KetchupIIITD.
Dec '21	Organizer for the QISE'21 workshop. https://acm-goa.github.io/QISE/.
Feb '20	Student organizer for "Algorithms for Big Data 2020", at IIIT-D. https://sites.google.com/view/abd2020/home.
Feb '20	Organized the first India Quantum Computing Meetup in New Delhi. https://sites.google.com/iiitd.ac.in/indiaqcmeetup/home.

Industry Experience

Sep'17-Mar'19	**Oracle Financial Services Software Limited**
Feb'17-May'17	**Infosys Limited** (Systems Engineering Intern)
Jun'16-Jul'17	**AlCircle Pte Ltd** (Data-Science Intern)