

Amartya Basu

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Education

2025– **PhD in Computer Science**, *SUNY Stony Brook*, New York, USA.

Advisor: Dr. Shubham Jain

2022–25 **MS in Computer Science & Engineering**, *IIT Madras*, Chennai, India.

Thesis: Mapping Pervasive Environments using Radio Tomography and Neural Radiance Field.

Advisor: Dr. Ayon Chakraborty

2016–20 **B.Tech in Computer Science & Engineering**, *Government College of Engineering and Leather Technology*, Kolkata, India.

Awards and Achievements

- Received the Research Excellence Award from IIT Madras.
- Received Pre-Incubation funding from NIRMANN, IIT Madras (Jul-Nov'24 cohort) to prototype UbiqMap.
- Received the Institute Research (IR) Award, IIT Madras (**sole recipient in MS category, Jul-Nov'24**).
- Received Travel Grant Award for IITB CSE Research Symposium 2023.
- Received Travel Grant Award for ACM SIGMETRICS/ PERFORMANCE 2022.
- Secured 98.58 percentile out of ≈ 1 lakh candidates in GATE (CS) 2020.

Experience

2025– **Research Assistant**, *Stony Brook University*, NY, USA.

Pervasive Computing and Smart Sensing (PiCASSo) Lab, Department of Computer Science.

2022-24 **Research Assistant**, *IIT Madras*, Chennai, India.

SeNSE Lab, Department of Computer Science & Engineering.

2020-21 **Assistant System Engineer**, *Tata Consultancy Services*, Kolkata, India.

Summer 2019 **Web Development Intern**, *ITC Infotech*, Kolkata, India.

Publications

AIoT'24 SpecNeRF: Neural Radiance Field Driven Wireless Coverage Mapping for 5G Networks.

Amartya Basu and Ayon Chakraborty.

AIoT in conjunction with ACM MobiHoc 2024.

IEEE TMC'24 Ubiquitous Indoor Mapping using Mobile Radio Tomography.

Amartya Basu, Ayon Chakraborty and Kush Jajal.

IEEE Transactions on Mobile Computing, Vol.23, No.12, 2024.

Patents

1. **A System and Method for Mapping Indoor Spaces in Real-time.**

Ayon Chakraborty and Amartya Basu. [Granted- 567451 \(India\)](#).

Press Coverage

■ **Ubiquitous Indoor Mapping using Mobile Radio Tomography:**

[Times of India](#), [Hindustan Times](#), [The Hindu](#), [India Today](#).

Professional Services

■ **Journal Reviewer**

- IEEE Transactions on Visualization and Computer Graphics- 2025.
- IEEE Transactions on Mobile Computing- 2025, 2024.
- Ad-Hoc Networks (Elsevier)- 2025, 2024.


■ **Artifact Evaluation Committee**

- ACM International Conference on emerging Networking Experiments and Technologies (CoNEXT 2025).
- ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2025).
- ACM Conference on Embedded Networked Sensor Systems (SenSys 2024).

■ **Conference Activities**

- Web chair of SOCIETY workshop in conjunction with ICDCN'25, IIT Hyderabad, India.
- Volunteer for the ICDCN'24 conference, IIT Madras, India.

■ **Institute Activities**

- Organizer of CSE Bits monthly event in the Department of CSE, IIT Madras- 2023.
 - Subject matter expert for GATE CS NPTEL- 2022. 
- Subjects: Operating System, Computer Networks, Computer Organization and Architecture.*

Teaching Assistantships

Jul-Nov, 2024 **Smart Sensing for Internet of Things (Graduate level).**

Instructor : *Dr. Ayon Chakraborty.*

Jan-May, 2024 **Advanced Data Structures and Algorithm (Graduate level).**

Instructor : *Dr. C Pandu Rangan.*

Jul-Nov, 2022 **Foundation for Computer System Design (Undergraduate level).**

Instructor : *Dr. Ayon Chakraborty.*