

# Pritam Goswami

✉ pgoswami.academic@gmail.com

🌐 <https://pritamacademic.github.io/profile.github.io/>

## Employment History

2018 📌 **TCS (Tata Consultancy Service)**: Assistant System Engineer (Trainee).

## Education

2012 – 2015 📌 **B.Sc (Honours)**: Ramakrishna Mission Residential College Narendrapur (Autonomous)  
Subject: *Mathematics*.

2015 – 2017 📌 **M.Sc**: University of Calcutta.  
Subject: *Pure Mathematics*

2019 – ... 📌 **Ph.D**: Jadavpur University.  
Topic: *Distributed Swarm Robot Algorithms*.  
Supervisor: *Prof. Buddhadeb Sau*

## Skills

Language 📌 Strong reading, writing and speaking competencies for English, Bengali and Hindi.

Coding 📌 C, Java, Python, SQL,  $\LaTeX$ , ...

Web Dev 📌 HTML, CSS, JavaScript, Tomcat Web Server.

## Research Publications

### Journal Articles

1 S. Ghosh, P. Goswami, A. Sharma, and B. Sau, "Move optimal and time optimal arbitrary pattern formations by asynchronous robots on infinite grid," *Int. J. Parallel Emergent Distributed Syst.*, vol. 38, no. 1, pp. 35–57, 2023. 📄 DOI: 10.1080/17445760.2022.2124411.

2 M. K. Kundu, P. Goswami, S. Ghosh, and B. Sau, "Arbitrary pattern formation by opaque fat robots on infinite grid," *Int. J. Parallel Emergent Distributed Syst.*, vol. 37, no. 5, pp. 542–570, 2022. 📄 DOI: 10.1080/17445760.2022.2088750.

### Conference Proceedings

1 B. Mondal, P. Goswami, A. Sharma, and B. Sau, "Arbitrary pattern formation on a continuous circle by oblivious robot swarm," in *ICDCN, 2024*, (proceedings not yet published).

2 A. Sharma, S. Ghosh, P. Goswami, and B. Sau, "Space and move-optimal arbitrary pattern formation on a rectangular grid by robot swarms.," in *ICDCN, 2024*, (proceedings not yet published).

3 A. Das, S. Ghosh, A. Sharma, P. Goswami, and B. Sau, "The computational landscape of autonomous mobile robots: The visibility perspective," in *Distributed Computing and Intelligent Technology*, S. Devismes, P. S. Mandal, V. V. Saradhi, B. Prasad, A. R. Molla, and G. Sharma, Eds., Springer Nature Switzerland, 2024, pp. 85–100. 📄 DOI: [https://doi.org/10.1007/978-3-031-50583-6\\_6](https://doi.org/10.1007/978-3-031-50583-6_6).

4 S. Ghosh, A. Sharma, P. Goswami, and B. Sau, "Brief announcement: Asynchronous gathering of finite memory robots on a circle under limited visibility," in *Stabilization, Safety, and Security of Distributed Systems - 25th International Symposium, SSS 2023, Jersey City, NJ, USA, October 2-4, 2023, Proceedings*, S. Dolev and B. Schieber, Eds., ser. Lecture Notes in Computer Science, vol. 14310, Springer, 2023, pp. 430–434. 📄 DOI: 10.1007/978-3-031-44274-2\32.

- 5 S. Ghosh, A. Sharma, P. Goswami, and B. Sau, "Oblivious robots performing different tasks on grid without knowing their team members," in *9th International Conference on Automation, Robotics and Applications, ICARA 2023, Abu Dhabi, United Arab Emirates, February 10-12, 2023*, IEEE, 2023, pp. 180–186. [DOI: 10.1109/ICARA56516.2023.10125816](https://doi.org/10.1109/ICARA56516.2023.10125816).
- 6 P. Goswami, A. Sharma, S. Ghosh, and B. Sau, "Brief announcement: Rendezvous on a known dynamic point in a finite unoriented grid," in *Stabilization, Safety, and Security of Distributed Systems - 25th International Symposium, SSS 2023, Jersey City, NJ, USA, October 2-4, 2023, Proceedings*, S. Dolev and B. Schieber, Eds., ser. Lecture Notes in Computer Science, vol. 14310, Springer, 2023, pp. 374–379. [DOI: 10.1007/978-3-031-44274-2\\_27](https://doi.org/10.1007/978-3-031-44274-2_27).
- 7 P. Goswami, A. Sharma, S. Ghosh, and B. Sau, "Time optimal gathering of myopic robots on an infinite triangular grid," in *Stabilization, Safety, and Security of Distributed Systems - 24th International Symposium, SSS 2022, Clermont-Ferrand, France, November 15-17, 2022, Proceedings*, S. Devismes, F. Petit, K. Altisen, G. A. D. Luna, and A. F. Anta, Eds., ser. Lecture Notes in Computer Science, vol. 13751, Springer, 2022, pp. 270–284. [DOI: 10.1007/978-3-031-21017-4\\_18](https://doi.org/10.1007/978-3-031-21017-4_18).
- 8 P. Goswami, S. Patra, and B. Sau, "Hole healing in mobile sensor network," in *8th NSysS 2021: 8th International Conference on Networking, Systems and Security, Cox's Bazar, Bangladesh, December 21 - 23, 2021*, ACM, 2021, pp. 13–18. [DOI: 10.1145/3491371.3491380](https://doi.org/10.1145/3491371.3491380).

## Presentations

- 2021 ■ Hole Healing in Mobile Sensor Network.  
Presented at: *NSysS, 2021.(Virtual)*.
- 2022 ■ Time Optimal Gathering of Myopic Robots on an Infinite Triangular Grid.  
Presented at: *SSS, 2022 (Clermont-Ferrand, France)*.
- Time Optimal Gathering of Myopic Robots on an Infinite Triangular Grid.  
Presented at: *LIMOS, UCA (Clermont-Ferrand, France)*.
- 2023 ■ Rendezvous on a Known Dynamic Point on a Finite Unoriented Grid.  
Presented at: *IIT Kanpur, Kanpur, India*.
- Rendezvous on a Known Dynamic Point on a Finite Unoriented Grid.  
Presented at: *SSS, 2023.(Virtual)*.

## Miscellaneous Experience

- **Teaching Assistant** : Assisted Professor B. Sau and Professor S. Ghosh as a teaching assistant by taking classes for the following two topics
  1. Linear Algebra
  2. Abstract Algebra.
- **Research Visit** :
  1. Visited Professor Anaïs Durand at LIMOS, UCA in Clermont-Ferrand, France.
  2. Visited Dr. Barun Gorain at IIT, Bhilai in Bhilai, India.