

# Tirtha Majumder, Ph.D.

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🌐 <https://scholar.google.com/citations?user=xBaiI2gAAAAJ&hl=en>

🏠 8/A/9 Jessore Road, Sarkar Apartment, Flat-2A, Kolkata 700028, India

📅 Born on Dec 1982

🔗 Orcid id: 0000-0003-2521-7161, Scopus id: 57094857100



A dedicated and organized professional with proven expertise in teaching, guidance, and counseling. Have more than 17 years of experience in academics. A team player with an active listening skills and good interpersonal connections. An ardent learner and researcher with a determination to work and contribute in the frontier area of teaching and research. Possess a positive attitude towards life, adaptable, and seeks feedback for improvement and personal growth.

## 📁 Employment History

- Dec 2022 – Present    📖 **Adamas University, KOLKATA, India,**  
Associate Professor, and Head of Department (HoD)  
Electrical and Electronics Engineering  
(Electronics and Communication Engineering (ECE), Electrical Engineering (EE), and BioMedical Engineering (BME))  
School of Engineering and Technology
- Sept 2012 – Dec 2022    📖 **KIIT Deemed to be University, BHUBANESWAR, India**  
Assistant Professor-II  
School of Electronics Engineering
- June 2007 – Aug 2012    📖 **KIIT Deemed to be University, BHUBANESWAR, India**  
Assistant Professor-I  
School of Electronics Engineering
- 📖 **Courses Taught**  
Communication Engineering, Mobile Communication Engineering, Analog Communication Techniques, Digital communication Techniques, Digital Electronics Circuits, Analog Electronics, Basic Electronics, and many more.

## 🎓 Education Credentials

- 2020    📖 **Ph.D., KIIT DEEMED TO BE UNIVERSITY, BHUBANESWAR, INDIA**  
Specialization : Electronics and Telecommunication Engineering.  
Thesis title: *Performance Improvement by Optimal Resource Allocation and Congestion Control in Cognitive Radio Network.*
- 2007    📖 **Master of Technology, (M.Tech), KIIT DEEMED TO BE UNIVERSITY, BHUBANESWAR, INDIA**  
Specialization : Communication.  
Thesis title: *Thesis : Study of Dual - Frequency S and broad band E antenna configuration.*
- 2005    📖 **Bachelor of Technology, (B.Tech), BIJU PATTNAIK TECHNICAL UNIVERSITY, BHUBANESWAR, INDIA**  
Specialization : Electronics and telecommunication Engineering.  
Thesis title: *Thesis : Microcontroller based product counting system.*

## 🔍 Research Interest

- 📌 Cognitive Radio Network
- 📌 Wireless Communication
- 📌 Sliding Mode Control of nonlinear Uncertain Systems
- 📌 Event-triggered Coordination
- 📌 Networked Control Systems

## 📖 Publications

### Patents

- 1 S. Kumar, M. Mitra, **Majumder, T**, *et al.*, "A system for optimal resource allocation for a secure nxiiot network for non-terrestrial network applications," in Deutsches (Germany) Patent No : 202022100431, Feb 23, 2022.
- 2 A. Mukherjee, B. S. Patro, S. Kumar, **Majumder, T**, and Y. Qi, "A system and method of uniform distributed wireless sensor nodes in medical tools for edge/cloud-based computations," in Australian Patent No : 2021105613, Nov 3, 2021.

### Journal Articles

- 1 **T. Majumder**, U. Das Sarma, S. Choudhury, and D. Debnath, "Pneumonia detection using asynchronous split learning method," *IEEE Transactions on Consumer Electronics*, 2024. [DOI: 110.1109/TCE.2024.3413893](#).
- 2 S. C. Kumari, M. Behera, D. Pradhan, and **T. Majumder**, "Energy efficient routing protocol for manet : Ff- aomdv," *journal of Data Acquisition and Processing*, vol. 38, no. 2, pp. 360–369, 2023. [DOI: 110.5281/zenodo.7766347](#).
- 3 **T. Majumder**, R. K. Mishra, S. S. Singh, P. K. Sahu, and R. Vohnout, "Cognitive-radio-based resource management for smart transportation: A sliding mode control approach," *IEEE Internet of Things Journal*, vol. 10, no. 21, pp. 18 622–18 632, 2023. [DOI: 10.1109/JIOT.2023.3279103](#).
- 4 **T. Majumder**, R. K. Mishra, S. S. Singh, and P. K. Sahu, "Robust congestion control in cognitive radio network using event-triggered sliding mode based on reaching laws," *Journal of the Franklin Institute*, vol. 357, no. 11, pp. 7399–7422, 2020.
- 5 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, "Robust congestion control in cognitive radio network using dynamic event-triggered sliding mode," *International Journal of Communication Systems*, vol. 33, no. 10, 2020.
- 6 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, "Congestion control in cognitive radio networks with event-triggered sliding mode," *International Journal of Electronics and Communication (AEU)*, vol. 90, pp. 155–162, 2018.
- 7 A. Mishra, **T. Majumder**, R. K. Mishra, S. S. Sekhar, and P. K. Sahu, "Literaturesurvey on cognitive radio and its functionalities," *International Journal of Electronics and Communication (AEU)*, pp. 06–12, 2016, ISSN: 2167-9843. [URL: https://doi.org/10.7287/peerj.preprints.2205v1](#).

### Conference Proceedings

- 1 S. Choudhury, A. Dutta, and **T. Majumder**, "Multiband patch antenna utilizing e, l and u-slots for satellite communication," in *2nd International Conference on Futuristic Technologies (INCOFT)*, 2023.
- 2 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, "Robust nonlinear congestion controller for cognitive radio based wireless network," in *IEEE sponsored 2nd International Conference on Innovations in Information, Embedded and Communication Systems, ICIECS'15*, 2015.

- 3 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, "Robust nonlinear congestion controller for time delayed and uncertain cognitive radio based wireless network," in *Power, Communication and Information Technology Conference(PCITC)*, Siksha 'O' Anusandhan University, Bhubaneswar, India, 2015.
- 4 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, "Sliding mode controller design for high performance of permanent magnet stepper motor," in *Innovations in Information, Embedded and Communication Systems*, 2015.

## Books and Chapters

- 1 S. Mallick<sup>1</sup>, **Tirtha Majumder**, P. Chowdhury, and M. R. Alam, Eds., *Revolutionized 6G communication with Holographic MIMO network*. in Millimeter Wave, Terahertz Devices for 5G, and 6G systems (MWTD<sub>SCT</sub> – 2024), *Springer*, 2024, Accepted.
- 2 **T. Majumder** and P. K. Sahu, Eds., *Green Communication in Next Generation 5G Network : Techniques and Challenges*. in 5G-Green Communication Network and Diversity for Smart Cities, Taylor Francis Group, 2023.
- 3 D. Pradhan, Rajeswari, H. M. T. Prasanna Kumar Sahu, and **Tirtha Majumder**, Eds., *5G-Enabled Edge Computing for Smart Cities*. in 5G-Green Communication Network and Diversity for Smart Cities, Taylor Francis Group, 2022.
- 4 **T. Majumder**, R. K. Mishra, A. Sinha, S. S. Singh, and P. K. Sahu, Eds., *Congestion Control in Cognitive Radio networks using Fractional Order Rate reaching law based Sliding Modes*. in Foundations, Frontiers in Compute, Communication, and Electrical Engineering, Taylor Francis Group, 2016.

## Positions of Responsibility

### Reviewer of Refereed Journal

- 📖 IEEE Systems Journal
- 📖 IEEE Transaction on Consumer Electronics
- 📖 IEEE Sensors Journal
- 📖 IEEE Internet of Things Journal
- 📖 IEEE Transactions on Communications
- 📖 International Journal of Communication Systems (Wiley)

## Administrative Responsibility

- 📖 **Head of Department**, Electrical and Electronics Engineering from Dec 2022 to till date.
- 📖 **Chairman** of the Departmental Committee on Doctorate in Philosophy(Ph.D), from Dec 2022 till present.
- 📖 **Chairman** of Departmental BoS (Board of Study) Committee, from Dec 2022 till present.
- 📖 **Convener** of multiple technical talks.
- 📖 **Convener** of multiple workshop.
- 📖 **Member** of academic council, from Dec 2022 till present.
- 📖 **Member** of university level National Assessment and Accreditation Council (NAAC) committee.
- 📖 **Member** of university level National Board of Accreditation (NBA) committee.
- 📖 **Member** of university level All India Council for Technical (AICTE) Education committee.
- 📖 **Under graduate project Coordinator**, 2010 - 2022.

## Administrative Responsibility (continued)

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- 📖 Under graduate Viva-Voce Coordinator, 2010 - 2022.
- 📖 Under graduate Internship-Coordinator, 2010 - 2022.
- 📖 Under graduate Course Coordinator, 2009 - 2022.
- 📖 Member of Internal Examination Committee.
- 📖 Under graduate Project Guide, 20012-2022.
- 📖 Post graduate Project Guide, 20016-2022.

## ★ Personal Highlights

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### Personal Interest

- 📖 **Travel:** have been to more than 19 countries, exploring nature and culture.
- 📖 **Music, Dancing and Painting :** Attended many workshops on different dance forms, landscape and face sketches.
- 📖 **Exercising and healthcare:** Healthy mind, body and soul
- 📖 **Volunteering at a charity center:** helping underprivileged children

### Achievements and Awards

- 📖 **Certificates** on painting.
- 📖 **Certificates** on dancing.
- 📖 **Jury member** of Dance Competitions
- 📖 **Jury member** of painting Competitions

### Activities

- 📖 Volunteer and participant, Blood Donation Camp, KIIT Deemed to be University, Bhubaneswar, India
- 📖 Social activities for conservation of environment, nature and natural resources

### Language

- 📖 English
- 📖 Hindi
- 📖 Bengali
- 📖 Oriya

## References

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**Dr. Prasanna Kumar Sahu**

- 📖 Professor, National Institute of Technology, Rourkela, , INDIA,  
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**Dr. Amrit Mukherjee**

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