



Md. Sipon Miah, Ph.D. (Ireland), Postdoc (Spain), SMIEEE

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&

Professor

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www.iu.ac.bd

<https://scholar.google.com/citations?user=XhP8D5oAAAAJhl=en>

<https://orcid.org/0000-0002-6986-1517>

<https://www.researchgate.net/profile/Md-Sipon-Miah-2>

WOS ID: AAK-5397-2020

Born 04 January, 1982

RESEARCH SUMMARY

Currently, I am working on machine learning-based cooperative spectrum detection and sum rate analysis in cognitive radio-Internet of things (CR-IoT) networks to separate malicious users from normal users. During my previous postdoctoral fellowship, I worked on an energy-efficient-based spectrum sensing and throughput analysis in CR-IoT networks. My research is focused on spectrum sensing and sum rate analysis based on machine learning / deep learning in CR-IoT networks using different optimization techniques. As a research output, I have published 55 peer-reviewed reputed international articles (SCI/SCIE), 43 top-tier conference articles, 2 book chapters, and 3 posters as a first author/coauthor with a total number of citations of more than 1947 (H-index: 20, i10-index: 33) reported by Google Scholar, Scopus, ORCID, and ResearchGate. I serve as a member of the Editorial Board of Scientific Reports. I also act as a referee in several highly reputed journals and international conferences. Most of the research has been done in collaboration with international research groups. I am self-motivated and have a dynamic approach to work and getting things done.

EDUCATION

Doctor of Philosophy (Ph.D.)

Ph.D. in Computer Science

College of Science and Engineering, School of Computer Science, University of Galway (formally National University of Ireland Galway), Galway, Ireland.

Dissertation Title: "An Energy Efficient Spectrum Sensing Scheme for the Cognitive Radio Based Internet of Things"

Advisor: Prof. Dr. Michael Schukat

Co-Advisor: Prof. Dr. Enda Barrett

Examiners: Prof. Dr. Des Chambers & Prof. Dr. Ramona Trestian

ECTS: 360

Thesis-Defence: 24-09-2020

Awarded: Ph.D. Degree (09-12-2020)

Conferring: 15-06-2021

<http://hdl.handle.net/10379/16347>

Master of Science [M.Sc.(Thesis)]

M.Sc. in Information and Communication Engineering

Department of Information & Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.

Dissertation Title: "Performance Analysis of Fiber Optical Dispersion on OFDMA-QAM System"

Advisor: Prof. Dr. Md. Mahbubur Rahman

Result: A- (A minus) First position in order of merit (Class Size: 30)

Thesis Score: 3.65 out of 4.0

Awarded: M.Sc. Degree (08-11-2009)

Bachelor of Science [B.Sc.(Honours)] B.Sc. (Honours) in Information and Communication Engineering
Department of Information & Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.
Project Title: "Simulation and Performance Analysis of WCDMA Systems"
Advisor: Prof. Dr. Md. Mahbubur Rahman
Result: First Class 2nd position in order of merit (Class Size: 40)
Project Score: 67 out of 100 (67%)
Awarded: B.Sc. Degree (13-11-2008)

Higher Secondary Certificate (HSC) Gaibandha Adarsha College, Gaibandha (Rajshahi Board, Rajshahi), 5700, Bangladesh, 2001.

Secondary School Certificate (SSC) Kuptala A. Q. High School, Gaibandha (Rajshahi Board, Rajshahi), 5700, Bangladesh, 1999.

RESEARCH INTEREST

Cognitive Radio Network, Wireless Communications, Wireless Sensor Networks, Internet of Things (IoT), Industrial Internet of Things (IIoT), Internet of Medical Things (IoMT), Cognitive Radio Network based IoT, Massive Antennas based CR-IoT Networks, Machine-to-Machine (M2M) Communications, Cloud Computing and Security, Vehicle to Vehicle Communications, Wireless Communications in 5G & 6G, THz Communications, Machine Learning or Artificial Intelligence based Wireless Communications, Cybersecurity, Biomedical Engineering and Deep Learning based Image Processing.

PROFESSIONAL EXPERIENCES

Chairman/Head Department of Information and Communication Technology, Islamic University, Kushtia, 29.10.2025 – Present 7003, Bangladesh.

Professor (Grade-III) Department of Information and Communication Technology, Islamic University, Kushtia, 06.03.2022 – Present 7003, Bangladesh.

Postdoctoral Research Fellow Department of Signal Theory and Communications, University Carlos III of Madrid (UC3M), Leganes, 28911, Madrid, Spain. 01.11.2021 – 31.10.2024

Associate Professor Department of Information and Communication Technology, Islamic University, Kushtia, 06.03.2017 – 05.03.2022 7003, Bangladesh.

Head, Department of ICT Department of Information and Communication Technology, Rangpur Engineering College, Rangpur, Bangladesh. 18.04.2014 – 17.04.2015

Assistant Professor Department of Information and Communication Technology, Islamic University, Kushtia, 18.04.2013 – 05.03.2017 7003, Bangladesh.

Lecturer Department of Information and Communication Technology, Islamic University, Kushtia, 18.04.2010 – 17.04.2013 7003, Bangladesh.

Foreign Expert Lecturer Internet of Vehicle to Road (IVR) Research Laboratory, Department of Automation, School of Electronics and Control Engineering, Chang'an University, ShaanXi Province, 710064, China. 01.08.2023 – 31.08.2023

Foreign Expert Lecturer Internet of Vehicle to Road (IVR) Research Laboratory, Department of Automation, School of Electronics and Control Engineering, Chang'an University, ShaanXi Province, 710064, China. 01.09.2022 – 31.12.2022

Assistant Programmer Bangladesh Computer Council (BCC), Agargaon, Dhaka, 1207, Bangladesh. 01.07.2009 – 17.04.2010

RESEARCH EXPERIENCES

Research Associate **Professor Dr. Mingbo Niu**, Internet of Vehicle to Road (IVR) Low-Carbon Research Institute, Chang'an University, ShaanXi Province, 710064, China (<http://en.chd.edu.cn/>). 01.04.2023 – Present

Research Associate 01.01.2021 – Present	Professor Dr. Mingbo Niu , Internet of Vehicle to Road (IVR) Research Laboratory, Department of Automation, School of Electronics and Control Engineering, Chang'an University, ShaanXi Province, 710064, China (https://en.chd.edu.cn/).
Research Associate 01.11.2021 – 31.10.2024	Professor Dr. Ana Garcia Armada , Communications Research Group (GCOM), Department of Signal Theory and Communications, University Carlos III of Madrid (UC3M), Leganes, Madrid, Spain (http://gcom.tsc.uc3m.es/en/home/).
Research Assistant 01.09.2016 – 31.09.2024	Professor Dr. Michael Schukat , Open Sensor Network Authentication (OSNA), University of Galway (UG), Galway, Ireland (http://www.it.nuigalway.ie/mschukat/).
Research Assistant 01.09.2019 – 08.09.2023	Professor Dr. Heejung Yu , Wireless Information Processing Laboratory (WIPL), Korea University, Sejon Campus, South Korea (https://sites.google.com/site/heejung6149/).
Research Assistant 01.01.2013 – 30.12.2019	Professor Dr. Heejung Yu , Wireless Communications and Networks (WCN), Yeungnam University, South Korea (https://sites.google.com/site/heejung6149/).
Research Assistant 01.03.2012 – 30.05.2013	Professor Dr. Insoo Koo , Multimedia Communication Systems Lab. (MCSL), Ulsan University, South Korea (https://www.mcsul.ulsan.ac.kr/).
Research Associate 01.03.2003 – Present	Professor Dr. Md. Mahbubur Rahman , Wireless Communication Lab.(WCL), Dept. of Information and Communication Technology (ICT), Islamic University, Kushtia-7003, Bangladesh (https://www.iu.ac.bd/)

TEACHING EXPERIENCES

Lecturer in M.Sc., Dept. of Automation, Chang'an University, ShaanXi, China	Summer Lecturer:- Probability Theory and Stochastic Process for Engineering I ²⁰²² , Probability theory and stochastic process for engineering II ²⁰²² , Optimization techniques in wireless communications research ²⁰²² , Technologies and Architectures for new terrestrial communication system ²⁰²²
Lecturer in M.Sc., Dept. of TSC, University Carlos III of Madrid (UC3M), Leganes, Spain	18229:- Simulation and Optimization of Communication Systems ^{21/22,22/23,23/24} , 18227:- Technologies and Architectures for the New Terrestrial and Space Communications ^{22/23,23/24} .
Lecturer in B.Sc., Dept. of TSC, University Carlos III of Madrid (UC3M), Leganes, Spain	13497:- Communication Theory Laboratory ^{2021/22,22/23,23/24} , 13842:- Digital Communications Laboratory ^{22/23,23/24} , 15369:- Systems and Circuits ^{23/24} .
Tutor in B.Sc. (Engg.), Dept. of Computer Science, University of Galway, Ireland	CT255:- Next Generation Technologies I, II & III ²⁰¹⁶ , CT331:- Programming Paradigm ²⁰¹⁶ , CT331:- Programming Paradigm ²⁰¹⁶ , CT248-345:- Introduction to Modelling ²⁰¹⁷ , CT209:- OOP-Data Structure & Algorithms ²⁰¹⁷ , CT807:- Internet Programming ²⁰¹⁷ , CT3535:- Object Oriented Programming III ²⁰¹⁷ , CT248:- Introduction to Modelling ²⁰¹⁸ , CT216:- Software Engineering ²⁰¹⁸ .
Lecturer in M.Sc., Dept. of ICT, Islamic University, Bangladesh	ICT-5101: Wireless Sensor Networks ^{2022/23} , ICT-5103: Advanced Digital Communications ²⁰²¹ , ICT-5221: Convex Optimization ^{2024/25} , ICT-5104: Artificial Neural Networks and Deep Learning Laboratory ^{2024/25} , ICT-5107: Cybersecurity ^{2024/25} , and ICT-5203: Stochastic Process ^{2023/24} .
Lecturer in M.Sc. (Evening), Dept. of ICT, Islamic University, Bangladesh	ICT-5103: Internet Application & Security ²⁰²³ , ICT-5203: Database Management ²⁰²² , ICT-5205: Cellular Mobile Communications ²⁰²³ , ICT-5301: Data Communications ²⁰²⁰ , ICT-5105: Computer Networking ^{2024/25} .
Lecturer in B.Sc. (Engg.), Dept. of ICT, Islamic University, Bangladesh	Digital Electronics ^{2011,12} , Discrete Mathematics ²⁰¹⁶ , ICT-2203:- Numerical Method Analysis ²⁰²⁴ , ICT-2107:- Signal and Systems ^{2020,24} , Data Communications and Networking, Computer Networking, Optical Communications ²⁰¹⁶ , ICT-3103:- Electronic Communications and Microwave Engineering ²⁰²⁴ , ICT-3103:- Electronic Communications and Microwave Engineering Laboratory ²⁰²⁴ , Statistics for Communication Engineering ²⁰¹⁵ , AI and Interfacing and Telecommunication System Engineering, Programming Languages C ²⁰¹⁹ , Digital Signal Processing ^{2018,19,20,24} , & Operating Systems ²⁰¹⁹ .

LICENSES & CERTIFICATIONS

Cybersecurity

Cybersecurity Foundations; The Cybersecurity Threat Landscape; & Ethical Hacking: Introduction to Ethical Hacking.

Network Security

IT Security Foundations: Network Security; & Windows Server 2025: Installation and Configuration.

AI/ML/DL

Introduction to Artificial Intelligence; Customer Journey Mapping with Generative AI; Generative AI for Sales and Services Professionals; & Using AI for Customer Service Managers.

IT & Desktop

Learning Power BI Desktop; Putting ITIL Into Practice: Applying ITIL 4 Foundation Concepts; IT Service Desk Careers and Certifications; What Is Microsoft Copilot? An Overview of Microsoft's AI Tools; Learning Microsoft 365 Copilot for Work (2024); .

ADMINISTRATIVE AND OTHER EXPERIENCES

Provost

20.04.2024 – 25.08.2024

Bangamata Sheikh Fazilatunnesa Mujib Hall (BSFMH), Islamic University, Kushtia, 7003, Bangladesh.

Member

2023 – 2024

Technical Sub-Committee, GST Combined Admission Examination, Islamic University, Kushtia, 7003, Bangladesh.

SCHOLARSHIP AND AWARDS

Visiting Professor

21.12.2023 – 03.01.2024

Visiting Professor (Short-Term), Department of Energy and Electrical Engineering (EEE), Changan University, Xian, China (<https://enndxy.chd.edu.cn/>).

30 Postdoctoral Fellowship

01.11.2021 – 31.10.2024

Postdoctoral Research Fellow, Department of Signal Theory and Communications (TSC), University Carlos III of Madrid (UC3M), Leganes, Madrid, Spain (<https://www.uc3m.es/empleo/en/estancias-postdoctorales>).

Teaching Excellent Acknowledgment

2021 – 2022

Certificate for the course of Simulation and Optimization Techniques from the Vice-Rector of studies of University Carlos III of Madrid (UC3M), Leganes, Madrid, Spain.

Hardiman Scholarship

01.09.2016 – 30-08-2020

For Structured Ph.D. Degree, Department of Information Technology (IT), University of Galway, Galway, Ireland (<https://www.universityofgalway.ie/hardiman-scholarships/>).

ICT Scholarship

01.01.2013 – 30-07-2016

For Ph.D. Degree, the Ministry of Information and Communication Technology Division (ICTD), Dhaka, Bangladesh (<http://www.ictd.gov.bd/>).

Talent Pool Scholarship

01-03-2006 – 30-02-2007

For obtaining M.Sc. Degree with Grade: A- (1st Position in order of merit), Islamic University, Kushtia, 7003, Bangladesh (<https://www.iu.ac.bd>).

Talent Pool Scholarship

01-03-2002 – 30-02-2006

For obtaining B.Sc. Degree with First Class (2nd Position in order of merit), Islamic University, Kushtia, 7003, Bangladesh (<https://www.iu.ac.bd>).

EDITOR/EDITORIAL BOARD MEMBER/REVIEWER/TPC

Guest Editor

Special Issue on the "Leveraging Image Processing for Automated Quality Control in Manufacturing-A Deep Learning Approach" in .

Special Issue on the "Machine Learning Models for Real-time Analysis in High-density IoT Networks." in *Communications in Statistics—Case Studies and Data Analysis [IF: 1.6, Q3, Taylor & Francis]*.

Special Issue on the "Signal Processing Innovations for Enhancing Sustainable Energy Solutions in Marine Hydrological Systems" in *Ocean Systems Engineering*.

International Conference on Artificial Intelligence and Manufacturing (AIAM2020), October, 15-17, Manchester, United Kingdom.

Associate Editor

Physical and Engineering Sciences in Medicine, Springer Nature.

Invited Speaker Talk title "Machine Learning Aided Cognitive Radio based Internet of Things," - International Conference on Machneical Electronics and Engineering, (ICMEE), 17-19, 2023, Xian, China.

Editorial Board Member Scientific Reports (Springer Nature) [SCIE, Q1, IF:4.3] "10-06-2024 – Present"
AEU-International Journal of Electronics and Communications [SCIE, Q1, IF:2.6] "25-12-2025 – Present"
Future Generation Computer Systems [SCI, Q1, IF:5.9] "20-01-2025 – Present"

Reviewer Journals

IEEE Transactions on Cognitive Communications and Networking
IEEE Transactions on Green Communications and Networking
IEEE Sensors Journal
ACM Transactions on Multimedia Computing, Communications, and Applications
IEEE Networking Letters
IEEE Access
Human-centric Computing and Information Systems (HCIS)[Elsevier]
EURASIP Journal on Wireless Communications and Networking (JWCN)
Computer Systems (CS) [Elsevier]
China Communications [Elsevier]
KSII Transactions on Internet and Information Systems [SCIE]
Sensors, Electronics, Symmetry, Remote Sensing, Big Data and Cognitive Computing, Internet of Things (IoT), Applied Sciences, Network, Biology [MDPI, SCIE]
Journal of Automatika [Johan Wiley & Sons]
International Journal of Imaging Systems and Technology [Johan Wiley & Sons, SCIE]
International Journal of Communication Systems [Johan Wiley & Sons, SCIE]
Wireless Communications and Mobile Computing [SCIE]
International Journal Engineering Review [SCOPUS]
Wireless Personal Communications [SCIE]

Conferences

25th International Conference on Digital Image Computing: Techniques and Applications (DICTA 2024), Nov 27-29, 2024, Perth, Australia
26th International Conference on Computer and Information Technology (ICCIT), December 13-15, 2023, Long Beach Hotel, Cox's Bazar, Chittagong, Bangladesh
IEEE International Conference on Informatics, Electronics & Vision (ICIEV)
IEEE International Conference on Communications (ICC)

Publication Chair The 6th International Conference on Electronic Communication and Artificial Intelligence (ICECAI 2025), Hefei, China, 23-25 May, 2025.

Session Chair The 2nd International Conference on Networks, Computers and Communications (MIET'24), November 08-09, 2024, Noakhali Science and Technology University (NSTU), Noakhali, Bangladesh.
The 11th 11th International Symposium on Networks, Computers and Communications (ISNCC'24), October 22-25, 2024, University of the District of Columbia (UDC), Washington DC, USA.
The 26th International Conference on Computer and Information Technology (ICCIT), December 13-15, 2023, Long Beach Hotel, Cox's Bazar, Chittagong, Bangladesh.
The 11th International Conference on Informatics, Electronics & Vision (ICIEV), October 26-29, 2023, University of East London, London, UK.
IEEE Computer Society Bangladesh Chapter Summer Symposium, June 9-10, 2023, Islamic University, Kushtia, Bangladesh.
The 1st International Conference on Next-generation Computing, IoT and Machine Learning (NCIM), June 16-17, 2023, DUET, Gazipur, Bangladesh.

National Advisory Committee 2025 IEEE International Conference on Quantum Photonics, Artificial Intelligence, and Networking, Rangpur, Bangladesh, 01-02 August, 2025.

TPC Members	International Conference on Informatics, Electronics & Vision (ICIEV), 2012,13,14,15,16,17,18,19,20,21,22,23 International Conference on Sustainable Technologies for Industry 4.0 (STI), 2020,21,22,23,24 European Symposium on Software Engineering (ESSE), 2021 IEEE Symposium on Computers and Communications (ISCC), 2022 Symposium on Pattern Recognition and Applications (SPRA), 2021 International Conference on Machine Intelligence and Emerging Technologies (MIET), 2022, 2024 3rd International Conference on Intelligent Traffic Systems and Smart City (ITSSC), 2023 International Conference on Internet of Things and Intelligent Information Processing (IoTIIIP), 2024 The 9 th International Conference on Computer and Communication Systems (ICCCS), 2024 2025 International Conference on Image, Signal Processing and Machine Learning (ISPML 2025)
Volunteers	IEEE Global Communications (GLOBECOM) Conference, 7–11, December, Madrid, Spain, 2021 IEEE International Mediterranean Conference on Communications and Networking (MediCom), 8-11, July, Madrid, Spain, 2024.

COMPUTER SKILLS

Programming Languages	C, C++, Java, C#.NET, Python
Simulation Tools	MATLAB, OPNET, NS2
Web Applications	HTML, ASP.NET, ASP
Database Software	Oracle, SQL Server, Petri Nets, LaTeX

ACADEMIC ACTIVITIES

Academic Committee Member 01-11-2021 – 31-10-2024	Department of Signal Theory and Communications, University Carlos III of Madrid (UC3M), Leganes, Madrid, 28911, Spain.
Academic Council Member 06-03-2022 – Present	Islamic University, Kushtia, 7003, Bangladesh.
Board of Advanced Studies Member 06-03-2022 – Present	Islamic University, Kushtia, 7003, Bangladesh.
Course Coordinator in B.Sc. & M.Sc. 01-07-2021 – Present	Department of Information and Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.
Course Coordinator in MICT (Evening) 01-07-2024 – Present	Department of Information and Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.
Faculty Member 06-03-2022 – Present	Faculty of Engineering and Technology, Islamic University, Kushtia, 7003, Bangladesh.
Faculty Member 18-04-2010 – 17-04-2012	Faculty of Engineering and Technology, Islamic University, Kushtia, 7003, Bangladesh.
Planning Member 18-04-2010 – 17-04-2012	Department of Information and Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.
Academic Committee Member 18-04-2010 – Present	Department of Information and Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.

Assistant Director
02-03-2014 – 06-04-2015

ICT CELL (formerly Computer Centre), Islamic University, Kushtia, 7003, Bangladesh.

M.Sc. THESIS DEFENSE COMMITTEE

Member, Dept. of TSC, UC3M, Leganes, Spain

06. Mahbloos Khan, M.Sc. (Thesis)

Title: Analysis of PAPR Reduction by Implementing Precoding Techniques in OFDM^{2023/24}.

05. Oscar Becerril Roman, M.Sc. (Thesis)

Title: Software-Defined Radio Experiments with USRP B210 Applied to Communication Subjects^{2022/23}.

04. Steven Jesús Paz Barrera, M.Sc. (Thesis)

Title: Visible Light Backscatter communication system for very-low power and tiny IoT devices^{2022/23}.

03. Shaya Ganji, M.Sc. (Thesis)

Title: Identification of Digital Modulation Using Discrete Wavelet Transform^{2022/23}.

02. Salhim Bohali Ali Mohamed, M.Sc. (Thesis)

Title: Performance Evaluation for PAPR Reduction Techniques in OFDM Systems: A Comparative Study of SLM and PTS^{2022/23}.

01. Ezeddine Amar, M.Sc. (Thesis)

Title: LTE Network for SCADA with the Polling Algorithm^{2022/23}.

WORKSHOP

Resource Person
08-11-2023

Title: Practicing Integrity to Improve the Quality of Education, Room No: 203, ICT Cell, Faculty of Applied Science and Technology (1st Science Building), Islamic University, Kushtia, 7003, Bangladesh.

PROJECT EVALUATION COMMITTEE

Member
Fiscal Year: 2024 – 2025

The project evaluation committee for research grants funded by the University Grant Commission (UGC) of Bangladesh, Islamic University, Kushtia, 7003, Bangladesh.

Examiner
Fiscal Year: 2021 – 2022

The project evaluation committee for research grants funded by the University Grant Commission (UGC) of Bangladesh, Islamic University, Kushtia, 7003, Bangladesh.

SUPERVISION

Doctor of Philosophy (Ph.D.)

01. Md. Kazi Mowdud Ahmed, Assistant Professor, Dept. of Information and Communication Technology, Islamic University, Kushtia, 7003, Bangladesh.

Title: A Novel Approach for Detection and Classification of Cancer using Graph Neural Networks (Ongoing).

02. Md. Khairul Islam, Assistant Professor, Dept. of Biomedical Engineering, Islamic University, Kushtia, 7003, Bangladesh.

Title: Improvement of Detection and Classification Abnormalities in Medical Images using Deep Convolutional Neural Network (Awarded).

Master of Science (M.Sc.)

More than fifty graduate research students completed their thesis for their partial fulfillment of the M.Sc. Degree in Information and Communication Technology under my supervision as

01. Md. Shamim Hossain, Lecturer, Dept. of Electrical and Electronics Engineering, Sonargaon University (SU), Dhaka, 1215, Bangladesh.

Title: Machine Learning-Based Malicious User Detection for Reliable Cooperative Radio Spectrum Sensing in Cognitive Radio-Internet of Things.

02. Md. Ruhul Amin, Lecturer, Dept. of Information and Communication Technology, Rabindra Maitree University, Kushtia, 7000, Bangladesh.

Title: Analysis of Energy-Efficient Resource Allocation Architecture in Heterogeneity Mobile Ad-hoc Cloud Computing.

Bachelor of Science (B.Sc.)

More than sixty undergraduate students completed their project for their partial fulfillment of the B.Sc. Degree in Information and Communication Technology under my supervision.

OTHER ACTIVITIES

- IEEE Senior Member (SMIEEE)** IEEE Professional Communication Society (PCS) (Member Number - 97540811).
25-02-2023 – Present
- IEEE Member** IEEE Professional Communication Society (PCS) (Member Number - 97540811).
09-08-2012 – 24-02-2023
- BCS Member** Bangladesh Computer Society (BCS) (Member Number - AM05540).
31-12-2009 – Present
- Advisor** Student Association of ICT, Islamic University, 7003, Bangladesh.
18-04-2010 – Present
- Advisor** Gaibandha District Student Associations Islamic University, Kushtia, 7003, Bangladesh.
18-04-2010 – Present
- Member** Gaibandha District Student Associations Islamic University, Kushtia, 7003, Bangladesh.
21-03-2003 – 12-09-2009

Published Edited Books

- [1] R. V. Suganya, A. V. Senthil Kumar, **Md Sipon Miah** and Fahima Hajje, "AI-Driven Medical Imaging and Diagnosis," published by **CRC Press**, 2025 (ISBN: 9781779645975).

Published Book Chapters

- [3] Md Rakibul Islam, Md Khairul Islam, Md Mahbubur Rahman, **Md Sipon Miah**, "A Novel Approach for Detection and Classification of Breast Cancer using Graph Neural Network," **CRC Press**, 2024 (Under review).
[2] Md Shamim Hossain, Kazi Mowdud Ahmed, Md Khairul Islam, Md Mahbubur Rahman, **Md Sipon Miah**, Mingbo Niu, "Machine Learning and Blockchain-based Privacy-aware: Cognitive Radio Internet of Things," **Applied Intelligence for Industry 4.0 (Taylor & Francis Group)**, 2023, <https://doi.org/10.1201/9781003256083>.
[1] **Md. Sipon Miah**, Md. Mahbubur Rahman and Heejung Yu, "Towards 5G Wireless Networks - A Physical Layer Perspective," **InTech Publisher**, 2016, 10.5772/66047.

Published Journal Papers

- [55] Md Emamul Hossen, S M Mahim, Md Khairul Islam1, **Md Sipon Miah**, and Syed Mohammed Shamsul Islam, "Fusion of Vision Transformers and Fourier Transform Networks to Capture Spatial-Frequency Patterns in Chest Computed Tomography Scans for Lung Disease Diagnosis." **Scientific Reports [WoS, Q1, IF:4.3]**, 2025 (Accepted).
- [54] Musa N. Hamza, Mohammad Tariqul Islam, Mohammad Alibakhshikenari, Sunil Lavadiya, Iftikhar ud Din, Bruno Cavalcante de Souza Sanches, Slawomir Koziel, Syeda Iffat Naqvi, Abinash Panda, Bal S. Virdee, Ali Farmani, Peiman Parand, **Md. Sipon Miah**, and Md. Shabiul Islam, "High-Performance THz Nanometamaterial Absorber With Negative Permittivity (0.1–10THz) for Early Cancer Detection via Circulating Exosomes." **IEEE Sensors Journal [WoS, SCIE, Q1, IF:4.7]**, 2025.
- [53] Shakib Al Hasan, S M Mahim, Md Emamul Hossen, Md Olid Hasan, Md Khairul Islam1, Patrizia Livreri, Salahuddin Khan, Mohammad Alibakhshikenari, and **Md Sipon Miah**, "DSIT UNet A Dual Stream Iterative Transformer Based UNet Architecture for Segmenting Brain Tumors from FLAIR MRI Images." **Scientific Reports [WoS, Q1, IF:4.3]**, 2025.
- [52] Md Maruf Hossain, Md Mahfuz Ahmed, Abdullah Al Nomaan Nafi, Md Rakibul Islam, Md Shahin Ali, Jahurul Haque, **Md Sipon Miah**, Md Mahbubur Rahman, Md Khairul Islam, "A novel hybrid ViT-LSTM model with explainable AI for brain stroke detection and classification in CT images: A case study of Rajshahi region." **Computers in Biology and Medicine [WOS, SCI, Q1, IF:7.1]**, 2025.
- [52] **Md. Sipon Miah** Michael Schukat, Enda Barrett, Maximo Morales Cespedes and Ana Garcia Armada, "Enhanced Spectrum Sensing for AI-Enabled Cognitive Radio IoT with Noise Uncertainty." **ITU Journal on Future and Evolving Technologies [WOS, ESCI]**, 2025.
- [51] Md. Maruf Hossain, Md. Mahfuz Ahmed, Abdullah Al Nomaan Nafi, Md. Rakibul Islam, Md. Shahin Ali, Jahurul Haque, **Md. Sipon Miah**, Md Mahbubur Rahman and Md Khairul Islam, "A Novel Hybrid ViT-LSTM Model with Explainable AI for Brain Stroke Detection and Classification in CT Images: A Case Study of Rajshahi Region." **Computers in Biology and Medicine [WOS, SCIE, Q1, IF:6.7]**, 2025.
- [50] Md. Emamul Hossen, S M Mahim, Shakib Al Hasan, Md Khirul Islam, Md Shohidul Islam, Salahuddin

- Khan, Mohammad Alibakhshikenari, Peiman Parand, and **Md. Sipon Miah**, "Boosting Cervical Cancer Prediction Leveraging a Hybrid FT-Transformer Model." **IEEE Access [WOS, SCIE, Q1, IF:3.7]**, 2024.
- [49] Qian Xu, Jia Yi, Xianyu Wang, Ming-bo Niu, **Md. Sipon Miah**, and Ling Wang, "Secure UAV Communication in Dual-Function Radar-Communication System by Exploiting Constructive Interference." **Drones [WOS, SCIE, Q1, IF:4.8]**, 2024.
- [48] Mohammad Amzad Hossain, **Md. Sipon Miah** and Ana Garcia Armada, "Digital Signature-based Authentication Framework in Cognitive Radio-Internet of Vehicles." **ITU Journal on Future and Evolving Technologies [WOS, ESCI]**, 2024.
- [47] Mohammad Amzad Hossain, **Md. Sipon Miah** and Ana Garcia Armada, "TransMixer-AF: Advanced Real-Time Detection of Atrial Fibrillation Utilizing Single-Lead Electrocardiogram Signals." **IEEE Access [WOS, SCIE, Q1, IF: 3.7]**, 2024.
- [46] Md. Mahfuz Ahmed, Md. Maruf Hossain, Md. Rakibul Islam, Md Shahin Ali, Abdullah Al Noman Nafi, Md Faisal Ahmed, Kazi Mowdud Ahmed, **Md. Sipon Miah**, Md Mahbubur Rahman, Mingbo Niu, and Md. Khairul Islam, "Brain Tumor Detection and Classification in MRI Using Hybrid ViT and GRU Model with Explainable AI in Southern Bangladesh." **Scientific Reports [WoS, Q1, IF:4.3]** 2024.
- [45] He Huang, Dong-qiang Li, Ming-bo Niu, Fei-yu Xie, **Md. Sipon Miah**, Tao Gao and Hui-feng Wang, "Multiple UAVs Networking Oriented Consistent Cooperation Method Based on Adaptive Arithmetic Sine-Cosine Optimization." **Drones [WOS, SCIE, Q1, IF:4.8]** 2024.
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[5] **Md. Sipon Miah**, Md. Mahbubur Rahman and Heejung Yu, "MISO Based Cooperative Cognitive Radio Vehicular Networks: Sensing and Sum Rate Analysis," **The 3rd International Conference Applications and Innovations in Mobile Computing (AIMoC)**, Kolkata, India, 2016.

[4] Md. Khairul Islam, Md. Mahbubur Rahman, Tapan Kumar Godder and **Md. Sipon Miah**, "Investigation and Performance Analysis of Call Admission Control in WCDMA system to find optimum Parameters," **International Conference on Materials, Electronics & Information Engineering (ICMEIE-2015)**, University of Rajshahi, Rajshahi, Bangladesh, June 05-06, 2015.

[3] Md. Amzad Hossain, Md. Mahbubur Rahman, Tapan Kumar Godder and **Md. Sipon Miah**, "Performance Analysis of Cognitive Radio Based Channel Allocation Scheme in WiMAX," **The 2nd International Conference on Electrical Engineering and Information and Communication Technology (iCEEICT-2015)**, Jahangirnagar University, Dhaka, Bangladesh, May 21-23, 2015.

[2] **Md. Sipon Miah** and Md. Mahbubur Rahman, "An Eigenvalue and Superposition-Based Cooperative Spectrum Sensing for Cognitive Radio Networks," **1st International Conference on Electrical Engineering and Information and Communication Technology (iCEEICT-2014)**, Military Institute of Science and Technology, Dhaka, Bangladesh, Vol. 01, No. 01, 2014.

[1] **Md. Sipon Miah**, and Insoo Koo, "A Cluster-based Spectrum Sensing using Double Threshold Energy Detection and Kullback-Leibler Information (KLI)," **The FTIRA International Conference on Advanced IT, Engineering and Management (FTIRA AIM-2013)**, Kyung Hee University, Seoul, Korea, 2013.

Published Posters

[2] **Md. Sipon Miah**, Michael Schukat and Enda Barrett, "D-S Theory Based Cooperative Spectrum Sensing in Cognitive Radio Networks with Energy Harvesting," **The 7th Annual Research Day, National University of Ireland Galway (NUIG)**, Ireland, 19 April, 2017.

[1] Lutfar Rahman, Md. Shafiu Alam Khan, Ahmedul Kabir and **Md. Sipon Miah**, "A Model of Algorithm with Asymptotic Perspectives," **The 2nd International Conference on Informatics, Electronics and Vision, Dhaka, Bangladesh**, 17-18 May, 2013.

Presented Seminars

[16] **Md. Sipon Miah**, "Convex Optimization Techniques in Wireless Transmission Systems," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 23rd April, 2024.

[15] **Md. Sipon Miah**, "Comparative Performance Analysis of Peak to Average Power Ratio in OFDM, SLM and PTS Systems," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 18th April, 2024.

[14] **Md. Sipon Miah**, "MU-MIMO-based Spectrum Sensing and Sum Rate in Cognitive Radio for Internet of Vehicular Things (IoVT)," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 29th December, 2023.

[13] **Md. Sipon Miah**, "Energy Harvesting-enabled Cognitive Radio-Internet of Things Using Machine Learn-

ing," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 27th December, 2023.

[12] **Md. Sipon Miah**, "Sensing and Throughput Analysis of a MU-MIMO based Cognitive Radio-based Internet of Things (CR-IoT)," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 25th December, 2023.

[11] **Md. Sipon Miah**, "Cluster-based Cooperative Spectrum Sensing in Cognitive Radio Networks (CRNs)," **Room 612, IVR Low-Carbon Research Institute, Chang'an University**, Xian, China, 22nd December, 2023.

[10] **Md. Sipon Miah**, "Technologies and Architectures for New Terrestrial Communication System," **Internet of Vehicle to Road Research (IVR) Laboratory, Chang'an University**, China, 31st August, 2022.

[9] **Md. Sipon Miah**, "Machine Learning based Cognitive Radio-Internet of Things (CR-IoT)," **Internet of Vehicle to Road Research (IVR) Laboratory, Chang'an University**, China, 17th August, 2022.

[8] **Md. Sipon Miah**, "Spectrum Sensing based Cognitive Radio-Internet of Things (CR-IoT)," **Internet of Vehicle to Road Research (IVR) Laboratory, Chang'an University**, China, 6th August, 2022.

[7] **Md. Sipon Miah**, "Analysis of Sensing and Network Lifetime in Full-Duplex Relay Based Energy Harvesting Cognitive Radio-Internet of Things (CR-IoT) with Security Framework for 5G," **Room 3.S1.08, Leganes Library, University Carlos III of Madrid (UC3M)**, Leganes, Madrid, Spain, 26th January, 2022.

[6] **Md. Sipon Miah**, "Sensing and Throughput Analysis of a MU-MIMO based Cognitive Radio Scheme for the Internet of Things," **Room No-125G, Department of Information Technology (IT), School of Engineering, National University of Ireland Galway (NUIG)**, Galway, Ireland, 7th May, 2020.

[5] **Md. Sipon Miah**, "Maximization of Sum Rate in AF-Cognitive Radio Networks Using Superposition Approach and n-out-of-k Rule," **Room No-125G, Department of Information Technology (IT), School of Engineering, National University of Ireland Galway (NUIG)**, Galway, Ireland, 22 May, 2018.

[4] **Md. Sipon Miah**, "Analysis of Sensing and Throughput for MU-MIMO Based Energy Harvesting Cognitive Radio Networks," **Room No-125G, Department of Information Technology (IT), School of Engineering, National University of Ireland Galway (NUIG)**, Galway, Ireland, 12 May, 2017.

[3] **Md. Sipon Miah**, "A Cluster Based Cooperative Spectrum Sensing for Cognitive Radio Network using Eigenvalue Detection Technique," **Department of Information and Communication Technology, Islamic University, Kushtia-7003**, Bangladesh, 2016.

[2] **Md. Sipon Miah**, "A Cluster-Based Cooperative Spectrum Sensing in Cognitive Radio Network Using Eigenvalue Detection Technique with Superposition Approach," **Department of Information and Communication Technology (ICT), Islamic University (IU), Kushtia-7003**, Bangladesh, 2015.

[1] **Md. Sipon Miah**, "Super-allocation and Cluster-based Cooperative Spectrum Sensing in Cognitive Radio Network," **Department of Information and Communication Technology (ICT), Islamic University (IU), Kushtia-7003**, Bangladesh, 2015.

Projects (On-going and Completed)

[18] **Project Director (PD)**, Title: ESSFSC-5GBN: Energy-efficient Spectrum Sensing for FD-based Secure CR-IoT in 5G-and-Beyond Networks, Grants: NA, Grant No: NA, Period: NA, Status: Submitted, Output: NA, Funding: The Ministry of Science and Technology (MoST), Bangladesh.

[17] **Project Director (PD)**, Title: 6G Spectrum Management, Localization, Sensing, and Security: Integrating Terrestrial and Non-Terrestrial Networks (6G-SLSS), Grants: NA, Grant No: NA, Period: NA, Status: Submitted, Output: NA, Funding: HEAT, Ministry of Education, Bangladesh and World Bank.

[16] **Project Director (PD)**, Title: Deep Learning based Security Analysis in Hybrid VLC/RF Aided Cognitive Radio-Internet of Things, Grants: NA, Grant No: NA, Period: NA, Status: Submitted, Output: NA, Funding: Ministry of Education (BANBEIS), Palashi-Nilkhet, Dhaka, 1205, Bangladesh.

[15] **Project Director (PD)**, Title: A Novel Security Technique in Hybrid VLC/RF Aided Cognitive Radio-based Internet of Things in 6G, Grants: 3,50,000.00, Grant No: SRG-242277, Period: 2024-2025, Status: Completed, Output: NA, Funding: Ministry of Science and Technology (MOST), Bangladesh.

[14] **Project Director (PD)**, Title: Sensing and Security Analysis in Hybrid VLC/RF Aided Cognitive Radio-based Internet of Things (CR-IoT) Network, Grants: Two Lac and Ten Thousand (2,10,000.00) Taka, Grant No: Ref-no-141-EDU-IU-2014-31, Period: 01/07/2024-30/06/2025, Status: Completed, Output: NA, Funding: Islamic University, Kushtia, 7003, Bangladesh.

[13] **Project Director (PD)**, Title: Secure Spectrum Sensing in Cognitive Radio-Industrial Internet of Things (CR-IIoT) Networks for 6G, Grants: One Lac and Seventy Five Thousand (1,75,000.00) Taka, Grant No: Ref-no-141-EDU-IU-27, Period: 01/07/2023-30/06/2025, Status: Completed, Output: NA, Funding: Islamic University, Kushtia, 7003, Bangladesh.

[12] **Member**, Title: Energy and Cost Efficient Communications with Universal Coverage, Grants: 193,479.00 Euros, Grant No: PID2020-115323RB-C33, Period: 01/09/2021-31/08/2024, Status: Completed, Output:

NA, *Funding:* Agencia Estatal De Investigacion (AEI), Madrid, Spain (UC3M).

[11] **Member**, *Title:* Visible light communications for an efficient digital transition, *Grants:* 143,980.00 Euros , *Grant No:* TED2021-129869B-I00, *Period:* 01/12/2021-30/11/2024, *Status:* Completed, *Output:* Papers published, *Funding:* Agencia Estatal De Investigacion (AEI), Madrid, Spain (UC3M).

[10] **Consulting Expert**, *Title:* Hybrid Optics Technologies in Intelligent Transportation Systems, *Grants:* 600000.00 CNY, *Grant No:* 300203110029, *Period:* 2020-2024, *Status:* Completed, *Output:* Papers published, *Funding:* High-level expert funding project of Chang'an University, Xian, China.

[9] **Member**, *Title:* "Transportation-Energy-Information" Multigrid Fusion and Self-consistent, *Grants:* 400000.00 CNY, *Grant No:* 300201000173, *Period:* 2023-2025, *Status:* Completed, *Output:* Papers published, *Funding:* The innovation creative base project of Shaanxi Province, China (Changan University).

[8] **Consulting Expert**, *Title:* Infrastructure Planning and Design Technology for Transportation Self-consistent Energy System, *Grant No:* 2021YFB1600200, *Grants:* 510000.00 CNY, *Period:* 2021-2024, *Status:* Completed, *Output:* papers published, *Funding:* National Key Research and Development Project, Xian, China (Changan University).

[7] **Member**, *Title:* Human-Vehicle-Road-Light Smart Communication Fusion and Low-Carbon Based Intelligent V2R Informatics Research, *Grant No:* G2021171024L, *Grants:* 107000.00 CNY, *Period:* 2021-2022, *Status:* Completed, *Output:* Two journal papers, *Funding:* Ministry of Science and Technology, Xian, China (Changan University).

[6] **Member**, *Title:* Human-Vehicle-Road-Light Fusion in Low Carbon Intelligent Transportation Systems, *Grants:* Fifty Six Lac and Thirty Thousand (56,30,000.00) Taka, *Period:* January, 2021- December, 2022, *Status:* Completed, *Output:* More than two papers published, *Funding:* Ministry of Science and Technology, China (Changan University).

[5] **Project Director**, *Title:* Machine Learning Based Security Approach in Energy Harvested CR-IoT, *Grant No:* IC20201325, *Grants:* Fifteen Lac (15,00,000.00) Taka, *Period:* July, 2022- June, 2025, *Status:* Completed, *Output:* five journal papers, two book chapters and six conference papers published, *Funding:* Ministry of Education (BANBEIS), Palashi-Nilkhet, Dhaka, 1205,Bangladesh (Islamic University)

[4] **Project Director**, *Title:* Full Duplex based Cognitive Radio-Internet of Things, *Grants:* One Lac and Seventy Five Thousand (1,75,000.00) Taka, *Period:* July, 2021- June, 2022, *Status:* Completed, *Output:* One conference paper published, *Funding:* Islamic University, Kushtia, 7003,Bangladesh.

[3] **Project Director**, *Title:* Machine Learning Based Malicious User Detection in Energy Harvested Cognitive Radio-Internet of Things, *Grants:* One Lac and Fifty Thousand (1,50,000.00) Taka, *Period:* July, 2020-June, 2021, *Status:* Completed, *Output:* One journal paper published, *Funding:* Islamic University, Kushtia, 7003,Bangladesh.

[2] **Project Director**, *Title:* Analysis of Sensing and Sum Rate in Energy Harvested Cognitive Radio Network, *Grants:* Two Lac (2,00,000.00) Taka, *Period:* September, 2019 - August, 2020, *Status:* Completed, *Output:* One Journal paper published in Sensor (Q1, MDPI), *Funding:* Ministry of Science and Technology (MOST), Bangladesh (Islamic University).

[1] **Member**, *Title:* Establishment of Information Technology Research & Resource Center in IU-Kushtia, *Grants:* 4,62,00,000.00 (Taka), *Period:* September, 2011 - August, 2013, *Status:* Completed, **Output:** Several Workshops, Conferences and Journal papers published, *Funding:* University Grants Commission (UGC) of Bangladesh, and World Bank (Islamic University).

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Declaration of Authenticity

I do hereby declare that all the information here is true to the best of my knowledge. If required and where applicable, this document can be supported by appropriate authentic certificates/papers.



[Md. Sipon Miah, Ph.D.]

25 November, 2025