

MD. ARIF HOSSAIN

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EDUCATION

Bachelor of Science in Electrical, Electronics and Telecommunication Engineering

Dhaka International University, Dhaka, Bangladesh

CGPA: 3.60 / 4.00

Year of Graduation: 2019

Diploma in Engineering in Electrical Technology

The North Polytechnic Institute, Rajshahi, Bangladesh

CGPA: 3.71 / 4.00

Year of Graduation: 2013

RESEARCH INTEREST

Wireless Communications | Spectrum Monitoring | 5G/6G | IoT | Smart Cities

PUBLICATIONS

Journal Publications

Mishu, M. K., Rokonuzzaman, M., Yap, B. K., Prasetya, T. A. E., **Hossain, M. A.**, et al. (2026).

Autonomous Smart Vertical Farming: A Systems-Level Synthesis of IoT and Solar Energy Integration for Sustainable Agriculture.

Energy Reports (Elsevier, Q1, IF: 6.6) <https://doi.org/10.1016/j.egy.2026.109509>

Accepted Conference Papers

Data-Driven Radio Frequency Interference Management for Reliable Smart Grid and Renewable Energy Communications in Smart Cities. *15th International Conference on Renewable Energy Research and Applications (ICRERA 2026), Paris, France, 12–15 October 2026. Accepted.*

PROFESSIONAL EXPERIENCE

Deputy Assistant Director (Spectrum Monitoring)

Bangladesh Telecommunication Regulatory Commission (BTRC)

2015 – Present

- Conduct radio spectrum monitoring and analysis using advanced RF monitoring systems (TCI, Narda, Rohde & Schwarz, Agilent, and Scorpio 700) and geolocation tools to identify interference sources and unauthorized transmissions across national frequency bands.
- Investigate and resolve radio frequency (RF) interference issues in accordance with ITU-R recommendations and national regulatory guidelines.
- Support spectrum allocation, licensing, and re-farming activities for emerging technologies such as 5G/6G, Internet of Things (IoT), and satellite communications.
- Worked as part of a technical team addressing cross-border spectrum interference, contributing to the formulation of SOPs with neighboring countries and drafting the Border BTS Policy for mobile network operators.
- Contributed to the preparation of regulatory directives for IoT vendors regarding the import and deployment of IoT-based systems.
- Participated in the introduction of the NOC Automation and IMEI Database (NAID) system, enabling online verification of newly imported and locally assembled mobile handsets.
- Configure and maintain automated spectrum monitoring and management systems including SPX-TCI ASMS, Agilent, and Scorpio 700 RF monitoring platforms.
- Conduct Amateur Radio license examinations and facilitate the issuance of call-sign licenses to amateur radio operators who support communication during natural disasters and emergency situations.

ACADEMIC & PROFESSIONAL TRAINING

- **APT Frequency Information System (AFIS)**
Asia-Pacific Telecommunity (APT), Dhaka, Bangladesh – 2026
- **Modern Spectrum Monitoring and Management Techniques**
United States Telecommunications Training Institute (USTTI) & TCI Inc., Fremont, USA – 2025
- **Spectrum Management and Radio Frequency Monitoring**
International Telecommunication Union (ITU) – 2020
- **Implementation of Radio Monitoring Systems according to ITU-R Recommendations**
ITU & Rohde & Schwarz, Singapore – 2018

INTERNATIONAL CONFERENCES

- **APT Symposium on Spectrum Management**, Dhaka, Bangladesh – 2025
- **The 37th Meeting of APT Wireless Group (AWG-37)**, Dhaka, Bangladesh – 2026

CERTIFICATIONS

- 5G – The Path to the Next Generation, GSMA (2024)
- Technical Training on Spectrum Monitoring Equipment, TCI International (2023)

ACADEMIC & PROFESSIONAL AWARDS

- **Certificate of Excellence (2nd Position)**
4th Special Foundation Training Course (SFTC)
Bangladesh Public Administration Training Centre (BPATC) – 2026
- **Runner-Up Award**
National IT Competition for the project “*Solar Power Sharing through Distributed Mini-Grid System*”

PROFESSIONAL MEMBERSHIPS

IEEE – Student Member
Institution of Diploma Engineers Bangladesh (IDEB) – Member
Amateur Radio Licensee (Call Sign: S21TK) – BTRC

TECHNICAL SKILLS

- Spectrum Monitoring & Analysis
- Radio Frequency Interference Detection
- ITU-R Spectrum Management Framework
- Telecommunications Policy & Regulation
- Technical Data Analysis & Reporting

EXTRA-CURRICULAR ACTIVITIES

- Active participation in Amateur Radio activities including satellite communication and emergency communication support.
- Participation in blood donation and charitable activities.