

Dr. Md. Mahbubur Rahman  
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Electrical and Electronic Engineering  
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## CAREER SUMMARY


Educator with 10 years of academic experience and a proven track record in research, teaching, and student mentoring. Passionate about fostering academic achievement and implementing innovative teaching methods. Expert in handling administrative duties, with a track record of streamlining processes to increase efficiency.


## PROFESSIONAL EXPERIENCES

- ❖ **Jatiya Kabi Kazi Nazrul Islam University, Bangladesh**
  - **Position:** *Associate Professor* *Oct. 2023 to Present*  
Dept. of Electrical and Electronic Engineering under Faculty of Science and Engineering.
- ❖ **Jatiya Kabi Kazi Nazrul Islam University, Bangladesh**
  - **Position:** *Assistant Professor* *Dec. 2018 to Oct. 2023*  
Dept. of Electrical and Electronic Engineering under Faculty of Science and Engineering.
- ❖ **Jatiya Kabi Kazi Nazrul Islam University, Bangladesh**
  - **Position:** *Lecturer* *Oct. 2016 to Dec. 2018*  
Dept. of Electrical and Electronic Engineering under Faculty of Science and Engineering.
- ❖ **The People's University of Bangladesh, Bangladesh** *Jan. 2015 to Oct. 2016*
  - **Position:** *Lecturer*  
Dept. of Computer Science and Engineering under the Faculty of Engineering.
- ❖ **University of Development Alternative, Bangladesh** *Jun. 2014 to Jan. 2015*
  - **Position:** *Lecturer*  
Dept. of Computer Science and Engineering under the Faculty of Engineering.

## SCHOLASTIC ATTAINMENT

- 📖 **Okayama University, Japan**  
**Ph.D.** From Graduate School of Natural Science and Technology
  - **Research Field:** Wireless Local Area Network.
- 📖 **University of Rajshahi (RU), Rajshahi, Bangladesh**  
**M.Sc.**, Information and Communication Engineering
  - **Result:** 3.83 out of 4.00 (Secured First Position).
- 📖 **University of Rajshahi (RU), Rajshahi, Bangladesh**  
**B.Sc.**, Information and Communication Engineering
  - **Result:** 3.51 out of 4.00 (Secured First Position).

 **Bogra Cantonment Public School & College, Bogura, Bangladesh**  
**Higher Secondary School Certificate (H.S.C)** Rajshahi Board, Rajshahi, Bangladesh  
 • **Result: 5.00** out of **5.00**.

 **Polli Unnayan Academy Laboratory High School, Sherpur, Bogura, Bangladesh**  
**Secondary School Certificate (S.S.C.)** Rajshahi Board, Rajshahi, Bangladesh  
 • **Result: 5.00** out of **5.00**.

**EXPERIENCE  
IN  
DEVELOPMENT  
PROJECT**

**Sub Project manager (SPM)**, “Installation of Information & Communication Technology (ICT) Backbone of Jatiya Kabi Kazi Nazrul Islam University” with **Higher Education Quality Enhancement Project (HEQEP), Academic Innovation Fund (AIF)**. Project Time line: May, 2017 - September, 2018. Project Valuation: 6.5 million BDT

**RESEARCH  
FUND**

Jatiya Kabi Kazi Nazrul Islam University’s internal research fund.

1. Title: Scope of Internet of Things (IoT) in Bangladesh: A Comprehensive Study (2017-18, Fiscal Year)
2. Harnessing face detection for ensuring distant location security by deploying an IoT platform. (2023-24, Fiscal Year)

**RESEARCH  
PUBLICATIONS**

**PUBLISHED JOURNALS AND CONFERENCES**

**Referred Journal Papers**

- I. Hendy Briantoro, Anang Budikarso, and **Md Mahbubur Rahman**. "Design and Implementation of Tire Pressure and Temperature Monitoring System for Hatchback and Multi-Purpose Vehicle Based on IoT." Journal of Advances in Information and Industrial Technology, pp. 21-30 vol. 6, no. 1 May 2024.
- II. Bin Wu, Nobuo Funabiki, Sujan Chandra Roy, **Md Mahbubur Rahman**, Dezheng Kong, and Shihao Fang "An Application of Throughput Request Satisfaction Method for Maximizing Concurrent Throughput in WLAN for IoT Application System," Sensors, vol.24, no. 7, p.2173, March 2024.
- III. Md Manowarul Islam, Md Abdul Ahad Adil, Md Alamin Talukder, Md Khabir Uddin Ahamed, Md Ashraf Uddin, Md Kamran Hasan, Selina Sharmin, **Md Mahbubur Rahman**, and Sumon Kumar Debnath. "DeepCrop: Deep learning-based crop disease prediction with web application." Journal of Agriculture and Food Research, p. 100764, 2023.
- IV. Sujan Chandra Roy, Nobuo Funabiki, **Md. Mahbubur Rahman**, Bin Wu, Minoru Kuribayashi, and Wen-Chung Kao. "A Study of the Active Access-Point Configuration Algorithm under Channel Bonding to Dual IEEE 802.11 n and 11ac Interfaces in an Elastic WLAN System for IoT Applications." Signals, vol.4, no. 2, pp. 274-296, April 2023.
- V. **Md. Mahbubur Rahman**, Nobuo Funabiki, Kwenga Ismael Munene, Sujan Chandra Roy, Minoru Kuribayashi, Melki Mario Gulo, and Wen Chung Kao. "A Throughput Request Satisfaction Method for Concurrently Communicating Multiple Hosts in Wireless Local Area Network," Sensors, vol.22, no. 22, p.8823, November 2022.
- VI. Kwenga Ismael Munene, Nobuo Funabiki, **Md. Mahbubur Rahman**, Hendy Briantoro, Sujan Chandra Roy and Minoru Kuribayashi, “A throughput drop estimation model and its application to joint optimization of transmission power, frequency channel, and channel bonding in IEEE 802.11n WLAN for large-scale IoT environments,” Internet of Things, VI. 20, p. 100583, November 2022.

- VII. **Md. Mahbubur Rahman**, Nobuo Funabiki, Kwenga Ismael Munene, Sujan Chandra Roy, Minoru Kuribayashi, and Wen Chung Kao. "A Throughput Fairness Control Method for Concurrent Communications in Wireless Local-Area Network with Multiple Access-Points," Journal of Communications, vol.17, no. 8, pp. 592-599, August 2022.
- VIII. Sujan Chandra Roy, Nobuo Funabiki, Kwenga Ismael Munene, **Md. Mahbubur Rahman**, and Minoru Kuribayashi, "An Extension of Active Access-Point Configuration Algorithm to IEEE 802.11n and 11ac Dual Interfaces in Wireless Local-Area Network," International Journal of Future Computer and Communication vol. 11, no. 2, pp. 18-26, June 2022.
- IX. Hendy Briantoro, Nobuo Funabiki, **Md. Mahbubur Rahman**, Kwenga Ismael Munene, Minoru Kuribayashi, "Joint optimization method of channel assignment and transmission power for concurrently communicating multiple access-points in wireless local area network." International Journal of Networking and Computing, vol. 11, No. 2, pp. 251-266, July 2021.
- X. Kwenga Ismael Munene, Nobuo Funabiki, Hendy Briantoro, **Md. Mahbubur Rahman**, Fatema Akhter, Minoru Kuribayashi, and Wen-Chung Kao, "A throughput drop estimation model for concurrent communications under partially overlapping channels without channel bonding and its application to channel assignment in IEEE 802.11n WLAN." IEICE Transactions on Information and Systems, Vol. E104-D, No.05, pp.585-596, May, 2021.
- XI. Md. Khalid Mahbub Khan, Kawsaruzzaman, **Md. Mahbubur Rahman** and Al-Imtiaz "The Impact of Node Density and Buffer Size on DTN Routing Protocols with Energy Efficiency: A Comparative Study." European Journal of Engineering and Technology Research, vol. 5, no. 9, pp. 1054-1061, September 2020.
- XII. Md. Ohidul Islam, **Md. Mahbubur Rahman**, Md. Arifur Rahman and Farhana Enam, "Analysis the effect of Diversity Technique on a Multi-User Wideband CDMA (W-CDMA) Communication System" Journal of Multidisciplinary Engineering Science Studies (JMESS), Vol. 3 Issue 9, September – 2017.
- XIII. **Md. Mahbubur Rahman**, Kazi Md. Shahiduzzaman, B.K. Karmaker, Md. Mehedi Hasan Khan, "Voip on IP PBX System Using Secure VPN Communication and Delay Analysis" IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), Volume 12, Issue 2, Ver. II, PP 12-19, March-April 2017.
- XIV. Rockib Hassan, Halida Homyara, **Md. Mahbubur Rahman** and Md. Abdullah Al Asad, "Performance Analysis of Optical Code Division Multiple Access (OCDMA) Communication System" International Journal of Trend in Research and Development, Vol. 3, no.3, May - Jun 2016.
- XV. Md. Ashraful Islam, **Md. Mahbubur Rahman**, Farhana Enam, Halida Homyara, "Analysis the Effect of Spectral Efficiency on Digitally Modulated OFDM Communication System over Realistic Channel Condition" International Journal of Scientific & Engineering Research, Volume 7, Issue 1, January 2016.
- XVI. Farhana Enam, Md. Ashraful Islam, **Md. Mahbubur Rahman** and Md. Mizanur Rahman, "Analyze the effect of least mean square (LMS) equalization technique over reed-solomon encoded orthogonal frequency division multiplexing (OFDM) based wireless communication system", International Research Journal of Computer Science and Information Systems (IRJCSIS) Vol. 2, no.1, pp. 1-7, January 2013.

- I. MD. Shameem Ahammed, **Md. Mahbubur Rahman**, Sourav Sarker, Mobussir Nur Sium, Faria Ferdous, Fatema Tanbin Mim, Md. Shake Farid Uddin and Arit Sarker "Hypertuning Random Forest for Enhancing Cyber Security in Industrial Power Electronics", 27th International Conference on Computer and Information Technology (ICCIT-2024) 20-22 December 2024, Cox's Bazar, Bangladesh.
- II. Mritunjoy Sarker, **Md. Mahbubur Rahman**, MD. Shameem Ahammed, Sourav Sarker, Zinia Jahan, and Md. Shake Farid Uddin "ML Based Ammonia Converter Leakage Detector and Trip Predictor For Improving Safety", International Conference on Recent Progresses in Science, Engineering and Technology (ICRPSET), Faculty of Engineering, University of Rajshahi, Rajshahi-6205, Bangladesh, 07-08 December, 2024
- III. MD. Shameem Ahammed, **Md. Mahbubur Rahman**, Md. Borhan Uddin, Zinia Jahan, Md. Shake Farid Uddin and Sabnam Mushtari "Optimizing Logistic Regression Model for Heart Disease Prediction with Machine Learning", 7th International Conference on Vocational Education and Electrical Engineering (ICVEE-2024), Oct 30-31, 2024, Malang, Indonesia.
- IV. Zinia Jahan, **Md. Mahbubur Rahman**, and Nusrat Jahan "An IoT based Intelligent Security System through Visualizing Human Faces for Access Control Using Raspberry Pi", 2nd International Conference on Technology, Business, and Justice toward Smart Bangladesh (ICTBJ-2023), June 5-6, 2023, Jatiya Kabi Kazi Nazrul Islam University, Bangladesh.
- V. Fatema Akhter, Sun Yuanshuai, Nobuo Funabiki, Hendy Briantoro, Kwenga Ismael Munene, and **Md. Mahbubur Rahman**, "Feasibility investigations of access-point transmission power optimization method under co-use of channel bonding and non-channel bonding in wireless local-area network," The Ninth International Symposium on Computing and Networking Workshops (CANDARW, ASON), pp. 69-72, November 23 - 26, 2021, Japan.
- VI. Fatema Akhter, Nobuo Funabiki, Hendy Briantoro, Kwenga Ismael Munene, **Md. Mahbubur Rahman**, Minoru Kuribayashi, "Applicability investigation of transmission power optimization method for concurrently communicating access-points using channel bonding and non-bonding in WLAN," 4th International Conference on Vocational Education and Electrical Engineering (ICVEE 2021), October 2-3, 2021, Indonesia.
- VII. Kwenga Ismael Munene, Nobuo Funabiki, Hendy Briantoro, **Md. Mahbubur Rahman**, Sujana Chandra Roy, and Minoru Kuribayashi, "A study of throughput drop estimation model for concurrently communicating links under coexistence of channel bonding and non-bonding in IEEE 802.11n WLAN," 13-th International Workshop on Virtual Environment and Network-Oriented Applications (VENOA-2021), pp. 700-714, July 1-3, 2021.
- VIII. **Md. Mahbubur Rahman**, Nobuo Funabiki, Kwenga Ismael Munene, Hendy Briantoro, Fatema Akhter, Minoru Kuribayashi, and Md. Manowarul Islam, "A proposal of throughput allocation method for concurrently communicating two or three hosts in wireless local-area network," 2020 International Conference on Emerging Technologies for Communications (ICETC 2020), C1-4, December 2-4, 2020 Japan.
- IX. Kwenga Ismael Munene, Nobuo Funabiki, Hendy Briantoro, **Md. Mahbubur Rahman**, Fatema Akhter, and Minoru Kuribayashi, "Application of throughput drop estimation model under partially overlapping channels to channel assignment in IEEE 802.11n WLAN," 2020 International Conference on Emerging Technologies for Communications (ICETC 2020), December 2-4, 2020, Japan.
- X. Hendy Briantoro, Nobuo Funabiki, Kwenga Ismael Munene, **Md. Mahbubur Rahman**, Fatema Akhter, Minoru Kuribayashi, and Wen-Chung Kao, "A generalization of

transmission power optimization method for concurrently communicating multiple access-points in wireless local-area network," 13th International Workshop on Autonomous Self-Organizing Networks (ASON 2020), pp. 1-7, November 24-27, 2020, Japan.

- XI. Ismael Munene Kwenga, Nobuo Funabiki, Rahardhita Widyatra Sudibyo, Hendy Briantoro, **Md. Mahbubur Rahman**, and Wen-Chung Kao, "A study of throughput-drop estimation model for concurrently communicating two links without channel bonding in IEEE 802.11n wireless local-area network," 2020 IEEE International Conference on Consumer Electronics - Taiwan (ICCE-TW 2020), Online, September 28 - 30, 2020, Taiwan.
- XII. **Md. Mahbubur Rahman** and Muhammad Sajjadur Rahim, "Performance Evaluation of Replication-Based Delay-Tolerant Routing Protocols for Underwater Networks", International Conference on Materials, Electronics and Information Engineering (ICMEIE-2015), Faculty of Engineering, University of Rajshahi, June 2015, Bangladesh. (Poster presentation)

**Non-refereed Conference Proceedings (Symposium)**

- I. Yuanshuai Sun, Sujan Chandra Roy, Nobuo Funabiki, **Md. Mahbubur Rahman**, Bin Wu, and Minoru Kuribayashi, "Performance comparisons for IEEE 802.11n/ac dual interface usage of Raspberry Pi access-point with external NIC in wireless local-area network," 2022 IEEE Hiroshima Section Student Symposium (HISS2022), pp. 80-84, November 2022, Japan.
- II. Bin Wu, Nobuo Funabiki, **Md. Mahbubur Rahman**, Sujan Chandra Roy, Yuan-Shuai Sun, and Minoru Kuribayashi "An extension of throughput request satisfaction method to throughput maximization for concurrently communicating hosts in wireless local-area network with two access-points," IEICE Technical Report, NS2022-121, pp. 119-124, November 2022, Japan.
- III. Sujan Chandra Roy, Nobuo Funabiki, **Md. Mahbubur Rahman**, Yuanshuai Sun, Bin Wu, and Minoru Kuribayashi "A study of active access-point configuration algorithm under IEEE 802.11n and 11ac dual interfaces with channel bonding in wireless local-area network," IEICE Technical Report, LOIS2022-120, pp. 113-118, November 2022, Japan.
- IV. Kwenga Ismael Munene, Nobuo Funabiki, Hendy Briantoro, **Md. Mahbubur Rahman**, Sujan Chandra Roy, Minoru Kuribayashi, "Application of throughput drop estimation model to frequency channel and channel bonding assignment in IEEE 802.11n WLAN." IEICE Society Conference, BS-6-11, pp. S-42-43, September 14-17, 2021, Japan.
- V. Sujan Chandra Roy, Nobuo Funabiki, Kwenga Ismael Munene, Hendy Briantoro, **Md. Mahbubur Rahman**, Fatema Akhter and Minoru Kuribayashi, "A study of throughput drop estimation model for two-link concurrent communications in 5GHz IEEE 802.11ac WLAN." IEICE Society Conf., BS-6-1, pp. S-42-43, September 14-17, 2021, Japan.
- VI. Ismael Munene Kwenga, Nobuo Funabiki, Hendy Briantoro, **Md. Mahbubur Rahman**, and Minoru Kuribayashi, "An extension of throughput estimation model for three-link concurrent communications under partially overlapping channels without channel bonding in IEEE 802.11n WLAN," IEICE Technical Report, NS2020-24, pp. 13-18, June 2020.
- VII. **Md. Mahbubur Rahman**, Nobuo Funabiki, Rahardhita Widyatra Sudibyo, Kwenga Ismael Munene, Hendy Briantoro, and Md. Manowarul Islam, "An Improvement of TCP Throughput Fairness Control Method for Concurrent Communications in Elastic WLAN System." IEICE Technical Report, pp. 19-24, June. 2020.

- VIII. Hendy Briantoro, Nobuo Funabiki, Kwenga Ismael Munene, Rahardhita Widyatra Sudibyo, **Md. Mahbubur Rahman**, and Minoru Kuribayashi, "An extension of transmission power optimization method for two concurrently communicating access-points associated with multiple hosts in wireless local-area network," IEICE Technical Report, NS2020-29, pp. 43-48, June 2020.
- IX. Kwenga Ismael Munene, Nobuo Funabiki, Rahardhita Widyatra Sudibyo, Hendy Briantoro, and **Md. Mahbubur Rahman**, "A throughput drop estimation model for two-link concurrent communications with non-bonded partially overlapping channels in IEEE 802.11n WLAN." IEICE General Conference, pp. S8-S9, March 2020.

#### ACADEMIC TRAINING

- *Foundation Training for University Teachers*, Organized by Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, Bangladesh, 03 to 29 August, 2017.
- *Teaching-Learning, Curriculum & Quality Assurance*, Organized by Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, Bangladesh, 15 to 19 May, 2016.

#### HONORS AND AWARDS

- Receiving **Japanese Government (Monbukagakusho) Scholarship (MEXT)** to pursue Ph.D degree from Oct. 2019 to Sep. 2022.
- Obtained **Gold Medal** from Bangabandhu Sheikh Mujibur Rahman Hall for outstanding result in B. Sc. Examination in 2010, University of Rajshahi.
- Ranked **First** in M.Sc. Examination 2011, Dept. of Information and Communication Engineering, University of Rajshahi.
- Ranked **First** in B.Sc. Examination 2010, Dept. of Information and Communication Engineering, University of Rajshahi.
- Merit scholarship for outstanding results in B.Sc. & H.S.C from University of Rajshahi in 2007 to 2010.
- Merit scholarship for outstanding results in S.S.C & H.S.C from Bogra District Office, Bangladesh.

#### LANGUAGE SKILLS

- **Bengali:** Mother Tongue.
- **English:** Second Language
- **Japanese:** Basic (poor)

#### REFERENCES

**Prof. Dr. Dipankar Das**  
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Communication Engineering.  
Faculty of Engineering  
University of Rajshahi,  
Rajshahi-6205, Bangladesh.  
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Prof. Muhammad Sajjadur Rahim  
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Communication Engineering.  
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