

NAME: DR. MD. ASIF HOSSAIN

Employee ID #: 8537

Designation: Assistant Professor

Name of the Department: Electrical and Electronic Engineering

Name of the School: Science and Engineering



Academic Qualifications:

Sl #	Name of Degree	Institution	Board	Major	Passing Year	Result/CGPA
1.	Ph.D.	University of Malaya, Malaysia	N/A	Computer Science	2022	Awarded
2.	MBA	East West University, Bangladesh.	N/A	Marketing	2011	CGPA: 3.60 (4 scale based)
3.	M.Sc.	East West University, Bangladesh.	N/A	Telecommunications Engineering	2007	CGPA: 4.00 (4 scale based) Gold Medal
4.	B.Sc.	East West University, Bangladesh.	N/A	Information and Communications Engineering	2006	CGPA: 3.97 (4 scale based) Gold Medal
5.	HSC	New Govt. Degree College, Bangladesh	Rajshahi	Science	2001	1 st Division (80.5% marks)
4.	SSC	Rajshahi Collegiate School, Bangladesh.	Rajshahi	Science	1999	1 st Division (85.3% marks)

Tenure of Teaching/Research Experiences:

Full-Time Experiences:

Sl #	Position	Department	University	Start	End	Length of Service
1.	Assistant Professor	Department of Electrical & Electronic Engineering (EEE)	Southeast University	3 July 2022	till date	---
2.	Assistant Professor	Department of Electronics & Communications Engineering (ECE)	East West University	29 Sept. 2016	1 May 2017	8 Months
3.	Senior Lecturer	Department of Electronics & Communications Engineering (ECE)	East West University	8 Apr. 2010	28 Sept. 2016	6 Year & 6 Months
4.	Lecturer	Department of Electronics & Communications Engineering (ECE)	East West University	3 Apr. 2008	7 Apr. 2010	2 Year & 4 Days

Part-Time Experiences:

Sl #	Position	Department	University	Start	End	Length of Service
1.	Associate Editor	Southeast University Journal of Electrical and Electronic Engineering (SEUJEEE)	Southeast University	1 August 2022	till date	---
2.	Research Assistant	Department of Computer System and Technology (CST)	University of Malaya, Malaysia.	1 Sept. 2018	30 Jun. 2020	1 Year & 10 Months
3.	Cisco Networking Academy Instructor	CCNA	East West University	1 Apr. 2008	31 Dec. 2013	4 Years & 5 Months
4.	Graduate Teaching Assistant (GTA)	Department of Electronics & Communications Engineering (ECE)	East West University	10 Jan. 2007	22 Dec. 2007	1 Year
4.	Undergraduate Teaching Assistant (UTA)	Department of Electronics & Communications Engineering (ECE)	East West University	5 Sept. 2005	31 Aug. 2006	1 Year

Awards & Prizes:

No.	Name of the award/prize	Awarded by	Awarded for	Awarded Year
1	Graduate Research Assistant Scheme (GRAS), (Approx. MYRS\$ 70,000).	University of Malaya, Malaysia	For Ph.D. study	2018
2	Best Presentation Award	International Conference on Computer Science, Electrical and Electronic Engineering (ICCEE 2019), KL, Malaysia	For the best presentation in the conference	2019
3	President Gold Medal	East West University	Outstanding result of Masters Degree	2008
4	President Gold Medal	East West University	Outstanding result of Bachelors Degree	2007
5	Champion Trophy	Cisco Systems Inc., Bangalore, India.	Securing the top position in the 1 st Cisco SAARC Skill Competition, Bangalore, India.	2008
6	First Runner-up	American International University of Bangladesh	Securing the 2 nd position in 1 st National Cisco Skill Contest, AIUB, Dhaka	2008
7	Full Free Studentship Scholarship	East West University	Securing the 1 st position in the MS in TE admission test	2007
8	Merit Scholarship	East West University	Outstanding result during Bachelor Program	2004-06

Teaching Competences:

- 1) Expert in cognitive teaching
- 2) Expert in Communication Engineering laboratory experimental works
- 3) Expert in Computer networking lab and theory courses
- 4) Expert in Machine learning and data science courses

Teaching Interests:

- 1) Communication Engineering
- 2) Computer networking
- 3) Programming
- 4) Machine learning and data science
- 5) Network Security

Research Areas:

- 1) Machine learning
- 2) Computer networks
- 3) Intelligent transportation system, Vehicular network
- 4) Energy harvesting, SWIPT
- 5) Cognitive radio networks

Research Publications

(a) Thesis:

- Ph.D. Thesis:
Cooperative Spectrum Sensing Based on Machine Learning in Cognitive Radio Vehicular Network.
- M.Sc. Thesis:
Performance Analysis of Bow-Tie and Slot Antenna Based on RWG Edge Elements.

(b) Journal Papers:

1. Ismail, Noraini, **Mohammad Asif Hossain**, Rafidah Md Noor, and Ainuddin Wahid Abdul Wahab. "Enhanced Congestion Control Model Based on Message Prioritization and Scheduling Mechanism in Vehicle-to-Infrastructure (V2I)." *In Journal of Physics: Conference Series*, vol. 2312, no. 1, p. 012087. IOP Publishing, 2022. . [Ei Compendex & Scopus].
2. **Md. Asif Hossain** and Nahid Akhter Jahan, "Spectrum Sensing Techniques and Their Performance Metrics and Parameters", *Southeast University Journal of Electrical and Electronic Engineering (SEUJEEE)*, vol-2, no.2, pp.31-43, 2022.
3. **Mohammad Asif Hossain**, Rafidah Md Noor, Kok-Lim Alvin Yau, Saaidal Azzuhri Razalli, Muhammad Reza Z'aba, Ismail Ahmedy, and Mohammad Reza Jabbarpour, "Multi-Objective Harris Hawks Optimization Algorithm based 2-hop Routing Algorithm for CR-VANET", *IEEE Access*, vol. 9, pp. 58230-58242, 2021. [ISI IF 3.367 (2020), Q1].
4. **Mohammad Asif Hossain**, Rafidah Md Noor, Kok-Lim Alvin Yau, Saaidal Azzuhri Razalli, Muhammad Reza Z'aba, Ismail Ahmedy, and Mohammad Reza Jabbarpour, "Machine Learning based Cooperative Spectrum Sensing in Dynamic Segmentation Enabled Cognitive Radio Vehicular Network", *Energies*, 14 (4), 1169, pp. 1-29, 2021. [ISI IF 3.004 (2020), Q2].
5. **Mohammad Asif Hossain**, Rafidah Md Noor, Saaidal Azzuhri Razalli, Muhammad Reza Z'aba, Ismail Ahmedy, Kok-Lim Alvin Yau, and Chembe Christopher, "Spectrum sensing challenges & their solutions in cognitive radio based vehicular networks", *International Journal of Communication Systems*, vol. 34, no.7, pp.1-23, 2021. [ISI IF 2.047 (2020), Q2].

6. **Mohammad Asif Hossain**, Rafidah Md Noor, Kok-Lim Alvin Yau, Saaidal Azzuhri Razalli, Muhammad Reza Z'aba, and Ismail Ahmedy, "Comprehensive Survey of Machine Learning Approaches in Cognitive Radio-based Vehicular Ad Hoc Networks" *IEEE Access*, vol. 8, no. 1, pp. 78054-78108, 2020. [ISI IF 3.367 (2020), Q1].
7. **Mohammad Asif Hossain**, Rafidah Md Noor, Kok-Lim Alvin Yau, Ismail Ahmedy, Shaik Shabana Anjum, "A Survey on Simultaneous Wireless Information and Power Transfer With Cooperative Relay and Future Challenges" *IEEE Access*, vol. 7, no. 1, pp. 19166–19198, 2019. [ISI IF 3.367 (2020), Q1].
8. Noman Mazhar, Rosli Salleh, **Mohammad Asif Hossain** and Muhammad Zeeshan, "SDN based Intrusion Detection and Prevention Systems using Manufacturer Usage Description: A Survey", *International Journal of Advanced Computer Science and Applications (IJACSA)*, 11(12), 2020. [ESCI & Scopus]
9. **Mohammad Asif Hossain**, Ismail Ahmedy, Muhammad Zar Mohd Zaid Harith, Rafidah Md Noor, Mohd Yamani Idna Idris, Tey Kok Soon and Sumiani Binti Yusoff, "Route Optimization by using Dijkstra's Algorithm for the Smart Waste Management System", *Association for Computing Machinery (ACM) International Proceeding Series*, The 3rd International Conference on Information Science and System (ICISS 2020), pp. 110-114, 2020. [Ei Compendex & Scopus].
10. **Mohammad Asif Hossain**, Md. Imdadul Islam, Fahima Tabassum and M R Amin. The Tradeoff between Mean Delay and Energy Saving Factor under DRX Scheme. *International Journal of Computer Applications (IJCA)*, 177(43):40-47, March 2020.
11. Harith, Muhammad Zar Mohd Zaid, **Mohammad Asif Hossain**, Ismail Ahmedy, Mohd Yamani Idna Idris, Tey Kok Soon, and Rafidah Md Noor. "Prototype Development of IoT Based Smart Waste Management System for Smart City." *In IOP Conference Series: Materials Science and Engineering*, vol. 884, no. 1, p. 012051. IOP Publishing, 2020. [Scopus]
12. Md Noor, R.; Seong Yik, N.; Kolandaisamy, R.; Ahmedy, I.; **Hossain, M.A.**; Alvin Yau, K.; Md Shah, W.; Nandy, T. "Predict Arrival Time by Using Machine Learning Algorithm to Promote Utilization of Urban Smart Bus". *Preprints 2020*, 2020020197.
13. **Mohammad Asif Hossain**, M. Ruhul Amin, Md. Imdadul Islam, "Analytical Modeling of DRX Mechanism to Enhance the Energy Efficiency in LTE," *International Journal of Simulation: Systems, Science & Technology*, vol.18, no.3, 2017.
14. Md. Razaul Hoq Proloy, Syed Mushfiq Ahmed and **Md. Asif Hossain**. "Comparative Analysis of Various Wireless Digital Modulation Techniques with different Channel Coding Schemes under AWGN Channel", *International Journal of Computer Applications (IJCA)*, 161(3):30-34, March 2017.
15. **Md. Asif Hossain**, Md. Mahful Islam, Md. Nesar Uddin Majumder, "Comparative Analysis of Two Prominent Routing Protocols in IPv6 Network: OSPFv3 & EIGRPv6", *International Journal of Computer (IJC)*, Volume 22, No 1, pp 79-89, 2016.
16. **Md. Asif Hossain**, Md. Imdadul Islam & M.R. Amin, "Load Sensitive Power Saving Technique for 4G Mobile Network Under Limited User Traffic", *Communications and Network (CN)*, Vol. 8, No. 2. pp. 79-87, 2016.
17. **Md. Asif Hossain**, Durjoy Podder, Sarwar Jahan, Mustafa Hussain, "Performance Analysis of Three Transition Mechanisms between IPv6 Network and IPv4 Network: Dual Stack, Tunneling and Translation", *International Journal of Computer (IJC)*, Volume 20, No 1, pp 217-228, 2016.

18. Mustafa Hussain, Rashedul Haque Chowdhury, Md Rakibul Hassan, Sarwar Jahan, **Mohammad Asif Hossain**, Md. Sahidul Islam, Mohammad Hanif Rahman, “Performance Enhancement & Optimization of GSM System through the Analysis of Key Performance Indicator for QoS”, *International Journal of Scientific and Engineering Research (IJSER)*, vol. 7 , no. 2, 2016.
19. Mustafa Hussain, Rashedul Haque Chowdhury, Md Rakibul Hassan, Sarwar Jahan, **Mohammad Asif Hossain**, Mohammad Hanif Rahman,” Performance Analysis of Various Modulation Schemes for Achieving Energy Efficient Communication over Fading Channel for Wireless Sensor Network”, *International Organization of Scientific Research Journals (IOS Journals)*, vol.11, No. 2, 2016.
20. **Md. Asif Hossain**, Md. Imdadul Islam & M.R. Amin , “Analysis of Sleep Window of IEEE802.16m Network Based on State Transition Chain”, *Journal of Computer & Communications (JCC)*, Vol.3 No.12, pg. 77-83, 2015.

(b) Book Chapter:

- 21) **Mohammad Asif Hossain**, Rafidah Md Noor, Saaidal Azzuhri Razalli, Muhammad Reza Z’aba, Ismail Ahmedy, Shaik Shabana Anjum, Wahidah Md Shah and Kok-Lim Alvin Yau, “Faster Convergence of Q-Learning in Cognitive Radio-VANET Scenario”, *Advances in Electronics Engineering*, Springer, vol. 619, pg. 171-181, 2020. [Scopus Indexed].

(c) Conference Papers:

- 22) Noraini Ismail, **Mohammad Asif Hossain**, Rafidah Md.Noor, Ainuddin Wahid Abdul Wahab, “Enhanced Congestion Control Model Based on Message Prioritization and Scheduling Mechanism in Vehicle-to-Infrastructure (V2I)”, *Third International Conference on Emerging Electrical Energy, Electronics and Computing Technologies 2021 (ICE4CT 2021)*, 16-17 December 2021, Virtual Conference, Malaysia. **(With the Best Paper Award)**.
- 23) **Mohammad Asif Hossain**, Ismail Ahmedy, Muhammad Zar Mohd Zaid Harith, Rafidah Md Noor, Mohd Yamani Idna Idris, Tey Kok Soon and Sumiani Binti Yusoff, “Route Optimization by using Dijkstra’s Algorithm for the Smart Waste Management System”, *The 3rd International Conference on Information Science and System (ICISS 2020)*, 19-22 March 2020, Cambridge University, UK.
- 24) Muhammad Zar Mohd Zaid Harith, **Mohammad Asif Hossain**, Ismail Ahmedy, Rafidah Md Noor, Mohd Yamani Idna Idris and Tey Kok Soon, “Prototype Development of IoT Based Smart Waste Management System for Smart City,” in *Sustainable & Integrated Engineering International Conference 2019 (SIE 2019)*, 8-9 December 2019, Putrajaya, Malaysia. **(With the Best Paper Award)**.
- 25) **Mohammad Asif Hossain**, Rafidah Md Noor, Saaidal Azzuhri Razalli, Muhammad Reza Z’aba, Ismail Ahmedy, Shaik Shabana Anjum, Wahidah Md Shah, “Faster Convergence of Q-Learning in Cognitive Radio-VANET Scenario”, *International Conference on Computer Science, Electrical and Electronic Engineering (ICCEE) 2019*, 30 April 2019, Kuala Lumpur, Malaysia. **(With the Best Presentation Award)**.
- 26) **Mohammad Asif Hossain**, Md. Imdadul Islam & M.R. Amin, “Analytical Modelling of DRX Mechanism to Enhance the Energy Efficiency in LTE”, *2016 Asia Multi Conference on Modelling and Simulation*, pg. 69-73, Kota Kinabalu, Sabah, Malaysia, 2016.
- 27) **Md. Asif Hossain**, Mushlah Uddin Sarkar, M.R. Amin & Md. Imdadul Islam, “Performance Comparison of Bow-Tie and Slot Antenna Based on RWG Edge Elements”, *The 2nd International Conference on Computer Research & Development (ICCRD 2010)*, Kuala Lumpur,

- Malaysia, May 7-10,, 2010, IEEE Xplore, 2010.
- 28) Mushlah Uddin Sarkar, **Md. Asif Hossain**, M.R. Amin & Md. Imdadul Islam, , “The Impact of Frequency on Radiation Pattern of Bowtie and Spiral Antenna Based on RWG Elements”, *The 2nd International Conference on Electronic Computer Technology (ICECT 2010)*, Kuala Lumpur, Malaysia, May 7-10,, 2010, IEEE Xplore, 2010.
 - 29) **Md. Asif Hossain**, S.H. Shah Newaz, Sarwar Jahan, Mustafa M Hussain M. R. Amin, “A Proposal for Enhancing The Security System of Short Message Service in GSM”, *International Conference on Anti-counterfeiting, Security, and Identification (ASID 2008)*, Guyang, China, IEEE Xplore, 2008.
 - 30) S.H. Shah Newaz, **Md. Asif Hossain**, Kazi. Khaled Al Zahid, and M.R. Amin, “Intelligence Adaptation in Visitor Location Register to Enhance the Performance of Next Generation Cellular Networks”, *2nd International Conference on Convergence Information Technology (ICCIT07)*, IEEE Computer Society, November 21-23, Gyeongju, Korea, Paper ID 345, 2007.
 - 31) **Md. Asif Hossain**, S.H. Shah Newaz, Imdadul Islam, and M.R. Amin, “Integrating The Internet with Mobile Ad Hoc Network”, *National Conference on Electronics, Information and Telecommunication*, ISBN-984-300-000645-7, pg- 208, Bangladesh, 2007.
 - 32) **Md. Asif Hossain**, S.H. Shah Newaz, Imdadul Islam, and M.R. Amin, “Determination of Bow-Tie & Slot Antenna Parameters Using RWG Edge Elements”, *National Conference on Electronics, Information and Telecommunication*, ISBN-984-300-000645-7, page 137, Bangladesh, 2007.
 - 33) **Asif Hossain**, Imdadul Islam, and M.R. Amin, “WiMAX: The Most Efficient Last Mile Solution for Rural Areas in Developing Countries”, *National Conference on Electronics, Information and Telecommunication*, ISBN-984-300-000645-7, Bangladesh, 2007.
 - 34) S.H. Shah Newaz, **M. Asif Hossain**, Imdadul Islam, and M.R. Amin, “A Newly Designed Base Station to Enhance Performance of a Mobile Cellular Antenna”, *National Conference on Electronics, Information and Telecommunication*, ISBN-984-300-000645-7, Bangladesh, 2007.

Funded Project/Development Works:

1. Team member, “Smart and Security-Enhanced Transportation Ecosystem for a Future Sustainable Smart City,” Matching Grant between University of Malaya and Sunway University, MYR\$400,000, 2018-2020.
2. Team member, “Smart Waste Management System Using Internet-of-Things”, University of Malaya Living Lab Grant, MYR\$225,00, 2018-2020.
3. Grant for Publications in IEEE Access (USD\$ 5,250), 2019, 2020, 2021.
4. Grant for Publication in Energies, MDPI (CHF \$ 1,800), 2021.
5. Grant for conference registration and attendance, MYR\$ 1500 & MYR\$ 1000, Malaysia, 2019.
6. East West University Travel Grant for conference registration and attendance (conference held in Malaysia), BDT\$ 65,000, Bangladesh, 2016.
7. East West University Grant for conference registration (conference held in China), BDT\$ 35,000, Bangladesh, 2008.
8. East West University Grant for conference registration (conference held in Malaysia), BDT\$ 30,000, Bangladesh, 2010.
9. Cisco Travel grant for Net-Rider competition attendance, Bangalore, India, 2008.

Training Received:

1. **Data Science with Python**, University of Malaya, Malaysia, 2019.
2. **Publishing in Q1 journal**, organized by Elsevier, Malaysia section, University of Malaya, Malaysia, 2019.
3. Training on **EndNote and Mendeley**, University of Malaya, Malaysia, 2020.
4. Summer school campaign on Intelligent Transportation System, IEEE VTS ASEAN, (Universiti Putra Malaysia (UPM), 2019.
5. **Cisco Instructor Training Program**, Cisco Certified Network Associate (CCNA) Exploration, at Bangladesh University of Engineering & Technology (BUET), 2008.
6. **CCNA, CCNA Security**, American International University of Bangladesh (AIUB), 2005, 2009.
7. **Various Online Courses: Python, Data Science, machine Learning, Reinforcement learning, MySQL** etc. from Coursera, Udacity, Udemy, Khan Academy, 2020-2021.

Extra-Curricular Activities:

1. **Vice President and Member of the Executive Committee**, Post Graduate Club, FCSIT, University of Malaya, Malaysia, 2019~2021.
2. **Moderator**, East West University Telecommunications Club, 2009-2012.
3. **President & General Secretary**, East West University Telecommunications Club, 2007 & 2006.
4. Second position (Excellence award), Photography Contest of SUN (PHOCOS), Italy, 2018.
5. Selection award, Photography Contest of SUN (PHOCOS), Uzbekistan, 2019.
6. Several photographs were exhibited in several exhibition, Bangladesh.
7. Organizer of several workshops, seminars, study tours, field trips etc.
8. **Champion**, Intra University Chess Tournament, East West University, Bangladesh, 2006.
9. Lifetime Blood Donor, Quantum Foundation Blood Donation Program, Bangladesh.

Industry Visits:

- [1] Technical Study Tour to **Submarine Cable Landing Station, Cox's Bazar**, organized by East West University Telecom Club, **2010, 2011, 2012**.
- [2] Visited the **Malaysia Automotive Robotics and IoT Institute (MARii)**, organized by IEEE Malaysia, 3 May 2019.
- [3] Visited **Telekom Malaysia Berhad (TM) center**, Kuala Lumpur, 2019.

Technical Affiliations:

Member of IEEE, IEEE ComSoc.

Contact Information:

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