CURRICULUM VITAE

PERSONAL INFORMATION

Name:	Dr. Mohammed Tarique
Nationality:	Canada
Job Title:	Associate Professor
College:	Engineering and Technology
Department:	Electrical and Computer Engineering
Contact Information:	E-mail:m.tarique@ustf.ac.ae
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	Mobile:+(971)501216446

EDUCATIONAL BACKGROUND

1. Doctorate:
Major: Electrical Engineering
Title of the Thesis: Cross Layer Design for Hierarchical Routing Protocol for Wireless Ad Hoc Network
University: University of Windsor, Canada, 2007

2. Master:
Major: Electrical Engineering
Title of the Thesis: NA
Lamar University, USA, 2001

3. Master:
Major: Finance
Title of Thesis: Spare Parts Management System for High Tech Manufacturing System.
Institute of Business Administration, Bangladesh 1999

4. Bachelor
Major: Electrical and Electronics Engineering
Title of Thesis: Computerization of Students Information System.
University: Bangladesh University of Engineering and Technology, Bangladesh, 1992

PROFESSIONAL EXPERIENCE

From (year)	To (year)	Position	Employer	Country
1993	**1996**	Engineering Officer	Beximco Infusions Limited	**Bangladesh**
1997	1999	Senior Engineering Officer	Beximco Pharmaceuticals Limited	Bangladesh

TEACHING EXPERIENCE AREA / COURSES)

Wireless Communications
Digital Communications
Mobile Communication
Digital Signal Processing
Mobile Communication
Data Networks
Computer Programming
Electromagnetics and Wave Propagation
Signals and Systems
Principles of Communication
Switching and Communication Networks
Microwave Engineering
Electrical Circuits
Analog Electronics
Electrical Machines
Engineering Management
Report Writing and Presentation

RESEARCH AREA

Computer Networks
Wireless Communication
Digital Communication
Digital Signal Processing
Biomedical Engineering
Biomedical Signal Processing
Artificial Intelligence and Applications

PUBLICATIONS

JOURNALS

1. Rumana Islam and **Mohammed Tarique**, "Chest X-ray Images to Differentiate COVID-19 from Pneumonia with Artificial Intelligence Techniques," International Journal of Biomedical Imaging, Volume 2022, Article ID 5318447, December 2022.

2. Rumana Islam, Esam Abdel-Raheem, and **Mohammed Tarique**, "Voice Pathology Detection using Convolutional Neural Networks with Electroglottographic and Speech Signals," *Computer Methods and Program in Biomedicine Update*, vol. 2, 2022, 100074, pp. 1-13

3. Rumana Islam. Esam Abdel-Raheem, and **Mohammed Tarique**, "A Novel Pathological Identification Technique Through Cochlear Implant Processing System," *Applied Sciences*, MDPI (Switzerland), vol. 12, no. 5, February 2022, pp. 1-21

4. Rumana Islam, Esam Abdel-Raheem, and **Mohammed Tarique**, "A Study of using cough sounds and deep neural network for the early detection of COVID-19," *Biomedical Engineering Advances*, Elsevier, vol. 3, June 2022, 100025, pp. 1-12

5. Rumana Islam and **Mohammed Tarique**, "A Novel Convolutional Neural Networks based Pathological Voice Detection using Spectrogram and Chromagram," *International Journal of Electrical and Computer Engineering*, vol. 12, no. 5., pp. 5511-5518

6. **Mohammed Tarique** and Rumana Islam, "Optimum Number of Neighbors for Resource-constrained Mobile Ad Networks," *International Journal of Ad hoc, Sensors, and Ubiquitous Computing*, vol. 12, no. 2, April 2021, pp. 1-14

7. Rumana Islam, and **Mohammed Tarique**, "Blind Source Separation Of Fetal ECG Using Fast Independent Component Analysis And Principle Component Analysis," *International Journal of Scientific and Technology Research*, vol. 9, no. 11, pp. 80-95

8. Rumana Islam, **Mohammed Tarique**, and Esam Abdel-Raheem, "A Survey on Signal Processing based Pathological Voice Detection Techniques," *IEEE Access*, Vol. 8, April 2020, pp. 66746-66776

9. Abou Elnour, **M. Tarique**, D. Foyez, L. Hassan, and A. Rashed, "Location-Aware Health Monitoring System for Emergency Cases," *International Journal of Scientific and Technology Research*, vol. 8, no. 21, January 2020, pp. 1247-1254,

10. **Mohammed Tarique** and Rumana Islam, "Performances of Ad hoc Networks under Deterministic and Probabilistic Channel Conditions: Cases for Single Path and Multipath Routing Protocols," *International Journal of Computer Networks and Communications*, Vol. 10, No. 4, July 2018, pp. 1-21

11. Henok Ali, Momem Odeh, Ahmed Odeh, Ali Abou El-Nour, and **Mohammed Tarique**, "Unmanned Aerial Vehicular System for Greenhouse Gas Measurement and Automatic Landing," *Network Protocols and Algorithms*, Vol. 9, No. 3-4, December 31, 2017, pp. 56-75

12. Mohamed Aboubakr, Ahmed Balkis, Ali-Abou ElNour, and **Mohammed Tarique**, "Environmental Monitoring System by Using Unmanned Vehicular System," *Network Protocols and Algorithms*, Vol. 9, No. 3-4, December 31, 2017, pp. 31-55

13. **Mohammed Tarique**, "Selection of Optimal Beam Forming Algorithm for Mobile Ad hoc Networks," *Wireless Engineering and Technologies*, Vol. 8, January 24, 2017, pp. 20-36

14. Hyder Khaleq, Ali Abu El-Nour, and **Mohammed Tarique**, "A Reliable Wireless Systems for Water Quality Monitoring and Level Control," *Network Protocols and Algorithm*, Vol.8. No. 3, October 30, 2016, pp. 1-14

15. **Mohammed Tarique**, "Optimum Wavelet Selection for Orthogonal Wavelet Division Multiplex (OWDM) Based Broadcasting System," *Transactions on Networks and Communications*, Vol. 4, No. 4, July 2016, pp. 1-12

16. Muna Dahir, Alyaa Obaid, Aisha Ali, Amna Mohammad, Ali Abou ElNour, and **Mohammed Tarique**, "Mobile Based Robotic Wireless Path Controller," *Network Protocols and Algorithms*, Vol.8, No.2, June 2016, pp. 20-38

17. **Mohammed Tarique**, "Performances of Orthogonal Wavelet Division Multiplex (OWDM) System Under AWGN, Rayleigh, and Ricean Channel Conditions," *International Journal of Computer Networks and Communications*, Vol. 8, No. 3, May 2016, pp. 93-105

18. **Mohammed Tarique** and Mussab Saleh Muhammad, "Window Based Pulse Shaping Techniques for DVB-T System," *Transactions on Networks and Communications*, Vol.4, No.1, March 2016, pp. 25-37

19. AKM Arifuzzaman, Rumana Islam, and **Mohammed Tarique**, "Window Based Smart Antenna Design for Mobile Ad hoc Networks Routing Protocol," *International Journal of Wireless and Mobile Networks*, Vol. 7, No. 4, August 2015, pp. 63-80

20. Abrar Khamies, Shaikhah Rashed, Ali Abou El-Nour, and **Mohammed Tarique**, "ZigBee Based Optimal Scheduling for Home Appliances in the United Arab Emirates," *Network Protocols and Algorithms*, Vol. 7, No. 2, July 31, 2015, pp. 60-79

21. Fatmah ElZahra, Ameena Hatem, and **Mohammed Tarique**, "Fourier Transform Based Early Detection of Breast Cancer by Mammogram Image Processing," *Journal of Biomedical Engineering and Medical Imaging*, Vol. 2, No. 4, July 2015, pp. 17-32

22. Amna Abdullah, Asma Ismail, Aisha Rashid, Ali Abou El-Nour, and **Mohammed Tarique**, "Real-Time Wireless Health Monitoring Applications Using Mobile Devices," *International Journal of Computer Networks and Communications*, Vol. 7, No. 3, May 2015, pp.13-30

23. Shaikhul Arefin Khan and **Mohammed Tarique**, "Minimizing Vibration Effects in Satellite Laser Communication," *International Journal of Multidisciplinary Sciences and Engineering*, Vol. 5, No. 11, November 2014, pp. 12-20

24. Thoraya Obaid, Halimaah Rashid, Abu El-Nour, M. Reehan, M.Saleh, and **Mohamed Tarique**, " ZigBee Technologies and Its Application in Wireless Home Automation System: A Survey," *International Journal of Networks and Communications*, Vol. 6, No. 6, July 2014, pp. 115-131

25. Khalifa AlSharqi, Abdelrahim Abdelbari, Ali Abou-Elnour, and **Mohammed Tarique**, "ZigBee based Wearable Remote Healthcare Monitoring System for Elderly People," *International Journal of Wireless and Mobile Networks*, Vol. 6, No. 3, June 2014, pp. 53-67

26. A.H. Siddique, AKM Arifuzzaman, Rumana Islam, and **Mohammed Tarique**, "Performance Study of Coded and Uncoded IEEE 802.16d under Stanford University Interim (SUI) channels," *International Journal of Computer Network and Communications*, Vol. 6, No.2, March 2014, pp. 143-158

27. Thoraya Obaid, Halimaah Rashid, Abu El-Nour, M. Rehan, M. Saleh, and **Mohamed Tarique**, "ZigBee based Voice-Controlled Wireless Smart Home System," *International Journal of Wireless and Mobile Networks*, Vol. 6, No. 1, February 2014, pp. 47-59

28. AKM Arifuzzaman, Rumana Islam, **Mohammed Tarique**, and Mussab Saleh Hassan "Effects of receiver filters on the performances DVB-T receiver," *International Journal of Wireless and Mobile Networks*, Vol. 5, No. 3, June 2013, pp. 103-118

29. AKM Arifuzzaman, Mussab Saleh, **Mohammed Tarique**, and Rumana Islam, "Effects of filters on DVB-T receiver performance under AWGN, Rayleigh, and Ricean fading channels," *International Journal of Computer Networks and Communication*, Vo. 5, No. 4, July 2013, pp. 87-101

30. Shaffatul Islam, Adnan Riaz, and **Mohammed Tarique**, "Performance analysis of routing protocols of mobile ad hoc networks for VoIP applications," *International Journal of Selected Area of Communication*, June 2012, pp. 26-33

31. Abdul Hashib Siddique, AKM Arifuzzaman, and **Mohammed Tarique**, "Performance study of IEEE 802.16d under Stanford University Interim (SUI) Channel," *International Journal of Computer Networks and Communications*, Vol. 5, No.2, 2013, pp. 137-152

32. Muhammad Shaffatul Islam, Md.Adnan Riaz, and **Mohammed Tarique**, "Performance Analysis of the Routing Protocols for Video Streaming Over Mobile Ad Hoc Networks," *International Journal of Computer Networks and Communication*, Vol.4, No.3, pp. 133-150,2012

33. Anwar Hossain and **Mohammed Tarique**, "Effect of Multi-Path Fading and Multiple Access Interference on Broadband CDMA Systems", *International Journal of Communication Systems*, John Wiley, June 24, 2011

34. **Mohammed Tarique**, Kemal E. Tepe, Sasan Adibi, and Shervin Erfani, "A Survey on Multipath Routing Protocols for Mobile Ad Hoc Network," *Journal of Network and Computer Applications*, Vol. 32, No. 6, November 2009, Pages 1125-1143

35. **Mohammed Tarique** and Kemal E. Tepe, "Minimum Energy Hierarchical Dynamic Source Routing for Mobile Ad Hoc Network," *Ad Hoc Networks*, Vol. 7, No. 6, August 2009, Pages 1125-1135

36. **Mohammed Tarique** and Kemal E. Tepe, "A new hierarchical design for Wireless Ad Hoc Networks with Cross-Layer Design," *International Journal of Ad Hoc and Ubiquitous Computing,* Vol. 2, No. ½, 2007, pp. 12-21

37. Dhrupad Debnath, Chowdhury Akram, Rumana Islam, and **Mohammed Tarique**, "Minimizing Shadowing effects on Mobile Ad hoc Networks," *International Journal of Selected Area on Telecommunications (IJSAT)*, October 2011, pp. 46-51

38. Nadia Nawshin, AKM Arifuzzaman, and **Mohammed Tarique**, "Demonstration and Performance ROF based OFDM-PON system for the next generation fiber optic communication," *International Journal of Computer Networks and Communications*, Vol. 4, No.1, January 2012, pp. 193-209

39. Nateq Be-Nazir Ibn Minar, and **Mohammed Tarique**, "Bluetooth Security Threats and Solution: A Survey," *International Journal of Distributed and Parallel Processing*, Vol. 3, No.1, January 2012, pp. 127-148

40. Arifuzzaman AKM, Anwar Hossain, Nadia Hossain, and **Mohammed Tarique**, "A Comparative Performance Analysis of MRC Diversity Receivers in OFDM System", *International Journal of Distributed and Parallel Systems (IJDPS)*, Vol.2, No.4, July 2011, pp. 88-101

41. **Mohammed Tarique**, Anwar Hossain, Rumana Islam, and C. Akram Hossain, "Issues of long-hop and short-hop routing in Mobile Ad hoc Networks: A comprehensive study," *Network protocol and Algorithm*, Vol. 2, No. 2, September 2010, pp. 107-131

42. Nateq Be-Nazir Ibn Minar, and **Mohammed Tarique**, "A Secured Bluetooth Based Social networks," *International Journal of Computer Applications*, Vol. 26, No.1, July 2011, pp. 16-22

43. Naurin Kadir, Ariq I. Aziz, Sarjana Chowdhury, Samiha Shamma, and **Mohammed Tarique**, "Minimizing vibration effects of satellite laser communications," *International Journal of Computer Applications*, Vol. 26, No. 6, July 2011, pp. 19-25

44. **Mohammed Tarique** and Tanvir Hasan, "Impact of Nakagami-m Fading Model on Multi-hop Mobile AdHoc Networks," *International Journal of Computer Applications*, Vol. 26, No. 6, July 2011, pp. 5-12

45. Nepal Narayan and **Mohammed Tarique**, "Performance Analysis of MIMO based WiMax System," *International Journal of Selected Area of Telecommunication,* July 2011, pp. 20-25

46. Shaffatul Islam, Mamunur Rashid, and **Mohammed Tarique**, "Performance analysis of WiMax/WiFi system using different Codecs," *International Journal of Computer Applications*, Vol. 18, No. 6, March 2011, pp. 13-19

47. Md. Anwar Hossain, **Mohammed Tarique**, and Rumana Islam, "Shadowing Effects on Routing Protocol of Multihop Ad Hoc Networks," *International Journal of Sensor, Ad Hoc, Sensor and Ubiquitous Computing*, Vol. 1, No. 1, March 2010, pp. 12-28

48. **Mohammed Tarique** and Rumana Islam, "Minimum Energy Dynamic Source Routing Protocol for Mobile Ad hoc Networks," *International Journal of Computer Science and Network Security*, Vol. 7, No. 11, 2008, pp. 304-311

2. CONFERENCES

1. Rumana Islam and **Mohammed Tarique**, "Chest X-ray Images to Differentiate COVID-19 from Pneumonia with Artificial Intelligence Techniques," International Journal of Biomedical Imaging, Volume 2022, Article ID 5318447, December 2022.

2. R. Islam, E. Abdel-Raheem and M. Tarique, "Deep Learning Based Pathological Voice Detection Algorithm Using Speech and Electroglottographic (EGG) Signals," 2022 International Conference on Electrical and Computing Technologies and Applications (ICECTA), Ras Al Khaimah, United Arab Emirates, 2022, pp. 127-131.

3. R. Islam, E. Abdel-Raheem and M. Tarique, "Deep Learning Based Pathological Voice Detection Algorithm Using Speech and Electroglottographic (EGG) Signals," 2022 International Conference on Electrical and Computing Technologies and Applications (ICECTA), Ras Al Khaimah, United Arab Emirates, 2022, pp. 127-131.

4. Rumana Islam and Mohammed Tarique, "Discriminating COVID-19 Patients from Pneumonia Patients using Machine Learning and Deep Learning Algorithms using Chest X-rays Images," *Proceedings of the 23rd IEEE International Conference on Industrial Technology*, August 2022, Shanghai

5. Rumana Islam, Esam Abdel-Raheem, and Mohammed Tarique, "Early Detection of COVID-19 Patients using Chromagram Features of Cough Sound Recordings with Machine Learning Algorithms," *Proceedings of International Conference on Microelectronics*, December 2021, Egypt, pp. pp. 82-85

6. Rumana Islam and Mohammed Tarique, "Classifier based Early Detection of Pathological Voice," *Proceedings of the International Symposium on Signal Processing and Information Technology*, Ajman, December 2019

7. Dina Jamel, Mohammed Tarique, and Rumana Islam, "Voice Features Analysis for Early Detection of Voice Disability in Children," *Proceedings of the IEEE International Conference on Signal Processing and Information Technology*, Louisville, KY, USA, USA Louisville, KY, USA, USA

8. Ali Abou-Elnour, A. Thabet, S. Helmy, Y. Kashf, Y. Hadad, M. Tarique, and Ossama Abo-Elnor, "Integrated wireless sensor network and real-time smart controlling and monitoring system for efficient energy management in standalone photovoltaic systems," *Proceedings of Sensors and Smart Structure Technologies for Civil, Mechanical, and Aerospace System*, San Diego, California, March 9, 2014

9. Nadia Nawshin, A K M Arifuzzaman, Mohammed Tarique, and ABM Siddique Hossain," Demonstration of a Novel OCDMA Based PON System for Next-Generation Fiber Optic Communication," *Proceedings of the Seventh International Conference on broadband and wireless computing, communication, and applications*, University of Victoria, Victoria, Canada, November 2012, pp. 573-577

10. A K M Arifuzzman, Md. Anwar Hossain, Nadia Nowshin, and Mohammed Tarique, "Performance Comparison of Selection Combining Diversity Receivers for different modulation schemes in OFDM System," *Proceedings of International Conference on Computer and Information and Information technology (ICCIT 2010)*, Dhaka, December 2010

11. Shamendu Roy Rohit, Tasnim Alam, Shadeeb Hossain, Adnan Maqsud, Najia Hossain, Mohammad Tarique, and Maruf Hossain, "Experimental Analysis on Wireless Energy Transfer Via Strongly Coupled Magnetic

Resonance," *Proceedings of International Conference on Engineering Research, Innovation and Education*, (CERIE 2011), January 2011, Dhaka

12. Tanveer Bhuiyan, Mohammed Tarique, and Rumana Islam, "Routing in MANET: Long hops vs short hops," *Proceedings of International Conference on Electrical and Computer Engineering*, December 2008, Dhaka, Bangladesh, pp. 600-605

13. Mohammed Tarique, Kemal E. Tepe, and Mohammad Naserian, "A cross-layer design for forwarding node selection in Wireless Ad Hoc Networks," *Proceedings of International Conference on Wireless Networks, Communication and Mobile Computing (IEEE Wirelesscom)*, 2005, Hawaii, USA, pp. 802-807

14. Mohammed Tarique, Kemal E. Tepe, and Mohammad Naserian, "Hierarchical Dynamic Source Routing: Passive Forwarding Node selection for Wireless Ad Hoc Network," *Proceedings of International Conference on Wireless and Mobile Computing, Networking and Communication (WIMOB)*, 2005, pp. 73-78

15. Mohammed Tarique, Kemal E. Tepe, and Mohammad Naserian, "Energy Saving Dynamic Source Routing for Wireless Ad Hoc Network," *Proceedings of the 3rd International Symposium, on Modeling and Optimization in Mobile Ad Hoc and Wireless Networks (WIOPT)*, 2005, Trento, Italy, pp. 305-310

16. Mohammad Naserian, Kemal E. Tepe, and Mohammad Tarique, "Routing overhead analysis for Wireless Ad Hoc Network," *Proceeding of IEEE International Conference of Wireless and Mobile Computing, Networking and Communication (WIMOB)*, 2005, Montreal, Quebec, pp. 87-92

17. Mohammad Naserian, Kemal E. Tepe, and Mohammad Tarique, "On the connectivity of nodes in wireless ad hoc and sensor network," *Proceeding of IEEE Canadian Conference on Electrical and Computer Engineering*, Saskatoon, Canada, pp. 2073-2075

18. Mohammad Naserian, Kemal E. Tepe, and Mohammad Tarique, "HDSR: Hierarchical Dynamic Source Routing for Heterogeneous Wireless Mobile Ad Hoc Networks," *Proceeding of the 10th IFIP International Conference on Personal Wireless Communication (PWC)*, Colmar, France, 2005, pp. 125-132

19. Kemal E. Tepe, Mohammad Naserian, and Mohammad Tarique, "A New Hierarchical Architecture for Wireless Ad Hoc Network," *Proceeding of Wireless 2004*, Calgary, Alberta, pp. 246-254

3. BOOKS AND BOOK CHAPTERS None
4. NOTES AND ARTICLES None
5. OTHER PUBLICATIONS **None**
PROFESSIONAL AND ACADEMIC ACTIVITIES

1. Professional Training (conductance and attendance)
- CISCO Routers and Switches, St. Clare College, Windsor, Ontario, Canada
- Object-Oriented Software Design, Lamar University, Beaumont Texas
- ISO 9001 Quality System, Beximco Infusions Limited, Bangladesh
- Inventory Management, Beximco Infusions Limited, Bangladesh
- Engineering Management Workshop, Beximco Infusions Limited, Bangladesh

2. Workshops and seminars (conductance and attendance)
- ABET Accreditations Workshop, Ajman University of Science and Technology, UAE
- Industrial Automation Workshop, Lamar University, Texas
- Sexual Harassment Workshop, Lamar University, Texas
- Human Resource Management, Beximco Infusions Limited, Bangladesh
- Time and Motion Study Workshop, Beximco Infusions Limited, Bangladesh
- Engineering Management Workshop, Beximco Infusions Limited, Bangladesh
- Project Management Workshops, Institute of Business Administration, Bangladesh
- The use of Turnitin in assessing the similarity indices in graduation projects, and assignments with high weightage.

- Role of the Faculty Member in Efficient Assessment and Evaluation
- Launching new academic programs
- Training on effective usage of the student's information system
- Design, preparation, administration, and grading of USTF admission exams at the university.
- Workshop on USTF COVID-19 safety protocols.
- Design and implementation of maintaining e-course files in the MOODLE LMS at USTF.
- Determining a new undergraduate Admission Policy at USTF.
- Ministry of Education (MoE) accreditation compliance Framework 15 Standards.
- Designing effective courses and program assessment tools according to QFEmirates Strands.
- Designing questionnaire for exit survey for assessing Program Outcomes.
- Feasibility study of on-campus vs online synchronous teaching modes of selected courses.
- Applications of Artificial Intelligence (AI) in improvement of health services and teaching methods.
- Designing appropriate exam questions for effective assessment tools.
- Designing appropriate teaching methods to support students with disability.
- The roles and responsibilities of USTF faculty and student councils in enriching student life on campus.
- Promoting innovation and sustainability in USTF practices.
- Social responsibility and community engagement strategy for the University.
- Preparing program effectiveness report as a tool for closing the quality assurance loop.
- Achieving course learning outcomes (CLOs) and Program Learning Outcomes (PLOs) in the hybrid mode of education.
- Writing proposal for obtaining external grant.
- Maintaining COVID-19 protocol at the University.
- The UK Professional Standards Framework for teaching and supporting learning in higher education.

3. Master Theses Supervision
- Demonstration and performance study of different PON systems for the next-generation optical fiber communication system
- Performance improvement of the tracking system for satellite laser communication link
- An analytical approach towards Bluetooth networking and its security architecture
- A comparative analysis of network performances for different routing protocols under the Nakagami-m fading channel model and its impact on multi-hop mobile ad hoc network (MANET)
- Minimizing shadowing effects in Mobile Ad hoc Networks (MANET)
- Performance evaluation of MIMO-based WiMAX system

4. Doctorate Theses Supervision
None

MEMBERSHIP OF SCIENTIFIC ASSOCIATIONS
- Member of IEEE   - Member of IEEE Communication Society   - Member of Association of Computing Machinery (ACM)   - Member of Association of Industry Research Council   - Member of Institute of Engineers Bangladesh

AWARDS
Ontario Graduate Scholarship (OGS), Ministry of Advanced Education and Skill Development, Provincial Government, Ontario, Canada
Tuition Scholarship, University of Windsor, Windsor, Ontario, Canada
Graduate Scholarship, University of Windsor, Ontario, Canada
Research Scholarship, University of Windsor, Ontario, Canada
Tuition Scholarship, Lamar University, Beaumont, Texas, USA
Teaching Assistantship, Lamar University, Beaumont, Texas, USA
Undergraduate Scholarship, Bangladesh University of Science and Technology, Bangladesh