

Assoc. Prof. Dr. A. F. M. Shahen Shah

Department of Electronics and Communication Engineering, Yildiz Technical University, Türkiye.

World's Top 2% Scientists (Stanford University and Elsevier, 2023-2024)

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1. Web of Science ResearcherID: R-5735-2017.

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Scopus Author ID: 57188670758.

IEEE Author ID: 37086331294.

Service to profession/ Publons: <https://www.webofscience.com/wos/author/rid/R-5735-2017>

Verified peer reviews: 85.

2. Google Scholar: Citations: 1421, h-index: 21, i10-index: 36.

<https://scholar.google.com.tr/citations?user=TEiljQ4AAAAJ&hl=en&oi=ao>**Academic Qualification:**

Exam Title	Concentration / Major	Institute	Result	Passing Year	Achievement
Doctor of Philosophy (Ph.D.)	Electronics and Communication Engineering	Yildiz Technical University, Turkey	CGPA-3.75 on a scale of 4.0	2020	Completed within minimum duration, Awarded “Gold” medal in the 32 nd ITEX.
Master in Information Technology	Information Technology	University of Dhaka, Bangladesh	CGPA-3.85 on a scale of 4.0	2011	Stood Third in the batch
B. Sc. in Electronics and Telecommunication Engineering	Electronics and Telecommunication Engineering	Daffodil International University, Bangladesh	CGPA-3.96 on a scale of 4.0	2009	Stood First in the batch

Working experiences:**1. Organization**

: Yildiz Technical University.

Designation

: Associate Professor, Department of Electronics and Communication Engineering.

Address

: YTÜ-Davutpaşa Kampüsü, 34220 Esenler, Istanbul, Türkiye.

Duration: Associate Professor (From 07-08-2023 to till now),
Assistant Professor (From 24-03-2021 to 06-08-2023)

Job Responsibility : Teaching courses:

1. Communication I (Bachelor)
2. Communication II (Bachelor)
3. Cellular Communication Systems 1 (Bachelor)
4. Probability Theory (Bachelor)
5. Digital Signal Processing (Bachelor)
6. Signals and Systems (Bachelor)

7. Principles of Digital Communications Systems (Bachelor)
8. Cellular Communication System Planning and Optimization (Master and Ph.D.)
9. Next Generation Wireless Communication Systems (Master and Ph.D.)

2. Organization : Istanbul Gelisim University.
Designation : Assistant Professor, Department of Electrical and Electronic Engineering.
Address : Cihangir Mahallesi, 34310 Avcılar, Istanbul, Türkiye.
Duration : From 03-02-2020 to 23-03-2021.
Job Responsibility : Teaching courses:
 1. Electromagnetic theory (Bachelor)
 2. Introduction to Electrical Engineering (Bachelor)
 3. Introduction to Robot Technology (Bachelor)
 4. Wireless communication (Master)
 5. Advanced artificial neural networks (Master)
 6. Communication Network Design (Master)
 7. Probability and Stochastic Process (Master)

3. Organization : Islami Bank Bangladesh Ltd.
Designation : Officer
Address : Implementation & Operation Management Division, ICT Wing.
 Head Office, 196, Motijheel C/A, Dhaka, Bangladesh.
Duration : From 12-05-2014 to 02-02-2020.
Job Responsibility : BACH, BEFTN and iBanking Support.

4. Organization : NCC Bank Ltd.
Designation : Assistant Officer(10-07-2011 to 31-07-2013),
 Junior Officer (01-08-2013 to 11-05-2014), IT Division
Address : Information Technology Division, NCC Bank Ltd, Head Office,
 13/1, 13/2, Toyenbee Circular Road, Motijheel C/A, Dhaka, Bangladesh.
Duration : From 10-07-2011 to 11-05-2014.
Job Responsibility : IT Support.

5. Organization : GTL International Bangladesh Pvt. Ltd
Designation : Radio Frequency (RF) Engineer.
Address : Suite # 06, Level # 06, Plot # 15, Road # 103,
 Pink City Building, Gulshan Avenue, Dhaka - 1212
Duration : From 01-12- 2009 to 09-07- 2011.
Job Responsibility : Radio optimization (saturation/capacity/Coverage/Events), Network Deployment
 (site-selection, site-construction & site-commissioning)

Projects:

9. HIKLAB: Development of Unmanned Aerial Vehicles IoT Platform for Disaster Management.
 Funded by Scientific Research Projects of Yildiz Technical University (YTÜ-BAP)
 (2025 - 2027)
 Position: Researcher

8. Designing Hybrid MAC Protocol and Channel Access Mechanism for UAV Communication in 5G and Beyond using Artificial Intelligence.
 Funded by Scientific Research Projects of Yildiz Technical University (YTÜ-BAP)
 (2025 - 2027)

Position: Project manager

7. Developing a product group resistant to mechanical impact that provides location detection and basic health data tracking, suitable for use in pre-school periods.

Funded by Scientific and Technological Research Council of Turkey (TÜBİTAK 1005)
(2025 - 2026)

Position: Project supervisor

6. Intelligent reflecting surface assisted Fluid Antenna Multiple Access with MIMO using artificial intelligence for 6G.

Funded by Scientific and Technological Research Council of Turkey (TÜBİTAK 1001)
(2024 - 2027)

Position: Project manager

5. Emergency communication systems in natural disasters via UAVs in 5G and beyond.

Funded by Scientific Research Projects of Yildiz Technical University (YTÜ-BAP)
(2024 - 2026)

Position: Project manager

4. Designing Cluster-based Cooperative Massive MIMO enabled Hybrid MAC Protocol for Reliable and Efficient UAVs Communication in 5G and beyond through Artificial Intelligence.

Funded by Scientific and Technological Research Council of Turkey (TÜBİTAK 3501)
(2023 - 2026)

Position: Project manager

3. Real-Time Turkish Sign Language Recognition System Based on Deep Learning.

Funded by Scientific Research Projects of Yildiz Technical University (YTÜ-BAP)
(2023 - 2025)

Position: Project manager

2. An Efficient and Reliable Cooperative MAC Protocol for Mobility Aware Cluster-based VANETs.

Funded by the Scientific and Technological Research Council of Turkey (TÜBİTAK 1002)
(2019 - 2020)

Position: PhD Scholar

1. Designing and performance analysis of efficient and reliable medium access control (MAC) protocols for vehicular ad hoc networks.

Funded by Scientific Research Projects of Yildiz Technical University (YTÜ-BAP)
(2018 - 2020)

Position: PhD Researcher

Supervised Theses:

Master:

5. Md. Thouhidur Rahman, “Cluster-based MAC Protocol for UAVs Ad Hoc Networks in 5G and Beyond”, Department of Electronics and Communication Engineering, Yildiz Technical University, 2025.

4. Dunya Jassim Al-Bu Mohammed, “Designing An Effective MIMO Antenna for 5G”, Department of Electrical and Electronic Engineering, Istanbul Gelisim University, 2023.

3. Kareem Hameed Ali Al-Gburi, “Performance comparison of PEGASIS, HEED, and LEACH protocols in wireless sensor networks”, Department of Electrical and Electronic Engineering, Istanbul Gelisim University, 2022.
2. Alaa Hussein Abdulaal, “Designing and implementation of electronic device controlled IoT for COVID 19 patients monitoring through secured communication system”, Department of Electrical and Electronic Engineering, Istanbul Gelisim University, 2021.
1. Ahmed Nidham Qasim, “Performance Evaluation and Comparison of Multiple Access Techniques for Next Generation Communication Systems”, Department of Electrical and Electronic Engineering, Istanbul Gelisim University, 2021.

Publications:

Journals:

Articles published in the journal of SCI/ SCIE index:

26. S. Uddin, **A. F. M. S. Shah**, M. A. Karabulut and H. Ilhan, "Cooperative MAC protocol with Optimal Relay Selection algorithm for UAVs ad hoc Network in Disasters," in IEEE Transactions on Vehicular Technology, Vol. , No. , pp. 1-11, Apr. 2025. (DOI: 10.1109/TVT.2025.3558455) **SCIE, Q1**
26. Unraveling the nexus of ML and 6G: Challenges, Opportunities, and Future Directions
25. **A. F. M. S. Shah**, M. A. Karabulut, A. Kamruzzaman, D. Alharthi, and P. G. Bradford, " A Survey on Artificial Intelligence and Blockchain Clustering for Enhanced Security in 6G Wireless Networks," in Computers, Materials & Continua, Vol. , No. , pp. 1-33, Jun. 2025. (DOI: 10.32604/cmc.2025.064028) **SCIE, Q2**
24. **A. F. M. S. Shah**, M. Ali Karabulut, E. Cinar and K. M. Rabie, "A Survey on Fluid Antenna Multiple Access for 6G: A New Multiple Access Technology That Provides Great Diversity in a Small Space," in IEEE Access, vol. 12, pp. 88410-88425, Jun. 2024. (DOI: 10.1109/ACCESS.2024.3418291) **SCIE, Q1**
23. Alaa Hussein Abdulaal, Morteza Valizadeh, Mehdi Chehel Amirani, and **A. F. M. Shahen Shah**, “A self-learning deep neural network for classification of breast histopathological images,” in Elsevier Biomedical Signal Processing and Control, vol. 87, 105418, pp. 1 - 21, Jan. 2024. (DOI: 10.1016/j.bspc.2023.105418) **SCIE, Q1**
22. M. B. Islam, M. S. Junayed, A. Sadeghzadeh, N. Anjum, A. A. Jeny, and **A. F. M. Shahen Shah**, “Acne Vulgaris Detection and Classification: A Dual Integrated Deep CNN Model,” in Informatica, Vol. 47, No. 4, pp. 577–592, Dec. 2023. (DOI: 10.31449/inf.v47i4.4384) **SCIE, Q2**
21. M. N. Mowla, N. Mowla, **A. F. M. S. Shah**, K. Rabie and T. Shongwe, "Internet of Things and Wireless Sensor Networks for Smart Agriculture Applications- A Survey," in IEEE Access, vol., pp., Dec. 2023. (DOI: 10.1109/ACCESS.2023.3346299). **SCIE, Q1**
20. **A. F. M. Shahen Shah**, Muhammet Ali Karabulut, Haci Ilhan and Ufuk Tureli, “Influence of channel fading and capture for performance evaluation in vehicular communications,” in IEEE Canadian Journal of Electrical and Computer Engineering, vol. 46, no. 4, pp. 322-332, Nov. 2023. (DOI: 10.1109/ICJECE.2023.3308478) **SCIE, Q2**

19. Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, Haci Ilhan, Al-Sakib Khan Pathan, and Mohammed Atiquzzaman, "Inspecting VANET with Various Critical Aspects – A Systematic Review ", *Ad Hoc Networks*, vol. 150, 103281, pp. 1-18, Nov. 2023. (DOI: 10.1016/j.adhoc.2023.103281). **SCIE, Q1**
18. M. A. Karabulut and **A. F. M. S. Shah**, "The impact of cooperative unmanned aerial vehicles communication under Nakagami-m fading channel", *Journal of the Faculty of Engineering and Architecture of Gazi University*, vol. 38, no. 4, pp. 2095-2106, Apr. 2023. (DOI: 10.17341/gazimmfd.997670). **SCIE, Q2**
17. **A. F. M. Shahen Shah**, M. A. Karabulut, A. F. M. S. Akhter, N. Mustari, A. K. Pathan, K. Rabie, and T. Shongwe, "On the Vital Aspects and Characteristics of Cryptocurrency – A Survey," in *IEEE Access*, vol. 11, pp. 9451-9468, Jan. 2023. (DOI: 10.1109/ACCESS.2023.3240103). **SCIE, Q1**
16. **A. F. M. Shahen Shah**, " Architecture of Emergency Communication Systems in Disasters through UAVs in 5G and Beyond," in *Drones*, vol. 7, no. 1, pp. 1-16, Jan. 2023. (DOI: 10.3390/drones7010025). **SCIE, Q1**
15. **A. F. M. Shahen Shah**, M. A. Karabulut, H. Ilhan and U. Tureli, "Optimizing Vehicular Safety Message Communications by Adopting Transmission Probability with CW Size," in *IEEE Access*, vol. 10, pp. 118849-118857, Nov. 2022. (DOI: 10.1109/ACCESS.2022.3221418). **SCIE, Q1**
14. Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, and Haci Ilhan, "A Novel MIMO-OFDM based MAC Protocol for VANETs," in *IEEE Transactions on Intelligent Transportation Systems*, vol. 23, no. 11, pp. 20255-20267, Nov. 2022. (DOI: 10.1109/TITS.2022.3180697). **SCIE, Q1 (Top 3%)**
13. M. Ahmed, N. Moustafa, A. F. M. S. Akhter, I. Razzak, E. Surid, A. Anwar, **A. F. M. Shahen Shah**, A. Zengin, "A Blockchain-Based Emergency Message Transmission Protocol for Cooperative VANET," in *IEEE Transactions on Intelligent Transportation Systems*, vol. 23, no. 10, pp. 19624-19633, Oct. 2022. (DOI: 10.1109/TITS.2021.3115245) **SCIE, Q1 (Top 3%)**
12. A. F. M. S. Akhter, M. Ahmed, A. Anwar, **A. F. M. Shahen Shah**, A. K. Pathan, A. Zengin, "Blockchain in Vehicular Ad hoc Networks: Applications, Challenges and Solutions," in *International Journal of Sensor Networks*, vol. 40, no. 2, pp. 94-130, Oct. 2022. (DOI: 10.1504/IJSNET.2022.10046926) **SCIE, Q3**
11. M. S. Junayed, A. A. Jeny, M. B. Islam, I. Ahmed, **A. F. M. Shahen Shah**, "An Efficient End-to-End Deep Neural Network for Interstitial Lung Disease Recognition and Classification," in *Turkish Journal of Electrical Engineering & Computer Sciences*, vol. 30, no. 4, pp. 1235-1250, 2022. (DOI: 10.55730/1300-0632.3846) **SCIE, Q3**
10. M. S. Junayed, M. B. Islam, A. A. Jeny, A. Sadeghzadeh, T. Biswas, **A. F. M. Shahen Shah**, "ScarNet: Development and Validation of a Novel Deep CNN Model for Acne Scar Classification with New Dataset," in *IEEE Access*, vol. 10, pp. 1245-1258, Dec. 2021. (DOI: 10.1109/ACCESS.2021.3138021) **SCIE, Q1**
9. **A. F. M. Shahen Shah**, A. N. Qasim, M. A. Karabulut, H. Ilhan and M. B. Islam, "Survey and Performance Evaluation of Multiple Access Schemes for Next-Generation Wireless Communication Systems," in *IEEE Access*, vol. 9, no.1, pp. 113428-113442, Aug. 2021. (DOI: 10.1109/ACCESS.2021.3104509) **SCIE, Q1**

8. A. F. M. S. Akhter, **A. F. M. Shahen Shah**, M. Ahmed, N. Moustafa, U. Çavuşoğlu, A. Zengin, “A Secured Message Transmission Protocol for Vehicular Ad Hoc Networks,” in *Computers, Materials & Continua*, vol. 68, no.1, pp. 229–246, 2021. (DOI: 10.32604/cmc.2021.015447) **SCIE, Q1**
7. A. F. M. S. Akhter, M. Ahmed, **A. F. M. Shahen Shah**, A. Anwar, A. S. M. Kayes, A. Zengin, “A Blockchain-Based Authentication Protocol for Cooperative Vehicular Ad Hoc Network,” in *Sensors*, vol. 21, no. 4, 1273, pp. 1-21, 2021. (DOI: 10.3390/s21041273) **SCIE, Q1**
6. A F M Suaib Akhter, Mohiuddin Ahmed, **A. F. M. Shahen Shah**, Adnan Anwar, Ahmet Zengin, “A Secured Privacy-preserving multi-level blockchain framework for cluster based VANET,” in *Sustainability*, vol. 13, no. 1, 400, pp. 1-25, 2021. (DOI: 10.3390/su13010400) **SCIE, Q2**
5. **A. F. M. Shahen Shah**, Muhammet Ali Karabulut, Hacı İlhan and Ufuk Tureli, “Performance optimization of cluster-based MAC protocol for VANETs,” in *IEEE Access*, vol. 8, no. 1, pp. 167731 - 167738, Sep. 2020. (DOI: 10.1109/ACCESS.2020.3023642) **SCIE, Q1**
4. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, “OEC-MAC: A Novel OFDMA Based Efficient Cooperative MAC Protocol for VANETs,” in *IEEE Access*, vol. 8, no. 1, pp. 94665 - 94677, May. 2020. (DOI: 10.1109/ACCESS.2020.2995807). **SCIE, Q1**
3. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, “Performance modeling and analysis of the IEEE 802.11 MAC layer for VANETs,” in *Journal of the Faculty of Engineering and Architecture of Gazi University*, vol. 35, no. 3, pp. 1575 - 1588, Apr. 2020. (DOI: 10.17341/gazimmfd.539985) **SCIE, Q2**
2. **A. F. M. Shahen Shah**, Hacı İlhan and Ufuk Tureli, “RECV-MAC: A Novel Reliable and Efficient Cooperative MAC Protocol for VANETs,” in *IET Communications*, vol. 13, no. 16, pp. 2541-2549, Oct. 2019. (DOI: 10.1049/iet-com.2018.6171) **SCI, Q2**
1. **A. F. M. Shahen Shah**, Hacı İlhan and Ufuk Tureli, “CB-MAC: A Novel Cluster-Based MAC Protocol for VANETs,” in *IET Intelligent Transport Systems*, vol. 13, no. 4, pp. 587-595, Apr. 2019. (DOI: 10.1049/iet-its.2018.5267) **SCIE, Q2**

Articles published in other journals:

19. An Effective MIMO Antenna Design for 5G and Beyond to Support Industry 5
18. A. H. Abdulaal, M. Valizadeh, R. A. Yassin, M. C. Amirani, A. F. M. Shahen Shah, B. M. Albaker, A. S. Mustaf, “Hybrid CNN and RNN Model for Histopathological Sub-Image Classification in Breast Cancer Analysis Using Self-Learning”, *Journal of Engineering and Sustainable Development*, vol. 29, no. 3, pp. 310–320, May 2025. (DOI: 10.31272/jeasd.2746). **SCOPUS, Q3**
17. Nazifa Mustari, Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, Ufuk Tureli, “A Comprehensive Study on Cellular Evolution from 1G to 6G,” in *Politeknik Dergisi*, vol. 28, no. 2, pp. 351-371, Mar. 2025. (DOI: 10.2339/politeknik.1263687) **ESCI**
16. A. H. Abdulaal, M. Valizadeh, R. A. Yassin, B. M. Albaker, A. H. Abdulwahhab, M. C. Amirani, and **A. F. M. Shahen Shah**, “Unsupervised Histopathological Sub-Image Analysis for Breast Cancer Diagnosis Using Variational Autoencoders, Clustering, and Supervised Learning”, *Journal of Engineering and Sustainable Development*, vol. 28, no. 6, pp. 729–744, Nov. 2024. (DOI: 10.31272/jeasd.28.6.6) **SCOPUS, Q4**

15. Abul Kalam Azad, Travis Atkison, **A. F. M. Shahen Shah**, “A Review on Machine Learning in Intelligent Transportation Systems Applications,” in Open Transportation Journal, vol. 18, pp. 1 - 19, Sep. 2024. (DOI: 10.2174/0126671212330496240821114216) **SCOPUS, Q3**
14. M. A. Karabulut and **A. F. M. S. Shah**, “A Study and Future Challenges in 6G Networks: Aeronautical Network, AI and Blockchain”, Journal of Aeronautics and Space Technologies (JAST), vol. 17, no. 2, pp. 122–138, Jul. 2024. **TR Index**
13. Arezoo Sadeghzadeh, **A.F.M. Shahen Shah**, Md Baharul Islam, “MLMSign: Multi-lingual multi-modal illumination-invariant sign language recognition”, Intelligent Systems with Applications, vol. 3, no. 1, pp. , 200384, Jun. 2024. ISSN 2667-3053, (DOI: 10.1016/j.iswa.2024.200384). **SCOPUS, Q1**
12. A. Hussein Abdulaal, M. Valizadeh, B. M. Albaker, R. Ali Yassin, M. Chehel Amirani, and **A. F. M. Shahen Shah**, “Enhancing Breast Cancer Classification using a Modified GoogLeNet Architecture with Attention Mechanism”, Al-Iraqia Journal for Scientific Engineering Research (IJSER), vol. 3, no. 1, pp. 47–63, Mar. 2024. (DOI: 10.58564/IJSER.3.1.2024.145).
11. A. ABDULAAL, **A. F. M. S. SHAH**, and M. A. KARABULUT, “Developing and Implementing an IoT Managed by Electronic Devices for Covid Patient Monitoring via a Secured Communication System”, Sakarya University Journal of Science (SAUJS), vol. 28, no. 1, pp. 85–100, Feb. 2024. (DOI: 10.16984/saufenbilder.1203409) **TR Index**
10. Nazifa Mustari, Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, Ufuk Tureli, “Cooperative THz Communication for UAVs in 6G and Beyond,” in Elsevier Green Energy and Intelligent Transportation, vol. 3, no. 1, pp. 1-7, Feb. 2024. (DOI: 10.1016/j.geits.2023.100131) **SCOPUS**
9. **A. F. M. S. Shah**, M. A. Karabulut and K. Rabie, "Multiple Access Schemes for 6G Enabled NTN-Assisted IoT Technologies: Recent Developments, Prospects and Challenges," in IEEE Internet of Things Magazine, vol. 7, no. 1, pp. 48-54, Jan. 2024. (DOI: 10.1109/IOTM.001.2300234) **IEEE Magazine**
8. Nazifa Mustari, Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, Ufuk Tureli, “Terahertz Communication with MIMO-OFDM in FANETs for 6G,” in Open Transportation Journal, vol. 17, pp. 1 - 9, Aug. 2023. (DOI: 10.2174/18744478-v17-230810-2023-7) **SCOPUS, Q3**
7. Kareem Hameed Ali, and **A. F. M. Shahen Shah**, “Performance Comparison of PEGASIS, HEED and LEACH Protocols in Wireless Sensor Networks,” in Celal Bayar University Journal of Science, vol. 19, no. 1, pp. 11–18, Mar. 2023. (DOI: 10.18466/cbayarfe.1165816) **TR Index**
6. **A. F. M. Shahen Shah**, and Muhammet Ali Karabulut, “Reliability estimation for drone communications by using an MLP-based model,” in International Advanced Researches and Engineering Journal, vol. 6, no. 3, pp. 1–7, Dec. 2022. (DOI: 10.35860/iarej.1162019) **EBSCO, TR**
5. Alaa Hussein Abdulaal, **A. F. M. Shahen Shah**, and Al-Sakib Khan Pathan, “NM-LEACH: A Novel Modified LEACH Protocol to Improve Performance in WSN,” in International Journal of Communication Networks and Information Security (IJCNIS), vol. 14, no. 1, pp. 1 - 10, April 2022. (DOI: 10.54039/ijcnis.v14i1.5127) **SCOPUS, Q3**
4. **A. F. M. Shahen Shah**, and Muhammet Ali Karabulut, “Optimization of drones communication by using meta-heuristic optimization algorithms,” in Sigma Journal of Engineering and Natural Sciences, vol. 40, no. 1, pp. 108–117, March 2022. (DOI: 10.14744/sigma.2022.00009) **ESCI**

3. **A. F. M. Shahen Shah**, Md. Shariful Islam, "A Survey on Cooperative Communication in Wireless Networks," International Journal of Intelligent Systems and Applications (IJISA), Vol. 6, No. 7, pp. 66-78, June 2014. (DOI: 10.5815/ijisa.2014.07.09) **SCOPUS, Q3**

2. **A. F. M. Shahen Shah** and Md. Shariful Islam, "CSCM: A Contention Sensitive Routing Metric for Efficient Cooperative Communication in Multi-Hop Wireless Networks," International Journal on Internet and Distributed Computing Systems (IJIDCS), Vol. 2, No. 2, pp. 157–163, 2012. (ISSN: 2219-1127) CrossRef

1. A.K.M Fazlul Haque, **A.F.M. Shahen Shah**, Md. Abdul Hannan, Nusrat Jahan, Jasim Uddin Ahmed, Md. Abu Saleh "High Performance Analysis of Frequency Reuse Schemes in Cellular Mobile Environment," International Journal of Latest Trends in Computing, Vol. 2, Issue 1, pp. 29 – 34, March 2011. (ISSN: 2045-5364) **EBSCO**

Publications in the conference/ congress / symposium:

33. Implementation of Cluster-Based UAV Swarm Networks for Emergency Communications

32.

31. Performance Analysis of Fluid Antenna Multiple Access (FAMA) for 6G

30. Cluster-Based FANETs With MIMO-OFDM Under 3D Mobility in 5G and Beyond

29. S. Uddin, M. A. Karabulut, **A. F. M. Shahen Shah** and H. Ilhan, "Performance Investigation of UAVs Ad Hoc Networks with 3D Markov Chain Model," IEEE 6th International Conference on Communications, Signal Processing, and their Applications (ICCSPA), Istanbul, Turkiye, 2024, pp. 1-5. (DOI: 10.1109/ICCSPA61559.2024.10794215.)

28. O. Kaya, M. A. Karabulut, **A. F. M. S. Shah** and H. Ilhan, "Modulation Classifier Based on Deep Learning for Beyond 5G Communications," IEEE 47th International Conference on Telecommunications and Signal Processing (TSP), Prague, Czech Republic, 2024, pp. 336-339. (DOI: 10.1109/TSP63128.2024.10605950.)

27. **A. F. M. Shahen Shah**, M. A. Karabulut, and K. Rabie, "Improvement of Emergency Communication Systems Using Drones in 5G and Beyond for Safety Applications," in Proc. of IEEE Future Networks World Forum (FNWF), Baltimore, USA, Nov. 2023, pp. 1-6. (DOI: 10.1109/FNWF58287.2023.10520362.)

26. **A. F. M. Shahen Shah**, M. A. Karabulut, and K. Rabie, "Mission-Critical Internet of Things on the 6G Network: Services and Apps with Networking Architecture," in Proc. of IEEE 98th Vehicular Technology Conference: VTC2023-Fall, Hong Kong, Oct. 2023, pp. 1-5. (DOI: 10.1109/VTC2023-Fall60731.2023.10333821).

25. **A. F. M. Shahen Shah** and Muhammet Ali Karabulut, "Analyzing IEEE 802.11ax: The Standard for The Next Generation WLANs," in Proc. of The 16th International Scientific Research Congress - Science and Engineering (UBAK), Ankara, Turkey, Mar. 2023, pp. 53-60.
24. **A. F. M. Shahen Shah**, "A Survey From 1G to 5G Including the Advent of 6G: Architectures, Multiple Access Techniques, and Emerging Technologies," in Proc. of IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC), Las Vegas, NV, USA, 2022, pp. 1117-1123. (DOI: 10.1109/CCWC54503.2022.9720781)
23. Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, Md Baharul Islam, Muhammad Ehsan Rana, "OFDMA Based UAVs Communication for Ensuring QoS," in Proc. of International Conference on Advances and Applications of Artificial Intelligence & Machine Learning (ICAAAIML), India, Oct. 2021, pp. 331-342. (DOI: 10.1007/978-981-19-4831-2_27) Q4
22. Ismail Hakki Yemenoglu, **A. F. M. Shahen Shah** and Haci Ilhan, "Deep Convolutional Neural Networks-Based Sign Language Recognition System," in Proc. of IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, 2021, pp. 0573-0576. (DOI: 10.1109/IEMCON53756.2021.9623068).
21. A. A. Jeny, M. S. Junayed, M. B. Islam, H. Imani and **A. F. M. Shahen Shah**, "Machine Vision-based Expert System for Automated Cucumber Diseases Recognition and Classification," in Proc. of IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA), Turkey, 2021, pp. 1-6. (Doi: 10.1109/INISTA52262.2021.9548607).
20. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Haci Ilhan, "Improvement of performance with MIMO Enabled MAC Protocol for VANETs," in Proc. of IEEE Innovations in Intelligent Systems and Applications Conference (ASYU), Istanbul, Turkey, 2020, pp. 1-4. (DOI: 10.1109/ASYU50717.2020.9259839).
19. **A. F. M. Shahen Shah**, Haci Ilhan and Ufuk Tureli, "Designing and Analysis of IEEE 802.11 MAC for UAVs Ad Hoc Networks," accepted in IEEE 10th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), New York, USA, Oct. 2019, pp. 0934-0939. (DOI: 10.1109/UEMCON47517.2019.8993018)
18. **A. F. M. Shahen Shah**, H. Ilhan and U. Tureli, "Performance and Complexity Analysis of MAC Protocol for VANETs," in Proc. of IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, 2019, pp. 1081-1086. (DOI: 10.1109/IEMCON.2019.8936150)
17. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Haci Ilhan, "Performance of the CR-MAC with Channel Fading and Capture Effect Under Practical Traffic Scenarios for VANETs," accepted in IEEE 10th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), New York, USA, Oct. 2019, pp. 0647-0652. (DOI: 10.1109/UEMCON47517.2019.8993071)
16. **A. F. M. Shahen Shah**, Haci Ilhan and Ufuk Tureli, "Modeling and Performance Analysis of the IEEE 802.11 MAC for VANETs under Channel Fading and Capture Effect," in Proc. of IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), Sofia, Bulgaria, July, 2019, pp. 1 - 5. (DOI: 10.1109/INISTA.2019.8778288)
15. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Haci Ilhan, "CoMACAV: Cooperative MAC Protocol for Autonomous Vehicles," in Proc. of IEEE International Symposium on INnovations in

Intelligent Systems and Applications (INISTA), Sofia, Bulgaria, July, 2019, pp. 1 - 6. (DOI: 10.1109/INISTA.2019.8778404)

14. **A. F. M. Shahen Shah**, Hacı İlhan and Ufuk Tureli, "Modeling and Performance Analysis of the IEEE 802.11p MAC for VANETs," in Proc. of IEEE 42st International Conference on Telecommunications and Signal Processing (TSP), Budapest, Hungary, July, 2019, pp. 393-396. (DOI: 10.1109/TSP.2019.8769073)

13. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, "Performance Optimization by Using Artificial Neural Network Algorithms in VANETs," in Proc. of IEEE 42st International Conference on Telecommunications and Signal Processing (TSP), Budapest, Hungary, July, 2019, pp. 633-636. (DOI: 10.1109/TSP.2019.8768830)

12. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, "CR-MAC: Cooperative Relaying MAC Protocol for VANETs," in Proc. of IEEE the Scientific Meeting on Electrical-Electronics & Biomedical Engineering and Computer Science (EBBT), Istanbul, Turkey, April, 2019, pp. 1 - 4. (DOI: 10.1109/EBBT.2019.8741925)

11. **A. F. M. Shahen Shah**, Hacı İlhan and Ufuk Tureli, "Modeling and Performance Analysis of the IEEE 802.11 MAC for VANETs under Capture Effect," in Proc. of IEEE Wireless and Microwave Technology Conference (WAMICON), Cocoa Beach, Florida, USA, April, 2019, pp. 1 - 5. (DOI: 10.1109/WAMICON.2019.8765446)

10. Osman Toker, **A. F. M. Shahen Shah**, and M.S. Ufuk Tureli, "Performance analysis of the IEEE 802.11p for different packet length in VANETs", IMCIC 2019 - 10th International Multi-Conference on Complexity, Informatics and Cybernetics, Proceedings, vol.1, Florida, USA, March, 2019, pp.171-176. (ISBN: 978-1-5108-9695-6)

9. **A. F. M. Shahen Shah**, Hacı İlhan and Ufuk Tureli, "qCB-MAC: QoS Aware Cluster-Based MAC Protocol for VANETs," in Proc. of Computing Conference, London, UK, Jul. 2018, pp. 685-695. (DOI: 10.1007/978-3-030-01177-2_50).

8. **A. F. M. Shahen Shah**, Muhammet Ali Karabulut, and Hacı İlhan, "Performance Modeling and Analysis of the IEEE 802.11 EDCAF for VANETs," in Proc. of Intelligent Systems Conference, London, UK, Sep. 2018, pp. 34-46. (DOI: 10.1007/978-3-030-01057-7_3)

7. Osman Toker, **A. F. M. Shahen Shah**, and M.S. Ufuk Tureli, "The IEEE 802.11p Performance for Different Packet Length and Arrival Rate in VANETs," in Proc. of The Fourteenth Advanced International Conference on Telecommunications (AICT), Barcelona, Spain, July, 2018, pp. 1 - 5. (ISBN: 978-1-61208-650-7)

6. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, "The Performance of the IEEE 802.11 DCF for Different Contention Window in VANETs," in Proc. of IEEE 41st International Conference on Telecommunications and Signal Processing (TSP), Athens, Greece, July, 2018, pp. 1 - 4. (DOI: 10.1109/TSP.2018.8441481)

5. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Hacı İlhan, "The Effect of Contention Window Size of the IEEE 802.11 DCF for VANETs," in Proc. of IEEE 26th Signal Processing and Communication Applications (SIU), Izmir, Turkey, May, 2018, pp. 1 - 4. (DOI: 10.1109/SIU.2018.8404850)

4. Jun Ma, **A. F. M. Shahen Shah**, Mustafa Baysal and Haci Ilhan, “On-Line Energy Management Strategy for Hybrid Electric Vehicle Based on AMPC,” in Proc. of IEEE 10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, December, 2017, pp. 185-189. (ISBN: 978-605-01-1134-7)

3. Muhammet Ali Karabulut, **A. F. M. Shahen Shah** and Haci Ilhan, “Performance Modelling and Analysis of the IEEE 802.11 DCF for VANETs,” in Proc. of IEEE 9th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT), Munich, Germany, November, 2017, pp. 341 - 346. (DOI: 10.1109/ICUMT.2017.8255147)

2. **A. F. M. Shahen Shah**, Nazifa Mustari, “Modeling and Performance Analysis of the IEEE 802.11P Enhanced Distributed Channel Access Function for Vehicular Network,” in Proc. of IEEE Future Technologies Conference (FTC), San Francisco, United States, December, 2016, pp. 173-178. (DOI: 10.1109/FTC.2016.7821607)

1. **A. F. M. Shahen Shah**, Mohammad Shah Alam and Shamim Ara Showkat, “A New Cooperative MAC Protocol for The Distributed Wireless Networks,” in Proc. of IEEE Region 10 Conference (Tencon), Macao, China, November, 2015, pp. 1 – 6. (DOI: 10.1109/TENCON.2015.7373141)

Book:

1. **A. F. M. Shahen Shah**, Md. Shariful Islam and Mohammad Shah Alam, “Cooperative Communication In Wireless Networks,” Saarbrücken, Germany: LAP LAMBERT Academic Publishing, February 2013. (ISBN: 978-3-659-34128-1)

Book chapters:

2. **A. F. M. Shahen Shah**, Muhammet Ali Karabulut, “Industry 5.0: A Study on Supporting Technology Systems, Applications, and Future Directions,” In: C. Özalp, S. Bardak, E. Hürdoğan (eds): International Academic Research and Reviews in Engineering, Serüven Publishing, Turkey, Mar. 2023, pp. 153-168. (ISBN: 978-625-6399-76-1)

1. Muhammet Ali Karabulut, **A. F. M. Shahen Shah**, “DF based cooperative UAVs communication with co-channel interference,” In: Alper Bideci (eds): International Research in Engineering Sciences, Platanus Publishing, Turkey, Mar. 2023, pp. 290-303. (DOI: 10.5281/zenodo.7744436)

Thesis:

1. “Designing and performance analysis of efficient and reliable medium access control (MAC) protocols for vehicular ad hoc networks”.

Ph.D. Thesis

Supervisor: Prof. Dr. Haci Ilhan, Co-Supervisor: Prof. Dr. M.S. Ufuk Tureli
(DOI: 10.13140/RG.2.2.26403.12323)

2. “Cooperative Communication in Wireless Networks”.

Master’s Thesis

Supervisor: Prof. Dr. Shariful Islam
(DOI: 10.13140/RG.2.2.16563.73762/1)

3. “Efficient Bandwidth Optimization in Telecommunication”.

B. Sc. Thesis

Supervisor: Prof. Dr. A.K.M. Fazlul Haque

AWARDS:

- "WORLD RANKING OF TOP 2% SCIENTISTS (2023-2024)" in the area of "Networking & Telecommunications", and "Artificial Intelligence" in 2023. In the areas of "Networking & Telecommunications," "Artificial Intelligence," and "Information & Communication Technologies" in 2024.
- Awarded "Special Jury Award" at the Disaster Technologies Summit Competition 2025, organized by Edis World.
- Awarded "top 10 most-published Assistant Professors" at Yildiz Technical University for the year of 2022, awarded in 2023.
- Awarded "mention award" with the supervised team in the multidisciplinary design project competition which was held in the Electrical and Electronics faculty of Yildiz Technical University, in 2023. The project was "vehicle control using eye tracking."
- Awarded "GOLD" in the 32nd International Invention, Innovation & Technology Exhibition (ITEX) which was held in Kuala Lumpur, Malaysia, in 2021. The invention was "Design and optimization of a novel cluster-based MAC (CB-MAC) protocol for VANETs."
- Achieved "Turkey Government Scholarship" for the Ph.D. degree in Yildiz Technical University.
- Achieved "100% waiver/ Scholarship" for the B. Sc. degree in Daffodil International University.
- Student volunteer award for dedication & commitment to quality service in the 7th Foundation day 2009 of Daffodil International University.
- Awarded "Crest" for the results of Higher Secondary Certificate examination.

Invited Talks & Keynote Speeches:

- "Intelligent reflecting surface assisted Fluid Antenna Multiple Access with MIMO using artificial intelligence for 6G", 2nd International Conference on Devices, Intelligent System & Communications (DISC 2024, indexed in Scopus & WOS), JB Institute of Engineering and Technology in Hyderabad, India, Nov. 2024. (Keynote speech)
- "Architecture of Emergency Communication Systems in Disasters via UAVs in 5G and Beyond Using Artificial Intelligence", Gaziosmanpaşa Anadolu İmam Hatip Lisesi, 06 May 2025, Istanbul, Türkiye. (TÜBİTAK Science Talk Event)
- "Architecture of Emergency Communication Systems in Disasters via UAVs in 5G and Beyond Using Artificial Intelligence", Gaziosmanpaşa Bilim Ve Sanat Merkezi, 17 May 2025, Istanbul, Türkiye. (TÜBİTAK Science Talk Event)

Editor-in-Chief:

- IECE Transactions on Mobile and Wireless Intelligence (IECE).
- ICRRD Quality Index Research Journal (ICRRD)

Editor:

- Open Transportation Journal (Scopus, Bentham Open).
- Discover Vehicles (Springer)

Associate Editor:

- Journal of Cyber Security Technology (Scopus, Taylor & Francis).

Reviewer:

- Applied Sciences, Concurrency and Computation-Practice & Experience, Drones, Electronics, Entropy, IEEE ACCESS, IEEE Transactions on Vehicular Technology, IEEE Transactions on

Intelligent Transportation Systems, IEEE Transactions on Wireless Communications, IEEE Communications Letters, IEEE Internet of Things Journal, IEEE Internet of Things Magazine, IET Communications, IET Intelligent Transport Systems, IET Software, Recent Advances in Electrical & Electronic Engineering, Sensors, SN Computer Science, Wiley Concurrency and Computation: Practice and Experience, Wiley/ Hindawi Wireless Communications and Mobile Computing, Wireless Networks (Springer), etc.

- IEEE conferences (AYSU, CCWC, Globecom, IEMCON, INISTA, PIMRC, TENCON, UEMCON, VPPC, WCNC, etc.)

Technical Program Committee (TPC):

- IEEE conferences (AYSU, CCWC, IEMCON, INISTA, PIMRC, UEMCON, etc.)
- 5th Global Conference on Computing and Media Technology (GCMT 2021), 8th EAI International Conference on IoT as a Service (IoTaaS 2022), etc.

Membership:

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE): (M'17, SM'19) to present.
- Life Member, Institution of Engineers Bangladesh (IEB): 2014 to present.

Communication & Language Proficiency:

- Fluent in listening, reading, writing and speaking in **Bengali, English** and **Turkish** Languages. (Bengali is native language, English: YÖKDİL score- 85, Turkish: C1 level certification from Yıldız TÖMER)
- I can understand Hindi and Urdu. I can read and write Arabic.

Professional Qualification:

- **Java SE-7 Programmer-1&2** is completed in New Horizons Computer Learning Centers, Dhaka, Bangladesh.
- **Certified Wireless Network Administrator (CWNA)** is completed in Daffodil International University, Dhaka, Bangladesh.

Computer Skill:

Conversant with following Computer Skills:

01	Operating System	:	Windows, Linux.
02.	Word Processing	:	Microsoft Word.
03.	Spread sheet analysis	:	Microsoft Excel.
04.	Special	:	Microsoft PowerPoint, Internet Browsing.
05	Language	:	Java, MATLAB, C/C++, HTML, XML, PHP, SQL in MySQL
06	Electronics software	:	Electric circuit maker, workbench, Orcad.
07	Telecommunication Software	:	Packet Tracer, Link Budget, Path Loss 4.0.
08	Computer Networking	:	Certified Wireless Network Administrator (CWNA)

Extra-Curricular Activities:

- I was the “Office Secretary of Science Club” in Daffodil International University.
- Participated as a “Volunteer in foundation program” of Daffodil International University.

- I was awarded “Prize for Speech Competition” in Chittagong Government Muslim High School.
- Participated in the “Inter University Debate Competition ” held in Daffodil International University
- Volunteer works in Institute of Electrical and Electronics Engineers (IEEE), Institution of Engineering and Technology (IET), Institution of Engineers, Bangladesh (IEB), etc.
- Visited Countries: Bangladesh, Czech Republic, France, Greece, Italy, Netherlands, Turkey, UK, and USA.