

Asst. Prof. AFM SHAHEN SHAH

Personal Information

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International Researcher IDs

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Biography

A. F. M. Shahen Shah (Senior Member, IEEE) received the B.Sc. degree in electronics and telecommunication engineering from Daffodil International University, Bangladesh, in 2009, the M.Sc. degree in information technology from the University of Dhaka, Bangladesh, in 2011, and the Ph.D. degree in electronics and communication engineering from Yildiz Technical University, Turkey, in 2020. He worked as an Assistant Professor with the Department of Electrical and Electronics Engineering, Istanbul Gelisim University, Turkey, from 2020 to 2021. He also worked in industry for ten years, where he served as a higher management position. Since 2021, he has been working as an Assistant Professor with the Department of Electronics and Communication Engineering, Yildiz Technical University. He has authored a book. He has published a good number of research papers in international conferences and journals. His current research interests include wireless communication, artificial intelligence, 6G, blockchain, and cross-layer design, etc. He is a Life Member of the Institution of Engineers, Bangladesh (IEB).

Education Information

Doctorate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2016 - 2020

Postgraduate, University of Dhaka, Institute of Information Technology (IIT), Information Technology, Bangladesh 2010 - 2011

Undergraduate, Daffodil International University, Engineering , Electronics and Telecommunication Engineering , Bangladesh 2006 - 2009

Foreign Languages

English, C1 Advanced

Turkish, C1 Advanced

Dissertations

Doctorate, Designing and performance analysis of efficient and reliable medium access control protocols for vehicular ad hoc networks, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, 2020

Postgraduate, Cooperative Communication in Wireless Networks, University of Dhaka, 2011

Research Areas

Communication Engineering, Communication Networks, Wireless Communication, Performance Modelling and Evaluation, Communications and Network Protocols, Network Architecture, Artificial Intelligence, Computer Learning and Pattern Recognition

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2021 - Continues

Assistant Professor, Istanbul Gelisim University, Faculty Of Engineering-Architecture, Department Of Electrical And Electronic Engineering, 2020 - 2021

Courses

Next Generation Wireless Communication Systems, Doctorate, 2021 - 2022

Probability Theory, Undergraduate, 2021 - 2022

Digital Signal Processing, Undergraduate, 2021 - 2022

Communication 1, Undergraduate, 2021 - 2022

Cellular Communication Systems 1, Undergraduate, 2021 - 2022

Cellular Communication System Planning and Optimization, Doctorate, 2021 - 2022

Advising Theses

Shah A. S. , Performance comparison of PEGASIS, HEED, and LEACH protocols in wireless sensor networks, Postgraduate, K.HAMEEDAH(Student), 2022

Shah A. S. , Designing and Implementation of electronic Device controlled IoT for COVID 19 patients monitoring through secured communication system, Postgraduate, A.Hussein(Student), 2021

Shah A. S. , Yeni Nesil Haberleşme Sistemleri İçin Çoklu Erişim Tekniklerinin Performans Değerlendirilmesi ve Karşılaştırılması, Postgraduate, A.Nidham(Student), 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A Novel MIMO-OFDM Based MAC Protocol for VANETs**
Karabulut M. A. , Shah A. S. , Ilhan H.
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, vol.1, no.1, pp.1-13, 2022 (Journal Indexed in SCI Expanded)
- II. **Blockchain in Vehicular Ad hoc Networks: Applications, Challenges and Solutions**
Zengin A., Shah A. S. , Anwar A., Akhter A. F. M. S. , Ahmed M., Pathan A. S. K.
INTERNATIONAL JOURNAL OF SENSOR NETWORKS, vol.1, pp.1-21, 2022 (Journal Indexed in SCI Expanded)
- III. **An efficient end-to-end deep neural network for interstitial lung disease recognition and classification**
Junayed M. S. , Jeny A. A. , Islam M. B. , Ahmed I., Shah A. S.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.30, pp.1235-1250, 2022 (Journal Indexed in SCI)
- IV. **ScarNet: Development and Validation of a Novel Deep CNN Model for Acne Scar Classification with a New Dataset**
Junayed M. S. , Islam M. B. , Jeny A. A. , Sadeghzadeh A., Biswas T., Shah A. S.

IEEE Access, vol.9, no.1, pp.1-13, 2021 (Journal Indexed in SCI Expanded)

- V. **A Blockchain-Based Emergency Message Transmission Protocol for Cooperative VANET**
Ahmed M., Moustafa N., Akhter A. F. M. S. , Razzak I., Anwar A., Shah A. S. , Zengin A.
IEEE Transactions On Intelligent Transportation Systems, vol.22, no.12, pp.1-10, 2021 (Journal Indexed in SCI Expanded)
- VI. **A Secured Message Transmission Protocol for Vehicular Ad Hoc Networks**
Akhter A. F. M. S. , Shah A. S. , Çavuşoğlu U., Zengin A.
Cmc-Computers Materials & Continua, vol.68, no.1, pp.229-246, 2021 (Peer-Reviewed Journal)
- VII. **A Blockchain-Based Authentication Protocol for Cooperative Vehicular Ad Hoc Network**
Akhter A. F. M. S. , Ahmed M., Shah A. S. , Anwar A., Kayes A. S. M. , Zengin A.
SENSORS, vol.21, no.4, 2021 (Journal Indexed in SCI)
- VIII. **Survey and Performance Evaluation of Multiple Access Schemes for Next-Generation Wireless Communication Systems**
SHAH A. S. , Qasim A. N. , KARABULUT M. A. , İLHAN H., Islam M. B.
IEEE ACCESS, vol.9, pp.113428-113442, 2021 (Peer-Reviewed Journal)
- IX. **A Secured Privacy-Preserving Multi-Level Blockchain Framework for Cluster Based VANET**
Akhter A. F. M. S. , Ahmed M., Shah A. S. , Anwar A., Zengin A.
SUSTAINABILITY, vol.13, no.1, 2021 (Journal Indexed in SCI)
- X. **Performance modeling and analysis of the IEEE 802.11 MAC protocol for VANETS**
Karabulut M. A. , Shah A. S. , İlhan H.
Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.35, no.3, pp.1575-1587, 2020 (Journal Indexed in SCI Expanded)
- XI. **Performance Optimization of Cluster-Based MAC Protocol for VANETS**
Shah A. S. , KARABULUT M. A. , İLHAN H., Tureli U.
IEEE ACCESS, vol.8, pp.167731-167738, 2020 (Peer-Reviewed Journal)
- XII. **OEC-MAC: A Novel OFDMA Based Efficient Cooperative MAC Protocol for VANETS**
KARABULUT M. A. , Shah A. S. , İLHAN H.
IEEE ACCESS, vol.8, pp.94665-94677, 2020 (Peer-Reviewed Journal)
- XIII. **RECV-MAC: a novel reliable and efficient cooperative MAC protocol for VANETS**
Shah A. S. , İlhan H., Türeli M. S. U.
IET COMMUNICATIONS, vol.13, no.16, pp.2541-2549, 2019 (Peer-Reviewed Journal)
- XIV. **CB-MAC: a novel cluster-based MAC protocol for VANETS**
SHAH A. S. , İLHAN H., Tureli U.
IET INTELLIGENT TRANSPORT SYSTEMS, vol.13, no.4, pp.587-595, 2019 (Peer-Reviewed Journal)

Articles Published in Other Journals

- I. **NM-LEACH: A Novel Modified LEACH Protocol to Improve Performance in WSN**
Abdulaal A. H. , SHAH A. S. , Pathan A. K.
International Journal of Communication Networks and Information Security, vol.14, no.1, pp.1-10, 2022 (Peer-Reviewed Journal)
- II. **Optimization of drones communication by using meta-heuristic optimization algorithms**
Shah A. S. , Karabulut M. A.
Sigma Journal of Engineering and Natural Sciences, vol.40, no.1, pp.108-117, 2022 (Journal Indexed in ESCI)
- III. **A Survey on Cooperative Communication in Wireless Networks**
Shah A. S. , Islam M. S.
International Journal of Intelligent Systems and Applications (IJISA), vol.6, no.7, pp.66-78, 2014 (Refereed Journals of Other Institutions)

Books & Book Chapters

- I. **OFDMA Based UAVs Communication for Ensuring QoS**
KARABULUT M. A. , SHAH A. S. , ISLAM M. B. , Rana M. E.
in: Applications of Artificial Intelligence and Machine Learning, Lecture Notes in Electrical Engineering,, B. Unhelker, H. M. Pandey, G. Raj, Editor, Springer, pp.331-342, 2022
- II. **qCB-MAC: QoS Aware Cluster-Based MAC Protocol for VANETs**
Shah A. S. , İlhan H., Türeli M. S. U.
in: Intelligent Computing. Advances in Intelligent Systems and Computing, Arai K., Kapoor S., Bhatia R., Editor, Springer, London/Berlin , Chemnitz, pp.685-695, 2019
- III. **Performance Modeling and Analysis of the IEEE 802.11 EDCAF for VANETs**
Shah A. S. , Karabulut M. A. , İlhan H.
in: Intelligent Systems and Applications. Advances in Intelligent Systems and Computing, Arai K., Kapoor S., Bhatia R., Editor, Springer, London/Berlin , Chemnitz, pp.34-46, 2018
- IV. **Cooperative Communication In Wireless Networks**
Shah A. S. , Islam M. S. , Alam M. S.
LAMBERT Academic Publishing, Saarbrücken, 2013

Refereed Congress / Symposium Publications in Proceedings

- I. **A Survey From 1G to 5G Including the Advent of 6G: Architectures, Multiple Access Techniques, and Emerging Technologies**
Shah A. S.
IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC), Nevada, United States Of America, 26 - 29 January 2022, pp.1117-1123
- II. **Deep Convolutional Neural Networks-Based Sign Language Recognition System**
Yemenoğlu İ. H. , Shah A. S. , İlhan H.
The 12th Annual IEEE Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON 2021), Vancouver, Canada, 27 - 30 October 2021, pp.1-4
- III. **Machine Vision-based Expert System for Automated Cucumber Diseases Recognition and Classification**
Jeny A. A. , Junayed M. S. , Islam M. B. , Imani H., Shah A. S.
IEEE International Conference on INnovations in Intelligent Systems and Applications (INISTA), Kocaeli, Turkey, 25 - 27 August 2021, pp.1-6
- IV. **Improvement of performance with MIMO Enabled MAC Protocol for VANETs**
Karabulut M. A. , Shah A. S. , İlhan H.
IEEE The Innovations in Intelligent Systems and Applications Conference (ASYU), İstanbul, Turkey, 15 - 17 October 2020, pp.1-4
- V. **Performance of the CR-MAC with Channel Fading and Capture Effect under Practical Traffic Scenarios for VANETs**
Karabulut M. A. , Shah A. S. , İlhan H.
IEEE 10th Annual Ubiquitous Computing, Electronics Mobile Communication Conference (UEMCON), New York, United States Of America, 10 - 12 October 2019, pp.647-652
- VI. **Performance and Complexity Analysis of MAC Protocol for VANETs**
Shah A. S. , İLHAN H., TÜRELİ M. S. U.
2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, 17 - 19 October 2019
- VII. **Designing and Analysis of IEEE 802.11 MAC for UAVs Ad Hoc Networks**
Shah A. S. , İlhan H., Türeli M. S. U.
IEEE 10th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), New

York, United States Of America, 10 - 12 October 2019, pp.934-939

- VIII. **Performance Optimization by Using Artificial Neural Network Algorithms in VANETs**
Karabulut M. A. , Shah A. S. , İlhan H.
IEEE 42nd International Conference on Telecommunications and Signal Processing (TSP), Budapest, Hungary, 1 - 03 July 2019, pp.633-636
- IX. **CoMACAV: Cooperative MAC protocol for autonomous vehicles**
Karabulut M. A. , Shah A. S. , İlhan H.
IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA), Sofija, Bulgaria, 3 - 05 July 2019, pp.1-5
- X. **Modeling and Performance Analysis of the IEEE 802.11 MAC for VANETs under Channel Fading and Capture Effect**
Shah A. S. , İlhan H., Türeli M. S. U.
IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), Sofija, Bulgaria, 3 - 05 July 2019, pp.1-6
- XI. **Modeling and Performance Analysis of the IEEE 802.11 MAC for VANETs under Capture Effect**
Shah A. S. , İlhan H., Türeli M. S. U.
IEEE Wireless and Microwave Technology Conference (WAMICON), Florida, United States Of America, 8 - 09 April 2019, pp.1-5
- XII. **CR-MAC: Cooperative relaying MAC protocol for VANETs**
Karabulut M. A. , Shahan Shah A. S. , İlhan H.
2019 Scientific Meeting on Electrical-Electronics and Biomedical Engineering and Computer Science, EBBT 2019, İstanbul, Turkey, 24 - 26 April 2019
- XIII. **Performance analysis of the IEEE 802.11p for different packet length in VANETs**
Toker O., Shah A. S. , TÜRELİ M. S. U.
10th International Multi-Conference on Complexity, Informatics and Cybernetics, IMCIC 2019, Florida, United States Of America, 12 - 15 March 2019, vol.1, pp.171-176
- XIV. **Modeling and Performance Analysis of the IEEE 802.11p MAC for VANETs**
SHAH A. S. , İLHAN H., TÜRELİ M. S. U.
42nd International Conference on Telecommunications and Signal Processing (TSP), Budapest, Hungary, 1 - 03 July 2019, pp.393-396
- XV. **The Performance of the IEEE 802.11 DCF for Different Contention Window in VANETs**
Karabulut M. A. , Shahan Shah A. S. , İlhan H.
41st International Conference on Telecommunications and Signal Processing, TSP 2018, Athens, Greece, 4 - 06 July 2018
- XVI. **The effect of contention window size of the IEEE 802.11 dcf for VANETs VANET'ler için IEEE 802.11 DCF'in çekişme penceresi boyutu üzerindeki etkisi**
Karabulut M. A. , Shah A. S. , İlhan H.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XVII. **Performance modeling and analysis of the IEEE 802.11 DCF for VANETs**
Karabulut M. A. , Shahan Shah A. S. , İlhan H.
9th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops, ICUMT 2017, Munich, Germany, 6 - 08 November 2017, pp.346-351
- XVIII. **Modeling and Performance Analysis of the IEEE 802.11P Enhanced Distributed Channel Access Function for Vehicular Network**
SHAH A. S. , Mustari N.
Future Technologies Conference (FTC), San-Francisco, Costa Rica, 6 - 07 December 2016, pp.173-178
- XIX. **A New Cooperative MAC Protocol for The Distributed Wireless Networks**
Shah A. S. , Alam M. S. , Showkat S. A.
IEEE Region 10 Conference (Tencon), Macau, China, 1 - 04 November 2015, pp.1-6

Supported Projects

İlhan H., TUBITAK Project, An efficient and reliable cooperative MAC protocol for mobility aware cluster-based VANETs, 2019 - 2020

İlhan H., Shah A. S. , Project Supported by Higher Education Institutions, Novel cooperative MAC protocols for vehicular networks, 2018 - 2020

Memberships / Tasks in Scientific Organizations

Institute of Electrical and Electronics Engineers (IEEE), Member, 2017 - Continues, United States Of America

Institution of Engineers Bangladesh (IEB), Member, 2014 - Continues, Bangladesh

Metrics

Publication: 40

Citation (WoS): 134

Citation (Scopus): 167

H-Index (WoS): 7

H-Index (Scopus): 8

Scholarships

Scholar, TUBITAK, 2019 - 2020

Turkey Government Scholarship, Other International Organizations, 2015 - 2020

Awards

Shah A. S. , Karabulut M. A. , İlhan H., Türeli M. S. U. , GOLD award, The 32Nd International Invention, Innovation & Technology Exhibition (Itex) 2021, December 2021