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SUMMARY

- Instructor at Özyeğin University in the wireless communication field with broad experience in developing and introducing reconfigurable intelligent surfaces (RIS) and non-orthogonal frequency-division multiplexing (GFDM).
- Doctor of Philosophy in Telecommunication Engineering with broad experience in developing and introducing millimeter wave (mmWave) multiple-input and multiple-output (MIMO) and non-orthogonal multiple access (NOMA) transmission scheme, beamforming, and user pairing schemes.
- Substantial experience in developing end-to-end wireless communication systems based on machine learning, few-shot learning, and multicarrier technologies such as orthogonal frequency-division multiplexing (OFDM) and GFDM.
- Research experience/interests:
 - Wireless communications: MIMO, NOMA, mmWave, beamforming, multicarrier technologies.
 - Reconfigurable Intelligent Surfaces: Path loss model, channel estimation, and phase shift design.
 - Machine learning: Deep neural networks, end-to-end wireless communication systems, and few-shot learning.
 - Signal processing: Image, biomedical signals, passive sonar data, and digital signals.

EDUCATION

2016-2020 **Doctor of Philosophy in Telecommunications Engineering**

University of Tabriz, Tabriz, EA, Iran.

Dissertation: “Beamforming and Random User pairing in Millimeter Wave MIMO Transmission Scheme Based on Non-Orthogonal Multiple Access ”

Advisor: Dr. Behzad Mozaffari Tazehkand

- Defended by excellent degree. • GPA: 18.13 (out of 20 up to now).

2014-2016 **Master of Science in Telecommunications Engineering**

University of Tabriz, Tabriz, EA, Iran.

Thesis: “An Adaptive Sampling Method of MRI Images for Use in Compressive Sensing ”

Advisor: Prof. Mohammad Ali Tinati

- Defended by excellent degree. • GPA: 16.37 (out of 20 up to now).

2010-2014 **Bachelor of Science in Telecommunications Engineering**

Urmia University, Urmia, WA, Iran.

Final project: “Design and Construction of a Digital Thermometer which Helps to Maintain the Room Temperature in a Desire Level”

Advisor: Dr. Shervin Rahim Zadeh

- Defended by excellent degree. • GPA: 16.74 (out of 20 up to now).

HONORS & AWARDS

- Best Book Award in the Third National Youth Book of the Year Award for the "Explosive Pulsed Power", Iran, 2023.
- Travel Award Winner to Participate in the MeditCom Conference, Greece, 2021.
- National Elite Foundation Scholarship Award, Iran, 2020.
- Best Adjunct Assistant Professor Award, Ilkhichi Branch, Islamic Azad University, Ilkhichi, Iran, 2019.
- Best Paper Award in Second National Conference on Applications of Mechatronic and Robotic Systems, Ilkhichi, 2018.
- Travel Award winner to participate in the Second National Conference on Applications of Mechatronic and Robotic Systems, Iran, 2018.
- First-Rank Graduate in B.Sc. Study and Directed Admission to M.Sc. Program of University of Tabriz, 2014.
- Highest GPA in B.Sc., Faculty of Electrical and Computer Engineering, Urmia University, 2013.

RESEARCH EXPERIENCE

Özyeğin University

Instructor, Department of Electrical and Electronics Engineering

September 2022- Present

Istanbul, Turkey

- I work as an Instructor in the Department of Electrical and Electronics Engineering at Özyeğin University, specializing in wireless communication. I have extensive experience developing and introducing RIS and GFDM multicarrier schemes.
- In the context of RIS, my focus is on designing phase shifters and modeling path loss in both near and far fields. Additionally, I am actively involved in extending index modulation within the RIS system, particularly by incorporating unmanned aerial vehicles (UAVs). This strategic incorporation of UAVs brings a dynamic dimension to the RIS functionality, facilitating enhanced adaptability and responsiveness in wireless communication scenarios.
- Concerning GFDM, our research introduces a prototype filter design method to eliminate in-band and adjacent subcarrier self-interference. Unlike previous methods, our proposed approach eliminates self-interference in the GFDM system, irrespective of the number of subcarriers and subsymbols. Furthermore, we outline how our policy can be applied to practical GFDM systems with a larger number of subcarriers and subsymbols. Doing so demonstrates that the proposed method is a helpful and efficient solution for mitigating self-interference in GFDM systems.

University of Tabriz

Graduate Research Assistant

September 2016- August 2022

Tabriz, EA, Iran

- During my Ph.D., I have gained significant experience in MIMO, NOMA, millimeter-wave technology, and random beamforming, as well as developed communication and leadership skills. In my Ph.D. thesis, MIMO and NOMA technologies are utilized in conjunction with millimeter-wave frequencies. Three structures are proposed based on the combination of two NOMA and millimeter-wave technologies with MIMO, large-scale (LS), and sparse large-scale MIMO. Since conventional beamforming requires that all user provide their channel status information to the base station (BS), system overhead and latency are inevitably increased. To reduce them, random beamforming and random user pairing schemes are employed in my Ph.D. thesis. Additionally, to optimize system

performance, the random beamforming vector has been optimized using optimization algorithms, and the optimum beamforming coefficients have been found.

- Developing a mmWave LS-MIMO-NOMA sparse transmission system to reduce the number of antennas, radio frequency (RF) chains, and improve energy efficiency. In this structure, we formulated an optimization problem to find the minimum number of antennas based on outage probability. We optimized the mmWave LS-MIMO-NOMA sparse transmission system using the optimal beamforming vector and random user pairing scheme to achieve massive connectivity. We demonstrated the convexity of the formulated optimization problem and employed a gradient-based algorithm to determine the optimal random beamforming coefficients. We controlled the sparsity of the signal transmission using the information from this iterative algorithm and carefully chose a threshold value. We utilized space-time block coding to improve system performance and improve the outage probability and sum rate by exploiting the diversity gain of space-time block code (STBC) in large-scale MIMO.
- Developing new end-to-end wireless communication systems based on deep machine learning to provide faster wireless communication systems with lower power consumption, and investigating the challenges of implementing the proposed scheme. This project extends the end-to-end concept to networks comprising numerous transmitters and receivers, and defines a new optimization process for use in a deep machine learning-based massive MIMO communication system.
- Designing a new end-to-end deep machine learning wireless communication system architecture by using the advantage of space-time coding and massive MIMO concept that can be used for 5G and beyond wireless communication systems. Learning and adaptation of the number of active transmitter antennas of the array. All transmitting antennas are needed in practical implementation; sometimes, only part of the antennas are utilized to transmit information. Therefore, the learning and adaptation of the transmission antenna to select the transmitting antennas are more important.
- Developing algorithms that can generalize to a novel task given only a few labeled examples represents a fundamental challenge in closing the gap between machine- and human-level performance. Few-shot learning aims to address this fundamental challenge by designing algorithms that can generalize to new tasks with only a few labeled training examples. Based on this concept, I am working on few-shot learning and applying it to feature extraction and classification of passive sonar data.
- Introducing a new system model to represent GFDM and analyze its operation based on the type of self-interferences in this waveform. There are two types of self-interferences in the GFDM system that are independent of each other, and we use this knowledge to design a low-complexity successive interference cancellation (SIC) technique. We refer to these interferences as in-band and adjacent subcarrier interferences. This project aims to develop a new, free, self-interference GFDM system model to enhance system performance and reduce system complexity. Introducing a new peak-to-average power ratio (PAPR) reduction method based on a two-dimensional subcarrier mapping in OFDM. We scramble or interleave each OFDM symbol based on the T-transform to obtain a new set of sub-blocks. In the proposed method, each one-dimensional symbol sequence is converted into a two-dimensional matrix, and partitions are formed starting from the main diagonal lines in the matrix.

University of Tabriz

Graduate Research Assistant

September 2014-February 2016

Tabriz, EA, Iran

- Compressive sensing utilizes sparsity of Magnetic resonance imaging (MRI) for accurate reconstruction of under-sampled k-space data. To use MRI in compressive sensing, a k-space image should be sampled. Based on this, adaptive sampling has been proposed, which consists of two updating steps that utilize the wavelet transform and image blocking. I applied the L1 Magic reconstruction

method to reconstruct MRI images from K-space samples in compressive sensing.

- Developing a feature extraction method in electrocardiogram (ECG) signals. I collaborated with Dr. Morteza Valizadeh on the fourth phase of Shahid Ahmadi Roshan's project, titled "Automatic detection of cardiac arrhythmias with ECG signal analysis," which was based at Urmia University. During this project, I have been involved in extracting features from the ECG signal by Python. The extracted features are utilized for detecting cardiac arrhythmias, and simulated results demonstrate that the proposed method can enhance system accuracy.
- Detection of brain tumor in MRI images using genetic algorithm and K-means clustering.

Urmia University

Undergraduate Research Assistant

September 2010-February 2014

Urmia, WA, Iran

- Designing a mine detector robot for the Robotic Society of Urmia University.
- Design and Construction of a Digital Thermometer which Helps to Maintain the Room Temperature at a Desired Level.
- Simulating Digital Modulators and Demodulators by MATLAB.

PUBLICATIONS

Books

- [1] Altgilbers, Larry L., et al. (2010), Explosive Pulsed Power, Translated by **M.R. Ghavidel Aghdam**, & H. Taghipour Farshi, Ilkichi, Iran, *Islamic Azad University Publications*, 2021.
- [2] **M.R. Ghavidel Aghdam**, & B. Mozaffari Tazehkand, Principles of Telecommunication Systems, *Elsevier*, (in press).

Journal Papers

- [1] M. Farhid, **M.R. Ghavidel Aghdam** & M. Shameli, A neural network-based approach for thrust prediction in cold gas propulsion systems, *Scientific Reports*, Vol. 15, No. 1, PP. e26673, 2025.
- [2] B. Mozaffari Tazehkand, **M.R. Ghavidel Aghdam**, R. Abdolee & A. Kamyab, Optimal Prototype Filter Design in GFDM Systems for Self-Interference Elimination: A Novel Signal Processing Approach, *Signal Processing*, Vol. 227, PP. e109711, 2025.
- [3] R. Chen, **M.R. Ghavidel Aghdam** & M. Khishe, Utilization of Artificial Intelligence for the automated recognition of fine arts, *PLOS ONE*, Vol. 9, No. 11, PP. e0312739, 2024.
- [4] **M.R. Ghavidel Aghdam**, B. Mozaffari Tazehkand & R. Abdolee, Eliminating Intrinsic Interference in GFDM Systems: Design of a Complex-Valued Prototype Filter, *Physical Communication*, PP. 102258, 2024.
- [5] **M.R. Ghavidel Aghdam**, S. M. Hasani Azhdari, M. Khishe & M. Kazemirad, Sonar Data Classification by Using Few-Shot Learning and Concept Extraction, *Applied Acoustics*, Vol. 195, PP. 108856, 2022.
- [6] **M.R. Ghavidel Aghdam**, S. M. Hasani Azhdari, M. Khishe & M. Kazemirad, Feature Extraction from Passive Sonar Data Based on the Combination of Cepstrum and Short-Time Fourier Transform, *Iranian Journal of Marine Science and Technology*, 2022.
- [7] **M.R. Ghavidel Aghdam**, B. Mozaffari Tazehkand, R. Abdolee, & V. Vakilian, Novel Successive Interference Cancellation (SIC) with Low-Complexity for GFDM Systems, *IEEE Access*, Vol. 10, PP. 40063-40072, 2022.

- [8] **M.R. Ghavidel Aghdam**, B. Mozaaffary Tazekand, & R. Abdolee, Joint Optimal Power Allocation and Beamforming for MIMO-NOMA in mmWave Communications, *IEEE Wireless Communications Letters* Vol. 11, No. 5, PP. 938-941, 2022.
- [9] **M.R. Ghavidel Aghdam**, B. Mozaaffari Tazehkand, & R. Abdolee, On the Performance of mm Wave MIMO-NOMA Systems, *IEEE Transaction on Vehicular Technology*, Vol. 69, No. 11, PP. 11491 - 11500, 2020.
- [10] **M.R. Ghavidel Aghdam**, J. Deiri, B. Mozaaffari Tazehkand, & R. Abdolee, A Low Complex PAPR Reduction in OFDM Systems using a two Dimensional Interleaving Strategy, *International journal of communication systems*, Vol. 33, No. 18, PP. e4622, 2020.
- [11] **M.R. Ghavidel Aghdam**, B. Mozaaffari Tazehkand, R. Abdolee, & M. Mohassel Feghhi, Space-Time Block Coding in Millimeter Wave Large-Scale MIMO-NOMA Transmission Scheme, *International Journal of Communication Systems*, Vol. 33, No. 9, PP. e4392, 2020.
- [12] B. Rahmani, **M.R. Ghavidel Aghdam**, & R. Abdolee, Energy Efficient Discontinuous Reception Strategy in LTE and Beyond using an Adaptive Packet Queuing Technique, *IET communication*, Vol. 14, No. 18, PP. 3247 – 3255, 2020.
- [13] **M.R. Ghavidel Aghdam**, Abdolee, R., Sahbari, S. S., & Tazehkand, B. M., Non-Gradient Based PDF Approximation for Sensor Selection in Cognitive Sensor Networks, *International Journal of Interdisciplinary Telecommunications and Networking (IJITN)*, Vol. 11, No. 1, PP. 1-16, 2019.

Manuscript Under Communication

- [14] **M.R. Ghavidel Aghdam**, M. Elamassie, & M. Uysal, A RIS-UAV Wireless Communication System Based on Index Modulation Scheme, TVT, Under review.
- [15] **M.R. Ghavidel Aghdam**, & M. Elamassie, PDF Analysis of Signal-to-Noise Ratio in Reconfigurable Intelligent Surfaces (RIS), Under review.
- [16] **M.R. Ghavidel Aghdam**, M.Elamassie, & M. Uysal, Performance Analysis in the Reconfigurable Intelligent Surfaces (RIS), Under review.
- [17] **M.R. Ghavidel Aghdam**, B. Mozaaffary Tazekand, & R. Abdolee, Random User Grouping in mmWave MIMO-NOMA Based on Optimal Random Beamforming to Maximize the Ergodic Capacity, *Physical Communications*, Under review.
- [18] **M.R. Ghavidel Aghdam**, & R. Abdolee, Deep Machine Learning in MIMO Communication Systems, Under review.

Conference Papers

- [1] **M.R. Ghavidel Aghdam**, M.Elamassie, & M. Uysal, Statistical Characterization of SNR in RIS-Aided Wireless Communication Systems, *IEEE Middle East Conference on Communications and Networking*, Abu Dhabi, United Arab Emirates, 2024.
- [2] **M.R. Ghavidel Aghdam**, R. Abdolee, B. Mozaaffari Tazekand & A. Abedy, Out-Of-Band Analysis of GFDM Systems Based on Different Self-Interference Types, *2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC)*, Las Vegas, NV, USA, pp. 0301-0305, 2023.
- [3] A. Abedy, R. Abdolee, B. Mozaaffari Tazekand & **M.R. Ghavidel Aghdam**, Low-Complexity Interference Reduction for GFDM Systems Using Corrective Coefficients, *2022 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, India, 2022.

- [4] **M.R. Ghavidel Aghdam**, B, Rahmani & R. Abdolee, Traffic-based Adjustable Discontinuous Reception Mechanism in 4G LTE and Beyond with Bounded Delay, *16th IEEE Conference on Wireless On-demand Network Systems and Services (IEEE WONS 2021)*, Klosters, Switzerland, 2021, pp. 1-6, doi: 10.23919/WONS51326.2021.9415597.
- [5] **M.R. Ghavidel Aghdam**, B, Mozaffari Tazekand & R. Abdolee, Random Beamforming in mmWave Large-Scale MIMO-NOMA Based on Sparse Transmission, *IEEE International Mediterranean Conference on Communications and Networking (IEEE MeditCom 2021)*, Athens, Greece, 2021, pp. 288-293, doi: 10.1109/MeditCom49071.2021.9647534.
- [6] **M.R. Ghavidel Aghdam**, M, Pishvai, R. Abdolee, B. Mozaffari Tazekand, & F. Tabe, User Grouping and Optimal Random Beamforming in mmWave MIMO-NOMA Transmission Systems, *20th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM 2019)*, Washington, DC, USA, 2019, pp. 1-6, doi: 10.1109/WoW-MoM.2019.8793042.
- [7] **M.R. Ghavidel Aghdam**, R. Abdolee, F. Asghari Azhiri, & B. Mozaffari Tazekand, Random User Pairing in Massive-MIMO-NOMA Transmission Systems Based on mmWave, *2018 IEEE 88rd Vehicular Technology Conference (VTC fall)*, Chicago, IL, USA, 2018, pp. 1-6, doi: 10.1109/VTC-Fall.2018.8690578.
- [8] **M.R. Ghavidel Aghdam**, R. Abdolee, S. K. Seyyedi. S, & B. Mozaffari Tazekand, Non-Gradient Based PDF Approximation for Sensor Selection in Cognitive Sensor Networks, *Wireless Telecommunication Symposium (WTS)*, USA, 2018.
- [9] **M.R. Ghavidel Aghdam**, R. Abdolee, F. Asghari Azhiri, & B. Mozaffari Tazekand, Optimum Beamforming Coefficient in MIMO-NOMA Transmission Systems Based on Millimeter Wave, *9th International Symposium on Telecommunications (IST2018)*, Tehran, Iran, 2018.
- [10] **M.R. Ghavidel Aghdam** & T. Yousefi, An Adaptive Method for Under- sampling of MRI Images Based on Compressive Sensing, *5th International Conference on Electrical and Computer Engineering with an Emphasis on Indigenous Knowledge*, Tehran, Iran, 2017.
- [11] **M.R. Ghavidel Aghdam** & J. Deiri, PAPR Reduction in OFDM Systems Based on Changing the Dimensions of the Symbol, *Second National Conference on Applications of Mechatronic and Robotic Systems, Ilkhchi*, Ilkhchi, Iran, 2018.
- [12] **M.R. Ghavidel Aghdam**, Optimal Beamforming Coefficients in MIMO-NOMA Based on Millimeter Wave Transmission Scheme and Genetic Algorithm, *Second National Conference on Applications of Mechatronic and Robotic Systems, Ilkhchi*, Ilkhchi, Iran, 2018.

Professional Presentations

- [1] **M.R. Ghavidel Aghdam**, End-to-End Wireless Communications Systems Using Deep Machine Learning, *2021 Workshop on Future Networks Artificial Intelligence and Machine Learning*, IEEE, USA, 2021.

SKILLS

Computer Skills

- **Programming:** MATLAB (proficient), Python (proficient), Hspice (proficient)
- **Simulation:** Pspice (proficient), Proteous (proficient), Altium Designer (proficient)
- **O.S & Tools:** LaTeX (proficient), Microsoft Office (proficient)

Languages

- English (Proficient)

Table 1: TOEFL Certificate.

Skills	Score	Skills	Score	Skills	Score	Skills	Score
Reading	29	Listening	29	Speaking	21	Writing	30

- Turkish (Mother tongue)
- Farsi (Native)
- Arabic (Basic)

TEACHING EXPERIENCE

Özyeğin University

Fall 2022- Present

Instructor

- Department of Electrical and Electronics Engineering, Özyeğin University, Istanbul, Turkey.

Courses:

- Signals and Systems
- Communication Systems

Islamic Azad University

Fall 2017- Spring 2022

Adjunct Assistant Professor

- Department of Electrical Engineering, Faculty of Engineering, Ilkhichi Branch, Islamic Azad University, Ilkhichi, Iran.

Courses:

- Signals and Systems
- Communication Systems
- Digital Communications
- Filters & Circuit Synthesis
- Communication Circuits
- Electromagnetism
- Microprocessor
- Circuits and Electronics 1
- Electrical Circuit Analysis

University of Tabriz

Fall 2016- Spring 2018

Teaching Assistant

- Faculty of Electrical and Computer Engineering, University of Tabriz, Iran.

Courses:

- Signals and Systems
- Communication Systems
- Digital Communications
- Filters & Circuit Synthesis
- Communication Circuits
- Electrical Circuit Analysis

Urmia University
Programming Lecturer

Fall 2013- Spring 2014

- Faculty of Electrical and Computer Engineering, Urmia University, Iran.

Courses:

- MATLAB
- LaTeX
- Hspice

MENTORING EXPERIENCE

- **Graduate Mentor, University of Tabriz** Summer 2019

Student: Bahram Rahmani, MS 2019 in Telecommunication Engineering.

Results: I mentored Bahram during spring 2019 where he introduced energy-efficient DRX in LTE and beyond using an adaptive packet queuing technique. Also, he introduced traffic-based adjustable DRX with bounded delay in 4G. He successfully defended his master's in September 2019.

- **Graduate Mentor, University of Tabriz** Spring 2019

Student: Javid Deiri, MS 2019 in Telecommunication Engineering.

Results: I mentored Javid on designing a new PAPR reduction method based on a two-dimensional subcarrier mapping in the OFDM technique.

- **Graduate Mentor, University of Tabriz** Fall 2021

Student: Mahsa Nateghi, MS student in Telecommunication Engineering.

Results: I mentor Mahsa to propose a software-based lossless ECG data compression algorithm.

PROFESSIONAL ACTIVITIES

Membership:

- COST Action CA20120 – The Intelligence-Enabling Radio Communications for Seamless Inclusive Interactions (INTERACT), Working Groups (WG1, WG2, WG3), Member 2024-
- COST Action CA22168 – Physical Layer Security for Trustworthy and Resilient 6G Systems (6G-PHYSEC), Working Groups (WG1, WG2, WG4), Member 2024-
- Iran National Elites Foundation, Member 2017-
- Iran Young Researchers and Elites Club, Member 2018-

Editorial Board Member:

- Editorial Board, PLOS ONE 2024-

Technical Reviewer:

- Journal Reviewer, IEEE Transactions on Industrial Informatics 2023-
- Journal Reviewer, IEEE Transactions on Vehicular Technology 2020-
- Journal Reviewer, IEEE Wireless Communications Letters 2023-
- Journal Reviewer, IEEE Access 2020-
- Journal Reviewer, Physical Communication 2023-
- Journal Reviewer, Scientific Reports 2024-
- Journal Reviewer, Journal of Supercomputing 2024-
- Journal Reviewer, International Journal of Information and Communication Sciences (IJICS) 2024-
- Journal Reviewer, Transactions on Emerging Telecommunications Technologies (ETT) 2021-
- Journal Reviewer, Wireless Communications and Mobile Computing 2021-
- Journal Reviewer, PLOS ONE 2023-
- Journal Reviewer, Annals of Telecommunications 2022-
- Journal Reviewer, Wireless Personal Communications 2024-
- Journal Reviewer, International Journal of Communication Systems 2022-
- Journal Reviewer, Frontiers of Information Technology & Electronic Engineering 2024-
- Journal Reviewer, International Journal of Information and Communication Sciences (IJICS) 2024-
- Conference Reviewer, IEEE World AI IoT Congress (AIIoT) 2024-
- Conference Reviewer, IEEE International Conference on Communications (ICC) 2021-
- Conference Reviewer, International Conference on Network and Communications Security 2020-

Technical Program Committee:

- TPC membership, The Nineteenth International Conference on Networking and Services ICNS (2023)
- TPC membership, IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC) (2023)
- TPC membership, IEEE 14th Annual Computing and Communication Workshop and Conference (CCWC) (2024)
- TPC membership, IEEE 15th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON) (2024)
- TPC membership, IEEE 15th Annual Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON) (2024)

LEADERSHIP EXPERIENCE

- President of Electrical Society of Urmia University, Urmia 2012-2013
- Vice President of Robotic Society of Urmia University, Urmia 2013-2014

REFERENCES

- Dr. Behzad Mozaffari tazekand (Ph.D. Advisor)
Wireless Communication Lab., Faculty of Electrical and Computer Engineering, University of Tabriz, Tabriz, Iran.
E-mail: Mozaffary@tabrizu.ac.ir
- Dr. Reza Abdolee (Ph.D. Co-Advisor)
Cybersecurity and Wireless Systems (CWS) Lab., Department of Computer Science, California State University Channel Islands, California, USA.
E-mail: reza.abdolee@csuci.edu
- Dr. Parvaneh Shams (Assistant Professor)
Department of Computer Engineering, Istanbul Aydin University, Istanbul, Turkey.
E-mail: Parvanehshams@aydin.edu.tr
- Dr. Morteza Valizadeh (Assistant Professor)
Faculty of Electrical and Computer Engineering, University of Urmia, Urmia, Iran.
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