

In the Name of God

Curriculum Vitae (C.V.)
Maryam Imani

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Electrical and Computer Engineering Faculty (communication)
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Education

Postdoctoral Fellow: Electrical and Computer Engineering Faculty, Tarbiat Modares University, Tehran, Iran, Nov. 2015-2016.

Research title: Extraction and Fusion of Features from Hyperspectral Images for Improvement of Classification Accuracy

Ph.D.: Electrical and Computer Engineering Faculty, Tarbiat Modares University, Tehran, Iran, Sept. 2012- 2015.

Electrical Engineering/ Telecommunication

Ph.D. Thesis: Feature Extraction Using Limited Training Samples for Hyperspectral Images

M.SC.: Department of Electrical Engineering, Faculty of Engineering, Shahed University, Tehran, Iran, Sept. 2009-2011.

Electrical Engineering/ Telecommunication

M.SC. Thesis: MIMO-OFDM Channel Estimation Using Training Symbols.

B.SC.: Department of Electrical Engineering, Faculty of Engineering, Shahed University, Tehran, Iran, Sept. 2005-2009.

Electrical Engineering/ Telecommunication

B.SC. Thesis: MIMO-OFDM System Simulation and Investigation of Channel Parameters' Changes in System Performance

Research Interests

- Pattern Recognition, Machine Learning, and Artificial Intelligence
- Signal and Image Processing
- Remote Sensing

Honors and Awards

1. Ranked among the top 2% scientists in 2021-2024 according to Stanford University reports based on data from Scopus.
2. Top Ten Percent Achievements in 3rd KANS Scientific Competition, 2022.
3. Awarded “Dr. Taghi Ebtekar” Young Researcher Award, Center for Peace and Environment, Iran, March 2022.
4. Winner at “3rd National Festival of Women and Science, (Maryam Mirzakhani Award)”, Dec. 2020.
5. Publons' global Peer Review Awards 2018 for placing in the top 1% of reviewers in Geosciences, September 2018.
6. Awarded "Dr. Kazemi Ashtiani" Research Grant Award for Young Assistant Professor, Iran's National Elite Foundation, 2018.
7. Awarded “Shahid Chamran Scientific Award for Postdoc Researchers”, Iran's National Elite Foundation, 2016.
8. The second-place recipient of the 2016 ERDAS Award for Best Scientific Paper in Remote Sensing from “American Society for Photogrammetry and Remote Sensing”, April 2016.
9. Top postdoctoral researcher, Tarbiat Modares University, 2016.
10. Best Ph.D. Thesis Award from the IEEE Iran Section, 3 May 2017.
11. Best Ph.D. Thesis Award, Tarbiat Modares University, 2015.
12. Ranked first among Ph.D. graduates of Communication in Electrical and Computer engineering Department, Tarbiat Modares University, Tehran, Iran, Sep. 2015.
13. Awarded Member of Iran's National Elite Foundation, 2015-until now.

Teaching Experience

- Deep learning in signal processing, Tarbiat Modares University, from fall 2023 until now.
- Statistical Pattern Recognition, Tarbiat Modares University, from fall 2018 until now.
- Fuzzy Systems, Tarbiat Modares University, from winter 2018 to winter 2021.
- Stochastic Processes, from fall 2021 to fall 2022.
- Wireless communication, from winter 2021 to winter 2022.

Membership in Societies

1. IEEE Senior member-From Feb. 2022 to now
2. Student Branch Counselor of the IEEE with Tarbiat Modares University, Jan. 2022-Jan. 2024
3. IEEE member of Geoscience and Remote Sensing Society (GRSS)-From 2020 to now
4. IEEE member of Women in Engineering-From 2020 to now
5. IEEE member of Young Professionals-From 2017 to now
6. IEEE member-From 2017 to now
7. Member of Iranian Society of Smart Grid-From 2018 to 2021

Reviewer of Journals

1. IEEE Transactions on Geoscience and Remote Sensing (TGRS)
2. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS)
3. IEEE Transactions on Cybernetics
4. IEEE Systems Journal
5. IEEE Transactions on Neural Networks and Learning Systems (IEEE TNNLS)
6. IEEE Transactions on Power Systems
7. IEEE Geoscience and Remote Sensing Magazine (GRSM)
8. IEEE Geoscience and Remote Sensing Letters
9. IEEE Transactions on Image Processing
10. IEEE Transactions on Multimedia
11. IEEE Access
12. IEEE Sensors Journal
13. IEEE Signal Processing Letters
14. Proceedings of the IEEE
15. IET image processing
16. Information Fusion
17. Pattern Recognition
18. Neurocomputing
19. ISPRS Journal of Photogrammetry and Remote Sensing

20. International Journal of Remote Sensing
21. Remote Sensing Letters
22. European Journal of Remote Sensing
23. Remote Sensing
24. Geocarto International
25. Applied & Experimental Mathematics
26. Journal of Visual Communication and Image Representation
27. Scientific Reports
28. Infrared Physics and Technology
29. Digital Signal Processing
30. Journal of Computational and Graphical Statistics
31. International Journal of Image and Data Fusion
32. Chemometrics and Intelligent Laboratory Systems
33. Heliyon
34. Sensors
35. Electronics
36. Earth Science Informatics
37. Chemosphere
38. Biomedical Signal Processing and Control
39. Expert Systems with Applications
40. Pattern Recognition Letters
41. Signal, Image and Video Processing
42. Applied Soft Computing Journal
43. Engineering Applications of Artificial Intelligence
44. Artificial Intelligence Review
45. Computers and Electrical Engineering
46. Multimedia Systems
47. AUT Journal of Modeling and Simulation
48. The ISC International Journal of Information Security (ISeCure)
49. Journal of AI and Data Mining (JADM)
50. Iranian Journal of Science and Technology, Transactions of Electrical Engineering
51. Signal and Data Processing (Printed in Persian)
52. Journal of Machine Vision and Image Processing (Printed in Persian)
53. Journal of Space Science & Technology (Printed in Persian)
54. Scientific Journal of Computational Intelligence in Electrical Engineering (Printed in Persian)
55. Electronics Industries (Printed in Persian)

Publications- Books

Imani, Maryam, Statistical Pattern Recognition Fundamentals and Methods (Printed in Persian), Tarbiat Modares University, Tehran, Iran, 2024.

Publications- Journal papers

[119] Seyed Amir Latifi, Hassan Ghassemian, Maryam Imani, Multi-Branch Convolutional Network and LSTM-CNN for Heart Sound Classification, Physical and Engineering Sciences in Medicine, 2025.

[118] Maryam Imani, Imbalanced Data Classification Using Graph Based Transformation, Scientific Reports, vol. 15, 33415, 2025.

[117] Maryam Imani, Daniele Cerra, Collaborative Representation-Based Attention Network for Hyperspectral Anomaly Detection, IEEE Geoscience and Remote Sensing Letters, vol. 22, pp. 1-5, Art no. 5507405, 2025.

[116] Maryam Imani and Samsung Lim, An Efficient Eigenvalue Decomposition-Based Attention Network for Polarimetric Synthetic Aperture Radar Image Classification, Advances in Space Research, vol. 76, no. 5, pp. 2795–2812, 2025.

[115] Maryam Imani, Daniele Cerra, Triple Graph Convolutional Network for Hyperspectral Image Feature Fusion and Classification, Remote Sensing, vol. 17, no. 9, 1623, 2025.

[114] Maryam Imani, Attention Based Multi-Level and Multi-Scale Convolutional Network for PolSAR Image Classification, Advances in Space Research, vol. 75, no. 11, pp. 7971-7986, June 2025.

[113] Maryam Imani, Daniele Cerra, Phase Space Deep Neural Network with Saliency-Based Attention for Hyperspectral Target Detection, Advances in Space Research, vol. 75, no. 4, pp. 3565-3588, Feb. 2025.

[112] Hosein Eskandari, Maryam Imani, Mohsen Parsa Moghaddam, A Deep Residual Network Integrating Entropy-Based Wavelet Packet Ensemble Model for Short-Term Electrical Load Forecasting, Energy, vol. 314, 134168, 2025.

- [111] Maryam Imani and Samsung Lim, An Eigenvalue Decomposition-Based Gabor Network for Polarimetric Synthetic Aperture Radar Image Classification, *Earth Science Informatics*, vol. 18, no. 83, 2025.
- [110] Maryam Imani, Discriminant Analysis-Based Attention Network for Hyperspectral Target Detection, *Optics and Laser Technology*, vol. 182, Part B, 112208, April 2025.
- [109] Maryam Imani, Attention Based Network for Fusion of Polarimetric and Contextual Features for Polarimetric Synthetic Aperture Radar Image Classification, *Engineering Applications of Artificial Intelligence*, vol. 139, Part B, 109665, Jan. 2025.
- [108] Maryam Imani, Generative adversarial network based data augmentation for hyperspectral images target detection using convolutional neural networks (Printed in Persian), *Journal of Machine Vision and Image Processing (journal of Iranian society of machine vision and image processing)*, vol. 11, no. 2, pp. 13-24, Dec. 2024.
- [107] Maryam Imani, Hassan Ghassemian, A Three-Branch Deep Neural Network for Diagnosing Respiratory Sounds, *Neural Computing and Applications*, vol. 36, no. 35, pp. 22611–22631, 2024.
- [106] Maryam Imani, Collaborative Representation Based Unsupervised CNN for Hyperspectral Anomaly Detection, *Infrared Physics and Technology*, vol. 141, 105498, Sept. 2024.
- [105] Zabihollah Haghiabi, Nader Mokari, Bijan Abbasi Arand, and Maryam Imani, Building Detection in SAR Images Based on Fusion of Classic and Deep Learning Features, *International Journal of Remote Sensing*, vol. 45, no. 11, pp. 3577–3596, 2024.
- [104] Ahmadreza Salehi, Maryam Imani, Amir Zaimbashi, and Halim Yanikomeroglu, Learning and Model-Based Approaches for Radar Target Detection, *IEEE Transactions on Cognitive Communications and Networking*, vol. 10, no. 5, pp. 1817-1830, Oct 2024.
- [103] Mohamad Ebrahim Aghili, Maryam Imani, Hassan Ghassemian, Segment-Driven Anomaly Detection in Hyperspectral Data using Watershed Technique, *The Egyptian Journal of Remote Sensing and Space Sciences*, vol. 27, no. 2, pp. 288-297, June 2024.
- [102] Shiva Aghapour Maleki, Hassan Ghassemian, Maryam Imani, Nonreference object-based pansharpening quality assessment, *The Egyptian Journal of Remote Sensing and Space Sciences*, vol. 27, no.2, pp. 227–241, 2024.
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- [97] Maryam Imani, Alzheimer's Diseases Diagnosis Using Fusion of High Informative BiLSTM and CNN Features of EEG Signal, *Biomedical Signal Processing and Control*, vol. 86, Part C, 105298, Sept. 2023.
- [96] Maryam Imani, An Iterative PolSAR Image Classification Method With Utilizing Scattering and Contextual Information, *Multimedia Tools and Applications*, vol. 83, no. 6, pp. 16605–16621, 2024.
- [95] Mohamad Ebrahim Aghili, Maryam Imani, Hassan Ghassemian, Clustering Based Background Learning for Hyperspectral Anomaly Detection, *The Egyptian Journal of Remote Sensing and Space Sciences*, vol. 26, no. 3, pp. 477–487, 2023.
- [94] Maryam Imani, Adaptive Window Based Collaborative Representation for Hyperspectral Anomaly Detection with Fusion of Local and Global Information, *The Egyptian Journal of Remote Sensing and Space Sciences*, vol. 26, no. 2, pp. 369–380, 2023.
- [93] Hosein Eskandari, Maryam Imani, Mohsen Parsa Moghaddam, Best-tree wavelet packet transform bidirectional GRU for short-term load forecasting, *The Journal of Supercomputing*, vol. 79, pp. 13545–13577, 2023.
- [92] Beheshteh Khosravi, Maryam Imani, Hassan Ghassemian, Shaped Patch Based Nonparametric Discriminant Analysis for Hyperspectral Image Classification through the CNN Model, *International Journal of Remote Sensing*, vol. 44, no. 6, pp. 1789–1819, 2023.
- [91] Amir Hossein Ghazvinizadeh, Maryam Imani, Hassan Ghassemian, Residual Network Based On Entropy-Anisotropy-Alpha Target Decomposition for Polarimetric SAR Image Classification, *Earth Science Informatics*, vol. 16, pp. 357–366, 2023.
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- [88] Maryam Imani, Entropy/Anisotropy/Alpha Based 3DGabor Filter Bank for PolSAR Image Classification, *Geocarto International*, vol. 37, no. 27, pp. 18491–18519, 2022.
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- [86] Shiva Aghapour Maleki, Hassan Ghassemian, Maryam Imani, Spectrum Similarity-Based Quality Assessment Metric, *International Journal of Information and Communication Technology Research (IJICTR)*, vol. 14, no. 4, pp. 19-27, 2022.
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- [84] Abbas Kakoolvand, Maryam Imani, Hassan Ghassemian, Unsupervised Change Detection in SAR Images Based on Generalized Likelihood Ratio Test and a Two-Stage Morphological Filter, *International Journal of Remote Sensing*, vol. 43, no. 12, pp. 4630–4662, 2022.
- [83] Maryam Imani, Spatial and Polarimetric Information Fusion Using Residual Network for Polarimetric Synthetic Aperture Radar Image Classification, *IET Radar, Sonar & Navigation*, vol. 16, no. 12, pp. 1963-1976, 2022.
- [82] Maryam Imani, Polarimetric SAR Image Classification Using Binary Coding-Based Polarimetric-Morphological Features, *IET Image Processing*, vol. 16, no. 14, pp. 3715– 3736, 2022.
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- [79] Ali Farajzadeh, Shahram Mohammadi, Maryam Imani, Hyperspectral image super-resolution using multi-scale decomposition and convolutional neural network based on relation type between low- and high-resolution images, *Signal, Image and Video Processing*, vol. 17, pp. 361–369, 2023.

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- [77] Hosein Eskandari, Maryam Imani, Mohsen Parsa Moghaddam, Power Grid Stability Identification Using High Discriminative Factors, *International Journal of Electronics Letters*, vol. 11, no. 2, pp. 193–202, 2023.
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- [72] Ali Farajzadeh, Shahram Mohammadi, Maryam Imani, High Performance Image Super-resolution Using Convolutional Neural Networks and Nonsubsampled Contourlet Transform, *Journal of Communications Technology and Electronics*, vol. 67, no. 4, pp. 418–429, 2022.
- [71] Maryam Imani, Convolutional Kernel-based covariance descriptor for classification of polarimetric synthetic aperture radar images, *IET Radar, Sonar and Navigation*, vol. 16, no. 3, 578–588, 2022.
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- [69] Maryam Imani, Guided Ridge Regression-Based Polarimetric-Spatial Feature Extraction for Classification of Polarimetric SAR Images, *the CSI Journal on Computer Science and Engineering (CSI-JCSE)*, vol. 18, no. 1, pp. 44–53, 2020.
- [68] Roohollah Keshvari, Maryam Imani, Mohsen Parsa Moghaddam, A Clustering-Based Short-Term Load Forecasting Using Independent Component Analysis and Multi-Scale Decomposition Transform, *The Journal of Supercomputing*, vol. 78, pp. 7908–7935, 2022.

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- [65] Maryam Imani, Automatic Diagnosis of Coronavirus (COVID-19) Using Shape and Texture Characteristics Extracted From X-Ray and CT-Scan Images, *Biomedical Signal Processing and Control*, vol. 68, 102602, 2021.
- [64] Maryam Imani, Electrical Load-Temperature CNN for Residential Load Forecasting, *Energy*, vol. 227, 2021.
- [63] Hosein Eskandari, Maryam Imani, Mohsen Parsa Moghaddam, Convolutional and Recurrent Neural network Based Model for Short-Term Load Forecasting, *Electric Power Systems Research*, vol. 195, 2021.
- [62] Maryam Imani, A Random Patches Based Edge Preserving Network for Land Cover Classification Using Polarimetric Synthetic Aperture Radar Images, *International Journal of Remote Sensing*, vol. 42, no. 13, pp. 4946–4964, 2021.
- [61] Maryam Imani, Particulate Matter (PM_{2.5} and PM₁₀) Generation Map Using MODIS Level-1 Satellite Images and Deep Neural Network, *Journal of Environmental Management*, vol. 281, 111888, 2021.
- [60] Mohammad Ghassemi, Hassan Ghassemian, Maryam Imani, Hyperspectral Image Classification by Optimizing Convolutional Neural Networks based on Information Theory and 3D-Gabor Filters, *International Journal of Remote Sensing*, vol. 42, no. 11, pp. 4383–4413, 2021.
- [59] Maryam Imani, Target Detection Using Multispectral Images, A Case Study: Wheat Detection in Chenaran County in Iran, *Journal of Electrical and Computer Engineering Innovations (JECEI)*, vol. 9, no. 1, pp. 11-24, winter and spring 2021.
- [58] Maryam Imani, Customer Churn Prediction in Telecommunication Using Machine Learning: A Comparison Study, *AUT Journal of Modeling and Simulation (Amirkabir International Journal of Modeling, Identification, Simulation & Control)*, vol. 52, no. 2, pp. 229-250, 2020.

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- [51] Maryam Imani, Intrusion Detection in IOT based Networks Using Double Discriminant Analysis, *AUT Journal of Modeling and Simulation* (Amirkabir International Journal of Modeling, Identification, Simulation & Control), vol. 51, no. 2, pp. 211-220, 2019.
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- [47] Maryam Imani, Histogram Based Shape and Textural Characteristics for Facial Emotion Recognition, *AUT Journal of Modeling and Simulation* (Amirkabir International Journal of Modeling, Identification, Simulation & Control), vol. 51, no. 1, pp. 45-56, 2019.

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