EDUCATION

**Tarbiat Modares University,** Tehran, Iran

**PhD**, Electrical Engineering (Telecommunications Engineering), Oct 2014

* Dissertation title: “Increasing spatial information of multispectral images using panchromatic images.”
* Adviser: Dr. Mohammad Hassan Ghassemian Yazdi.

**Sharif University of Technology,** Tehran, Iran

**MSc**, Electrical Engineering (Telecommunications Engineering), Jan 2010

* Thesis title: “Source of error in the monopulse radar tracking and solutions.”
* Adviser: Dr. Mohammad Hassan Bastani.

**Amirkabir University of Technology,** Tehran, Iran

**BSc**, Biomedical Engineering, Sep 2007

**RESEARCH INTEREST**

**Artificial intelligence:**

* Machine Learning.
* Deep Learning.
* Reinforcement Learning.

**Signal Processing:**

* Image Processing.
* Video Processing.
* Image classification.

PUBLICATIONS

**Peer-reviewed articles:**

1. **Shahdoosti, H.R**., 2022. Feature extraction using sparse component decomposition for face classification. Engineering Management and Soft Computing, 8(1), pp.105-120 (In Persian).
2. **Shahdoosti, H. R.** and Tabatabaei, Z., 2020. Object-based feature extraction for hyperspectral data using firefly algorithm. International Journal of Machine Learning and Cybernetics, 11(6), pp.1277-1291. (IF=4.377)
3. Tabatabaei, Z.**,** and **Shahdoosti, H. R.**, 2020. A New Object Based Feature Extraction Method Using Segmentation For Classification Of Hyperspectral Images. Electronic Industries 11 (2), 109-127 (In Persian).
4. **Shahdoosti, H.R.** and Rahemi, Z., 2019. Edge-preserving image denoising using a deep convolutional neural network. Signal Processing, 159, pp.20-32. (IF=4.729)
5. **Shahdoosti, H.R.** and Hazavei, S.M., 2019. A new compressive sensing based image denoising method using block-matching and sparse representations over learned dictionaries. Multimedia Tools and Applications, 78(9), pp.12561-12582. (IF=2.577)
6. **Shahdoosti, H.R.** and Javaheri, N., 2019. A new kernel fuzzy based feature extraction method using attraction points. Multidimensional Systems and Signal Processing, 30(2), pp.1009-1027. (IF= 2.030)
7. **Shahdoosti, H.R.** and Tabatabaei, Z., 2019. MRI and PET/SPECT image fusion at feature level using ant colony based segmentation. Biomedical Signal Processing and Control, 47, pp.63-74. (IF=5.076)
8. **Shahdoosti, H.R.** and Mehrabi, A., 2018. MRI and PET image fusion using structure tensor and dual ripplet-II transform. Multimedia Tools and Applications, 77(17), pp.22649-22670.(IF=2.577)
9. **Shahdoosti, H.R.** and Javaheri, N., 2018. A fast algorithm for feature extraction of hyperspectral images using the first order statistics. Multimedia Tools and Applications, 77(18), pp.23633-23650.(IF=2.577)
10. **Shahdoosti, H.R.** and Mehrabi, A., 2018. Multimodal image fusion using sparse representation classification in tetrolet domain. Digital Signal Processing, 79, pp.9-22. (IF=2.92)
11. **Shahdoosti, H.R.** and Rahemi, Z., 2018. A maximum likelihood filter using non-local information for despeckling of ultrasound images. Machine Vision and Applications, 29(4), pp.689-702. (IF=2.983)
12. **Shahdoosti, H.R.** and Salehi, M., 2018. Transform‐based watermarking algorithm maintaining perceptual transparency. IET Image Processing, 12(5), pp.751-759. (IF= 1.773)
13. **Shahdoosti, H.R.** and Hazavei, S.M., 2018. Combined ripplet and total variation image denoising methods using twin support vector machines. Multimedia Tools and Applications, 77(6), pp.7013-7031. (IF=2.577)
14. **Shahdoosti, H.R.**, and Javaheri, N., 2018. A new hybrid feature extraction method in a dyadic scheme for classification of hyperspectral data. International journal of remote sensing, 39(1), pp.101-130. (IF=3.531)
15. **Shahdoosti, H.R.** and Salehi, M., 2018. A new digital image watermarking using optimal embedding weights. Journal of Intelligent & Fuzzy Systems, 34(6), pp.4355-4366. (IF= 1.737)
16. **Shahdoosti, H.R.**, 2017. Two-stage image denoising considering interscale and intrascale dependencies. Journal of Electronic Imaging, 26(6), p.063029. (IF=0.829 )
17. **Shahdoosti, H.R**., A New Noise-Assistant LMS Algorithm for Preventing the Stalling Effect. The Modares Journal of Electrical Engineering, 16(4): pp. 63-70.
18. Kazemi, A., **Shahdoosti, H.R.** and Mnatsakanov, R.M., 2017. Hausdorff moment problem: Recovery of an unknown support for a probability density function. Journal of Inverse and Ill-posed Problems, 25(6), pp.719-731. (IF=1.448)
19. **Shahdoosti, H.R.** and Hazavei, S.M., 2017. Image denoising in dual contourlet domain using hidden Markov tree models. Digital Signal Processing, 67, pp.17-29. (IF=2.92)
20. **Shahdoosti, H.R.** and Javaheri, N., 2017. Pansharpening of clustered MS and Pan images considering mixed pixels. IEEE Geoscience and Remote Sensing Letters, 14(6), pp.826-830. (IF=5.343)
21. **Shahdoosti, H.R.** and Mirzapour, F., 2017. Spectral–spatial feature extraction using orthogonal linear discriminant analysis for classification of hyperspectral data. European Journal of Remote Sensing, 50(1), pp.111-124. (IF=3.168)
22. **Shahdoosti, H.R.** and Khayat, O., 2016. Image denoising using sparse representation classification and non-subsampled shearlet transform. Signal, Image and Video Processing, 10(6), pp.1081-1087. (IF=1.583)
23. **Shahdoosti, H.R.** and Ghassemian, H., 2016. Combining the spectral PCA and spatial PCA fusion methods by an optimal filter. Information Fusion, 27, pp.150-160. (IF= 17.564)
24. **Shahdoosti, H.R.** and Khayat, O., 2016. Combination of anisotropic diffusion and non-subsampled shearlet transform for image denoising. Journal of Intelligent & Fuzzy Systems, 30(6), pp.3087-3098. (IF= 1.737)
25. **Shahdoosti, H.R.** and Ghassemian, H., 2016. Fusion of multispectral and panchromatic images using special PCA. Signal and Data Processing, 10(1), pp.69-78 (in Persian).
26. **Shahdoosti, H.R.** and Ghassemian, H., 2014. Fusion of MS and PAN images preserving spectral quality. IEEE Geoscience and Remote Sensing Letters, 12(3), pp.611-615. (IF= 5.343)
27. **Shahdoosti, H.R.** and Ghassemian, H., 2011. Multispectral and Panchromatic Image Fusion by Combining Spectral PCA and Spatial PCA Methods. Modares Journal of Electrical Engineering 11 (3), pp. 19-27.
28. Khayat, O., Ebadzadeh, M.M., **Shahdoosti, H.R.**, Rajaei, R. and Khajehnasiri, I., 2009. A novel hybrid algorithm for creating self-organizing fuzzy neural networks. Neurocomputing, 73(1-3), pp.517-524. (IF=5.779)

**Conferences:**

1. Salehi. M. and **Shahdoosti, H.R.**, (2019). “A Robust Grayscale Image Watermarking Algorithm using IWT and SVD.” *Fifth International Conference on Quality Research in Electrical and Mechatronics Electrical Engineering, Tehran,* *Iran,* pp. 118-129.
2. **Shahdoosti, H.R.**, (2019). “A new ultrasound despeckling method using spectrum equalization and quantum-inspired adaptive threshold.” *Fifth International Conference on Quality Research in Electrical and Mechatronics Electrical Engineering, Tehran,* *Iran,* pp. 130-135.
3. **Shahdoosti, H.R.**, (2018). “A new ultrasound despeckling method using spectrum equalization and quantum-inspired adaptive threshold.” *2nd International Conference on Electrical Engineering, Tehran,* *Iran,* pp. 87-93.
4. **Shahdoosti, H.R.**, (2018). “Robust non-local means filter for ultrasound image denoising.” *2nd International Conference on Electrical Engineering, Tehran,* *Iran,* pp. 94-99.
5. **Shahdoosti, H.R.**, Hazavei, S. M. (2017). “Using Complex Wavelet Transform and Bilateral Filtering for Image Denoising.” *4nd International Conference on practical research in computer engineering and signal processing, Tehran,* *Iran,* pp. 208-214.
6. Hazavei, S. M., **Shahdoosti, H.R.** (2017). “Using Complex Wavelet Transform and Bilateral Filtering for Image Denoising.” *4nd International Conference on practical research in computer engineering and signal processing, Tehran,* *Iran,* pp. 301-306.
7. **Shahdoosti, H.R.**, Ghassemian, H. (2015). “Combination of IHS and Spatial PCA Methods for Multispectral and Panchromatic Image Fusion.” *21th Iranian Conference on Electric Engineering,Mashhad,* *Iran,* pp. 139-146.
8. Khayat, O., Razjouyan, J., Aghvami, M., **Shahdoosti, H.R.** and Loni, B. (2009), March. An automated GA-based fuzzy image enhancement method. *In 2009 IEEE Symposium on Computational Intelligence for Image Processing*, pp. 14-19.

**TEACHING EXPERIENCE**

* **Instructor of Record**: Communication systems, Remote Sensing, Image Processing, Pattern Recognition, Advanced Mathematical Programming.
* **Teaching Assistant**: Electric Circuits (Fall 2006), Signals and Systems (Spring 2006), Communication systems (Fall 2006).

**GRADUATE COURSE WORK**

* Advanced Digital Communication
* Coding Theory
* Digital signal processing
* Radar Systems
* Image Processing
* Remote Sensing
* Stochastic Processes
* Adaptive Filters
* Spectral Density Estimation
* Spread Spectrum Communication
* Neural Networks
* Coding and Information Theory

**HONORS and AWARDS**

* National Olympiad Electrical Engineering Award, Amir Kabir University Dean/Provost Award, 2007.
* Best Researcher of all engineering majors Award in Province of Hamedan, Governer (Head of Province) Award, 2017.
* Best Researcher of all engineering majors Award in Province of Hamedan, Governer (Head of Province) Award, 2018.
* Highest GPA of Telecommunications Engineering Class of 2010-2015, Tarbiat Modares University.
* Ranked in top 0.3%, Nationwide Entrance Exam of State Universities for BSC, 2003.
* Ranked in top 0.1%, Nationwide Entrance Exam of State Universities for MSc, 2007.

**SCHOLARLY SERVICE**

**Associate Editor**

* IET Image Processing (September 2018- September 2022) (IF=1.773).

**Reviewer:**

* IEEE Access (10 papers) (IF=3.476),
* Information fusion (4 papers) (IF= 17.564)
* IEEE transactions on geoscience and remote sensing (4 papers) (IF=8.125)
* GIScience and remote sensing (2 papers) (IF=6.397)
* IEEE geoscience and remote sensing letters (6 papers) (IF= 5.343)
* IEEE transactions on instrumentation and measurement (4 papers) (IF=5.332)
* International journal of remote sensing (4 papers) (IF=3.531)
* Biomedical signal processing and control (3 papers) (IF=5.076)
* Biocybernetics and biomedical engineering (1 paper) (IF=5.678)
* Mathematical problems in engineering (1 paper) (IF=1.430)
* International journal of imaging systems and technology (1 paper) (IF=2.177)
* IET image processing (2 papers) (IF=1.773)
* Journal of intelligent and fuzzy systems (1 paper) (IF=1.737)
* Canadian journal of remote sensing (1 paper) (IF=2.242)
* Signal processing (1 paper) (IF=4.729)
* Multidimensional systems and signal processing (1 paper) (IF=2.030)
* IEEE journal of selected topics in applied earth observations and remote sensing (1 paper) (IF=4.715)
* Frontiers of information technology and electrical engineering (1 paper) (IF=2.526)
* International journal of pattern recognition and artificial intelligence (1 paper) (IF=1.261)
* Imaging science journal (1 paper)

**COMPUTER SKILLS**

**Proficient in:**

* Programming software: Python, MATLAB.
* General software: Microsoft Office and Adobe Acrobat Professional.
* Operating software: Windows and DOS.
* Math and computing software: MATLAB.