

Curriculum Vitae

Hossein Ebrahimnezhad, PhD

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Professional Experience:

- [1996- Now] Member of academic staff, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
- [1996- 2007] Lecturer, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
- [2007- 2013] Assistant Professor, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
- [2013- 2017] Associate Professor, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
- [2017- Now] Full Professor, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.

Education:

- [1989-1993] B.Sc.: Faculty of Engineering, University of Tabriz, Electronics Eng.
- [1993-1995] M.Sc.: Faculty of Electrical Engineering, K.N.Toosi Univ. of Tech., Tele-Communication Systems Eng.
- [2003-2007] Ph.D. : Dept. of Electrical and Computer Engineering, School of Engineering, Tarbiat Modares University, Communication Systems Eng., Thesis title: "3D Model Reconstruction by Silhouette, Stereo and Motion Features Fusion", Supervisor: Professor H. Ghassemian.

Professional Membership:

- Member of IEEE
- Member of Iranian Society of Machine Vision and Image Processing (ISMVIP)

Areas of Interests:

- Computer Vision and It Applications in other fields like: Agriculture, Medical Engineering, Food Engineering, Autonomous Vehicles and Intelligent Traffic Systems, Sport, Animals, Security, Health Care, Education, Faison, Manufacturing, Inspection, Forensic, Biology, Environment, Forestry, and ...
- Computer Graphics and 3D Geometry Processing
- 3D Model Reconstruction, Processing, Retrieval, Animation, Compression, Deformation
- Deep Learning, Machine Learning, Soft Computing
- Signal, Speech, Image and Video Processing
- Pattern Analysis and Machine Intelligence
- Human Computer Interaction
- 2D and 3D Shape Analysis, Classification, Retrieval
- Multimedia Processing
- Image Understanding and Scene Analysis
- Object Detection and Categorization
- Image and Video Communication, Coding, Retrieval
- Human Pose Detection and Tracking
- Hand Gesture Recognition and Pose Tracking
- Computer Vision Applications in Agriculture, Medical Engineering, Food Engineering, Autonomous Vehicles, Sport, Animals, Security, Health Care, Education, Faison, Manufacturing, Inspection, and ...

Teaching Experience:

- Under Graduate: Electrical circuits-II, Physics of Electronics, Communication Systems, Microprocessor Systmes, Pulse Technique, Computer Networks.

- Graduate: Computer Vision, Soft computing, Video Processing and Coding, Speech Processing, Advanced Digital Communication, 3D Geometry Processing, Computational Geometry, Image and Video Understanding.

Journal Publications:

1. H. Ebrahimnezhad, H. Ghassemian, "3D Model Reconstruction by Silhouette, Stereo and Motion Features Fusion", Iranian Journal of Electrical and Computer Engineering, Vol.3, No.1, pp.18-28, Summer 2005, (printed in Persian) (ISC).
2. H. Ebrahimnezhad, H. Ghassemian, "Robust Motion from Space Curves and 3D Reconstruction from Multiviews Using Perpendicular Double Stereo Rigs", Journal of Image and Vision Computing, Elsevier, Vol 26, No.10, pp. 1397-1420, Oct. 2008 (ISI-JCR).
3. M. Emambakhsh, H. Ebrahimnezhad, M.H. Sedaaghi, "Integrated Region-Based Segmentation Using Color Components and Texture Features with Prior Shape Knowledge", International Journal of Applied Mathematics and Computer Science, Vol. 20, No. 4, pp. 711-726, Dec. 2010 (ISI-JCR).
4. S. Zare, A.Ghaffarpour Rahbar, H. Ebrahimnezhad, "A 2-level FEC mechanism joint with cross-layer superposition coded multicast for robust IPTV service over WiMAX", Wireless Networks, Springer, Vol. 17, No. 5, pp. 1203-1216, Jul. 2011 (ISI-JCR).
5. M. Ramezani, H. Ebrahimnezhad, "A Novel 3D Object Categorization and Retrieval System Using Geometric Features", International Journal of Information and Communication Technology Research (IJICTR), Vol.4, No.1, pp.9-20, Dec. 2011 (ISC).
6. N. Alijanpour, H. Ebrahimnezhad, A. Ebrahimi, "Hand static gesture recognition using HMM based on curvature gradient of occluding contour", Journal of Intelligent Procedures in Electrical Technology (JIPET), Vol.3, No.10, pp.33-42, Summer 2012 (printed in Persian).
7. G. Khademi, H. Ebrahimnezhad, "Multi-view based 3D Human Pose Estimation by Fitting the Projection of 3D Articular Skeleton Model in Silhouette Images", Journal of Signal and Data Processing (JSDP), Vol.9, No.1, Serial 17, pp.3-18, Spring-Summer 2012 (printed in Persian) (ISC).
8. S.R. Banimahd, H.Ebrahimnezhad, "Segmentation and tracking of lips using parallel surfaces based on shape receptivity and its application in speaker identity recognition", Karagah, Vol.4, No.16, pp.141-157, Autumn 2012 (printed in Persian)(ISC).
9. A. Goshvarpour, H. Ebrahimnezhad, A. Goshvarpour, "Classification of Epileptic EEG Signals using Time-Delay Neural Networks and Probabilistic Neural Networks", International Journal of Information Engineering and Electronic Business, (JIIEEB), Vol.5, No.1, pp.59-67, May. 2013.
10. A. Goshvarpour, H. Ebrahimnezhad, A. Goshvarpour, "Shape Classification Based on Normalized Distance and Angle Histograms Using PNN", International Journal of Information Technology and Computer Science(IJITCS), Vol. 5, No. 9, pp. 65-72, Aug. 2013.
11. S. Khoshnoud, H. Ebrahimnezhad, "Classification of Arrhythmias Using Linear Predictive Coefficients and Probabilistic Neural Network", Applied Medical Informatics, Vol. 33, No. 3, pp. 56-63, 2013.
12. A.M. Molaei, H. Ebrahimnezhad, M.H. Sedaaghi, "A Blind Fragile Watermarking Method for 3D Models based on Geometric Properties of Triangles", 3D Research, Springer, Vol. 4, No. 4, Dec. 2013 (ISI).
13. A.M. Molaei, M.H. Sedaaghi, H. Ebrahimnezhad, "A Blind Steganography based on Reed-Solomon Codes and Optimal Substitution Table with Improving Payload and Robustness", Tabriz Journal of Electrical Engineering (TJEE), Vol.43, No.2, pp.43-59, Winter 2013.
14. M. Ghaseri, H. Ebrahimnezhad, "Facial Image Retrieval by Combining Gradient Histogram and Local Binary Pattern", Journal of Machine Vision and Image Processing, (JMVIP), Vol. 1, No. 1, pp. 58-68, Summer 2013, (printed in Persian).
15. M. Ramezani, H. Ebrahimnezhad, "3D Model Pose Estimation and Alignment by Error Minimization in Silhouette Images", Journal of Machine Vision and Image Processing, (JMVIP), Vol. 1, No. 1, pp. 28-43, Summer 2013, (printed in Persian).
16. Z. Mousavian, H. Ebrahimnezhad, "Persian Static Sign Language Recognition using a New Shape Descriptor", Journal of Machine Vision and Image Processing, Vol. 1, No. 2, pp. 57-66, Winter 2014, (printed in Persian).
17. V. Mehrdad, H. Ebrahimnezhad, "Retrieving of 3D Models using Linear Prediction Coefficients in Cylindrical Projections by Generalizing the Projection to three Perpendicular Cylinders", Journal of Machine Vision and Image Processing, Vol. 1, No. 2, pp. 27-38, Winter 2014, (printed in Persian).

18. A. Momennezhad, M. Shamsi, H. Ebrahimnezhad, H. Saberhari, "Classification of EEG-P300 Signals Extracted from Brain Activities in BCI Systems using v-SVM and BLDA Algorithms", *Applied Medical Informatics*, Vol. 34, No. 2, pp. 23-35, 2014.
19. A. Momennezhad, H. Ebrahimnezhad, M. Shamsi, L. Asgharian, "Brain Activity EEG-P300 Signal Categorization from LPC based Estimation of Signal using Fisher Linear Discriminant Analysis", *International Journal of Intelligent Computing in Medical Sciences & Image Processing (IC-MED)*, Taylor & Francis, Vol. 6, No.1, pp. 17-26, Aug. 2014.
20. M. Mirloo, H. Ebrahimnezhad, "Semantic Segmentation of 3D Model Objects based on Salient Points and Core Extraction", *Journal of Signal and Data Processing (JSDP)*, Vol.11, No.1, Serial 21, pp. 59-72, Summer 2014 (printed in Persian) (ISC) .
21. S. Mansouri, H. Ebrahimnezhad, "3D Model Compression using Non-Linear System based on Curvature Feature", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 2, No. 2, pp. 72-87, Fall 2014 (printed in Persian) (ISC) .
22. V. Mehrdad, H. Ebrahimnezhad, "3D Model Retrieval Based on Linear Prediction Coding in Cylindrical and Spherical Projections using SVM-OSS", *Multimedia Tools and Applications*, Springer, Vol. 74, No. 4, pp. 1511-1535, Feb. 2015 (ISI-JCR) .
23. G. Malekshahi, H. Ebrahimnezhad, "Detection and Removal of Rain from Video Using Predominant Direction of Gabor Filters", *Journal of Information Systems and Telecommunication (JIST)*, Vol. 3, No. 1, pp. 41-49, Winter 2015 (ISC) .
24. M. Anvaripour, H. Ebrahimnezhad, "Accurate Object Detection Using Local Shape Descriptors", *Pattern Analysis and Applications* , Springer, Vol. 18, No. 2, pp 277-295, May 2015 (ISI-JCR) .
25. B. Maleki, H. Ebrahimnezhad, "Intelligent Visual Mouse System Based on Hand Pose Trajectory Recognition in Video Sequences", *Multimedia Systems*, Springer, Vol. 21, No. 6, pp 581-601, Nov. 2015 (ISI-JCR) .
26. V. Mehrdad, H. Ebrahimnezhad, "3D Object Retrieval Based on Histogram of Local Orientation using One-Shot Score Support Vector Machine", *Frontiers of Computer Science*, Springer, Vol. 9, No. 6, pp. 990-1005, Dec. 2015 (ISI-JCR) .
27. S. Mansouri, H. Ebrahimnezhad, "Segmentation Based Semi-Regular Remeshing of 3D Models Using Curvature Adapted Subdivision Surface Fitting", *Journal of Visualization*, Springer, Vol. 19, No. 1, pp. 141-155, Feb. 2016 (ISI-JCR).
28. Kh.Mahdikhanlou, H.Ebrahimnezhad, "Shape Classification Based on Geometric Features of Evolution Points via Sparse Representation", *International Journal on Artificial Intelligence Tools*, Worldscientific, Vol. 25, No. 3, pp. 1650010-1:23 , June 2016 (ISI-JCR)
29. A.M. Molaei, H. Ebrahimnezhad, M.H. Sedaaghi, "A Robust and Blind 3D Mesh Watermarking in Spatial Domain Based on Faces Categorization and Sorting", *3D Research*, Springer, Vol. 7, No. 2, pp. 1-18, June 2016 (ISI)
30. S. Mansouri, H. Ebrahimnezhad, "Efficient Axial Symmetry Aware Mesh Approximation with Application to 3D Pottery Models", *Multimedia Tools and Applications*, Springer, Vol. 75, No.14, pp. 8347-8379, July 2016 (ISI-JCR) .
31. L. Asgharian, H. Ebrahimnezhad, "Animating of Carton Characters by Skeleton based Articular Motion Transferring of Other Objects", *Journal of Signal and Data Processing (JSDP)*, Vol.13, No. 2, Serial 28, pp. 71-89, Summer 2016 (printed in Persian) (ISC) .
32. Kh. Mahdikhanlou, H. Ebrahimnezhad, "Shape based Object Retrieval using Descriptors Extracted from Growing Contour Process", *Journal of Signal and Data Processing (JSDP)*, Vol. 13, No. 3, Serial 29, pp. , Autumn 2016 (printed in Persian) (ISC) .
33. P. Salehpour, H.Balazadeh Bahar,G.Karimian, H.Ebrahimnezhad, "Adaptive Bit-Plane Probability and Wavelet Based Ucler Detection in Wireless Capsule Endoscopy Images",*Biomedical Engineering: Applications, Basis and Communications*, Worldscientific, Vol. 28, No. 4, pp. 1650029-1:10, Aug. 2016 (ISI)
34. F. Amini, H. Ebrahimnezhad,"Skeleton based Non rigid Shape Matching", *Bulletin de la Société Royale des Sciences de Liège*, Vol. 85, pp. 1188 - 1194, Oct 2016 (ISI).
35. M. Hajizadeh, H. Ebrahimnezhad, "Predictive Compression of Animated 3D Models by Optimized Weighted Blending of Key-Frames", *Computer Animation and Virtual Worlds*, Wiley, Vol. 27, No. 6, pp. 556–576, Nov./Dec. 2016 (ISI-JCR) .
36. A.M. Molaei, M.H. Sedaaghi, H. Ebrahimnezhad, "Steganography Scheme Based on Reed-Muller Code with Improving Payload and Ability to Retrieval of Destroyed Data for Digital Images", *Amirkabir International Journal of Science & Research Electrical and Electronics Engineering (AIJ-EEE)*, Vol. 49, No. 1, pp. 61-70, Spring 2017 (ISC).

37. S. Nikzad, H. Ebrahimnezhad, "Two-Person Interaction Recognition from Bilateral Silhouette of Key Poses", *Journal of Ambient Intelligence and Smart Environments*, IOS Press, Vol. 9, No. 4, pp. 483-499, July/Aug. 2017 (ISI-JCR).
38. M. Mirloo, H. Ebrahimnezhad, "Non-rigid 3D Object Retrieval using Directional Graph Representation of Wave Kernel Signature", *Multimedia Tools and Applications*, Springer, Vol 77 , No. 6 , pp. 6987-7011, March 2018 (ISI-JCR) .
39. M. Mirloo, H. Ebrahimnezhad, "Salient Point Detection in Protrusion Parts of 3D Object Robust to Isometric Variations ", *3D Research*, Springer, Vol. 9 , No. 1, Article 2, pp. 1-18, March. 2018 (ISI)
40. M. Hajizadeh, H. Ebrahimnezhad, "Eigenspace Compression: Dynamic 3D Mesh Compression by Restoring Fine Geometry to Deformed Coarse Models", *Multimedia Tools and Applications*, Springer, Vol. 77, No. 15, pp. 19347-19375, Aug. 2018 (ISI-JCR) .
41. F. Shamsafar, H. Ebrahimnezhad, "Understanding Holistic Human Pose Using Class-Specific Convolutional Neural Network", *Multimedia Tools and Applications*, Springer, Vol. 77, No. 18, pp. 23193-23225, Sep. 2018 (ISI-JCR) .
42. F. Shamsafar, H. Ebrahimnezhad, "Three-Dimensional Human Pose Estimation from a Single Image Using Non-linear Convolutional Neural Network Based on Shape Information", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 5, No. 1, pp. 83-103, spring-summer 2018 (printed in Persian) (ISC) .
43. H. Merrikhi, H. Ebrahimnezhad, "Synthesis of Human Facial Expressions based on the Distribution of Elastic Force Applied by Control Points", *Journal of Signal and Data Processing (JSDP)*, Vol. 16, No. 2, Serial 40, pp. 91-104, Sep. 2019 (printed in Persian) (ISC) .
44. F. Behbahani, V. Mehrdad, H. Ebrahimnezhad, "3D Models Recognition in Fourier Domain Using Compression of the Spherical Mesh up to the Models Surface", *Journal of Signal and Data Processing (JSDP)*, Vol. 16, No. 2, Serial 40, pp. 91-104, Sep. 2019 (printed in Persian) (ISC) .
45. N. Mostaghim Bakhshayesh , M. Shamsi , M.H. Sedaaghi, H. Ebrahimnezhad, "Alignment of Noncoding Ribonucleic Acids with Pseudoknots Using Context-Sensitive Hidden Markov Model", *Journal of Medical Signals and Sensors (JSDP)*, Vol. 9, No. 4, pp. 252-258, 2019 (printed in Persian) (ISC).
46. A. Amirfathiyan, H. Ebrahimnezhad, "Face Sketch Generation of Example Image by Encoding Local Binary Pattern", *Journal of Machine Vision and Image Processing*, Vol. 6, No. 2, pp. 133-146, Winter & Spring 2020, (printed in Persian) (ISC).
47. M. Hajizadeh, H. Ebrahimnezhad, "NLME: A Nonlinear Motion Estimation-Based Compression Method For Animated Mesh Sequence", *The Visual Computer*, Springer, Vol. 36, No. 3, pp. 649-665, March 2020, (ISI-JCR) .
48. A. Amirfathiyan, H. Ebrahimnezhad, "A Nonlinear Grayscale Morphological and Unsupervised Method for Human Facial Synthesis Based on an Example Image", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 6, No. 1, pp. 66-84, Winter 2020, (printed in Persian) (ISC).
49. A. Sadeghzadeh, H. Ebrahimnezhad, "Pose-Invariant Face Recognition Based on Matching the Occlusion Free Regions Aligned by 3D Generic Model", *IET Computer Vision*, Vol. 14, No. 5 , pp. 268-277, Aug. 2020 (ISI-JCR).
50. Kh. Mahdikhanelou, H. Ebrahimnezhad, "Multimodal 3D American sign language recognition for static alphabet and numbers using hand joints and shape coding", *Multimedia Tools and Applications*, Springer, Vol. 79, No. 31-32, pp. 22235–22259, Aug. 2020 (ISI-JCR).
51. Kh. Mahdikhanelou, H. Ebrahimnezhad, "Sign Language Recognition by Combining Leap Motion Controller and Hand Image Information", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 7, No. 1, pp. 4-32, spring-summer 2020 (printed in Persian) (ISC) .
52. L. Asgharian, H. Ebrahimnezhad, "How Many Sample Points Are Sufficient for 3D Model Surface Representation and Accurate Mesh Simplification?", *Multimedia Tools and Applications*, Springer, Vol. 79, No. 39-40, pp. 29595–29620, Oct. 2020 (ISI-JCR).
53. F. Shamsafar, H. Ebrahimnezhad, "Uniting Holistic and Part-based Attitudes for Accurate and Robust Deep Human Pose Estimation", *Journal of Ambient Intelligence and Humanized Computing*, Springer, Vol. 12, No. 2, pp. 2339–2353, Feb. 2021 (ISI-JCR).
54. L. Asgharian, H. Ebrahimnezhad, "Anisotropic Re-meshing of 3D Models Based on Adaptive Sampling", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 8, No. 1, pp. 4-34, spring and Summer 2021 (printed in Persian) (ISC) .
55. A. Asghari, H. Ebrahimnezhad, "Facial Landmark Localization by Initializing the Landmark Points through Training of Local Binary Properties and Histogram of Oriented Gradient ", *Journal of Nonlinear Systems in Electrical Engineering (JNSEE)*, Vol. 8, No. 2, pp. , Autumn and Winter 2021 (printed in Persian) (ISC) .

56. L. Asgharian, H. Ebrahimnezhad, "Feature Preserving Mesh Simplification through Anisotropic Nyquist based Adaptive Sampling of Points Inside the Segmented Regions", *Journal of Visualization*, Springer, Vol. 25, No. 4, pp. 807-817, Aug. 2022 (ISI-JCR).
57. J. Ranjbar, H. Ebrahimnezhad, "Matching of same family objects by searching for similar components based on both color and wavelet features", *Journal of Machine Vision and Image Processing*, (JMVIP), Vol. 9, No. 4, pp. 43-54, Dec. 2022, (printed in Persian) (ISC).
58. Kh. Mahdikhanlou, H. Ebrahimnezhad, "3D object deforming and manipulating through dynamic hand gestures", *Entertainment Computing*, Elsevier, Vol. 43, Aug. 2022 (ISI-JCR).
59. A.M.Taheri, H. Ebrahimnezhad, M.H. Sedaaghi, "Prediction of the Critical Temperature of Superconducting Materials Using Image Regression and Ensemble Deep Learning", *Materials Today Communications*, Elsevier, Vol. 33, Dec. 2022 (ISI-JCR).
60. Kh. Mahdikhanlou, H. Ebrahimnezhad, "3D Hand Pose Estimation from a Single RGB Image by Weighting the Occlusion and Classification", *Pattern Recognition*, Elsevier, Vol. 136, 109217, Apr. 2023 (ISI-JCR).
61. Kh. Mahdikhanlou, H. Ebrahimnezhad, "Object Manipulation and Deformation using Hand Gestures", *Journal of Ambient Intelligence and Humanized Computing*, Springer, Vol. 14, No. 7, pp. 8115-8133, July. 2023 (ISI-JCR).
62. L. Asgharian, H. Ebrahimnezhad, "3D Model Representation Using Space Curves: An Efficient Mesh Simplification Method by Exchanging Triangulated Mesh to Space Curves", *Multimedia Tools and Applications*, Springer, Vol. 82, No. 20, pp. 30965-31000, Aug. 2023 (ISI-JCR).
63. F. Gholipour, H. Ebrahimnezhad, "Content-Based Natural Images Retrieval using Curvature Histogram Shape Feature", *COJ Electronics & Communications*, Vol. 2, No. 5, pp. 1-8, Sep. 2023.
64. R. Kheyrolahi, F. Hoorali, M.H. Sedaaghi, H.Ebrahimnezhad, "Pupil Detection for Automatic Diagnosis of Eye Diseases Using Optimized Color Mapping", *Journal of Health and Biomedical Informatics*, Vol.10, No.1, June 2023.
65. AM Taheri, H Ebrahimnezhad, M Sedaaghi, "Ensemble deep learning for high-precision classification of 90 rice seed varieties from hyperspectral images", *Journal of Ambient Intelligence and Humanized Computing*, Vol. 15, No. 6, pp. 2883-2899, June 2024.
66. B. Namadian, H. Ebrahimnezhad, "Estimating scouring of combined spillway-valve structure due to contraction using numerical model and neural networks", *Iranian journal of Marine technology*, Vol. , No. , pp. , published on line, Sep. 2024.
67. Kh. Mahdikhanlou, H. Ebrahimnezhad, "Integration of Leap Motion sensor with camera for better performance in hand tracking", *Metaverse 2024*, Vol.5, No. 2, Dec. 2024.
68. A. Amirfathiyan, H. Ebrahimnezhad, "Efficient 3D Shape Matching: Dense Correspondence for non-isometric Deformation", *Iranian Journal of Electrical and Electronic Engineering (IJEET)*, Vol. 20, No. 4, pp. 162-172, Dec. 2024.
69. H. Merrikhi, H. Ebrahimnezhad, "Grasp Area Detection for 3D Object using Enhanced Dynamic Graph Convolutional Neural Network", *Iranian Journal of Electrical and Electronic Engineering (IJEET)*, Vol. 20, No. 4, pp. 134-146, Dec. 2024.
70. A. Yeganehmehr, H Ebrahimnezhad, "Classification of galaxy images using vision transformers", *AUT Journal of Electrical Engineering*, Vol., No., pp., Articles in Press, Available Online Nov. 2024.
71. N. Rahmani, H Ebrahimnezhad, E. Ahmadi, "Enhancing Agricultural Diagnostics: Tomato Leaf Disease Detection Using Quantum Vision Transformer", *AUT Journal of Electrical Engineering*, Vol., No., pp., Articles in Press, Available Online Nov. 2024.
72. S. Dehghani, H Ebrahimnezhad, N. Rahmani, "Diabetic Retinopathy Detection from Retinal Images Using the Pyramid Vision Transformer Method", *AUT Journal of Electrical Engineering*, Vol., No., pp., Articles in Press, Available Online Nov. 2024.
73. A. Asgari, H. Ebrahimnezhad, M.H. Sedaaghi, "Kidney Stones CT Images Classification using Graph Convolutional Network", *AUT Journal of Electrical Engineering*, Vol., No., pp., Articles in Press, Available Online Jan. 2025.
74. J. Ranjbar, H. Ebrahimnezhad, M.H. Sedaaghi, "Enhancing Colonoscopy-Images Segmentation using Laplacian-Former as Efficient Transformer Block", *AUT Journal of Electrical Engineering*, Vol., No., pp., Articles in Press, Available Online Jan. 2025.
75. A. Yeganehmehr, H Ebrahimnezhad, "Classification of galaxies from image features using best parameter selection by horse herd optimization algorithm (HOA)", *Astronomy and Computing*, Elsevier, Vol. 50, pp. 100898, Jan. 2025 (ISI-JCR).

Conference Publications:

1. H. Asjadi, H. Ebrahim Nezhad, "A New Algorithm for Signal Reconstruction from the Phase of Bispectrum and its Applications in Image Enhancement" Sixth International Conference on Image Processing and its Applications. (IPA97), IEE, Dublin, Ireland, Vol.1 , No443, pp. 298-302, 1997.
2. H. Ebrahimnezhad, H. Asjadi, "Image Reconstruction Using Third Order Spectrum", Proceeding of 5th Iranian Conference on Electrical Engineering (ICEE-97), vol. 5, pp. 286-293, Tehran, Iran., May 1997, (printed in Persian).
3. H. Ebrahimnezhad, F. Fattahi, "Design of SMES system for Azarbaijan Electrical network with Fuzzy controller and survey of its effect on damping of dynamic swing of power system", 15th International Power System Conference(PCS2000), Niroo Research Center, pp.167-175, Tehran, Iran, Nov. 2000, (printed in Persian).
4. H. Ebrahimnezhad, "A New Approach to Improving of Transmission Capacity in Electrical Transmission Line Using Super Conductive Magnetic Energy Storage" Energy, Ecology, Economy, Sixth Baku International Congress, pp.59-64, Baku, Azerbaijan, May-June 2001.
5. H. Ebrahimnezhad, H. Ghassemian, "3D model reconstruction through a silhouette based hierarchical method", Proceeding of 10th CSI Computer Conference (CSICC2005), vol.2, pp. 40-47, Tehran, Iran, Feb. 2005.
6. H. Ebrahimnezhad, H. Ghassemian, "3D Model reconstruction by multiple-views feature based matching and silhouette information during time", Proceeding of 13th Iranian Conference on Electrical Engineering(ICEE2005), vol. 1, pp. 459-464, Zanjan, Iran., May 2005.
7. H. Ebrahimnezhadi, H. Ghassemian, "A Volume Based 3D Visual Hull Reconstruction for Tele-Conferencing Application", Proceeding of 3rd Iranian Conference on Machine Vision and Image Processing MVIP2005, pp. 125-132, Tehran, Iran, Feb. 2005, (printed in Persian).
8. H. Ebrahimnezhad, H. Ghassemian, "Combining the Feature based Stereo Matching, Motion and Silhouette to Reconstruct Visual Hull", IEEE Workshop on Signal Processing Systems, (SIPS2005), pp. 461-466, Athens, Greece, Nov. 2005.
9. H. Ebrahimnezhad, H. Ghassemian, "3D Shape Reconstruction of Moving Object by Tracking the Sparse Singular Points", IEEE International workshop on Multimedia Signal Processing (MMSP2006), pp. 192-197, Victoria, Canada, Oct. 2006.
10. H. Ebrahimnezhad, H. Ghassemian, "Shape Reconstruction from Space Curves through the Rigid Motion", 12th International CSI Computer Conference (CSICC2007), pp. 1452-1459, Tehran, Iran, Feb. 2007.
11. H. Ebrahimnezhad, Gh. A. Montazer, N. Jafari, "Recognition of Persian Numeral Fonts by Combining the Entropy Minimized Fuzzifier and Fuzzy Grammar ", Proceedings of the 6th WSEAS Int. Conf. on Artificial Intelligence, Knowledge Engineering and Data Bases, pp 22-27, Corfu Island, Greece, Feb. 2007.
12. H. Ebrahimnezhad, H. Ghassemian, "Robust Motion and 3D Structure from Space Curves", IEEE International Symposium on Signal Processing and its Applications (ISSPA2007), 1-4244-0779-6/07, Sharjah, United Arab Emirates, Feb. 2007.
13. H. Ebrahimnezhad, H. Ghassemian, "Rigid Motion Estimation Using Two Rectangular Stereo Setup", Proceeding of 15th Iranian Conference on Electrical Engineering (ICEE2007), Communications (systems) Proceedings, pp 305-310, Tehran, Iran, May 2007, (printed in Persian).
14. S. Kamel, H. Ebrahimnezhad, A. Ebrahimi, "Moving Object Removal in Video Sequence and Background Restoration using Kalman Filter", International Symposium on Telecommunication (IST2008), IEEE, pp.580-585, Tehran, Iran, Aug. 2008.
15. H. Ranjzad, A. Ebrahimi, H. Ebrahimnezhad, "Improving Feature Vectors for Iris Recognition Through Design and Implementation of New Filter Bank and Locally Compound using of PCA and ICA", First International Symposium on Applied Science on Biomedical and Communication Technologies, (ISABEL 2008), IEEE, pp.1-5, Aalborg, Denmark, Oct. 2008.
16. H. Ranjzad, H. Ebrahimnezhad, A. Ebrahimi, "A Novel Compound Approach for Iris Segmentation", International Conference on Convergence and Hybrid Information Technology (ICCIT 2008), IEEE, pp. 657-661, Bousan, Korea, Nov. 2008.
17. S. Kamel, H. Ebrahimnezhad, A. Ebrahimi, "Removing the Fixed Object from Video Sequences and Restoring the Occluded Background and Moving Object", Fifth Iranian Conference on Machine Vision and Image Processing (MVIP2008), Tabriz, Iran, Nov. 2008.

18. S. Galamifard, H. Ebrahimnezhad, A. Ebrahimi, "Edge Detection in Blurry Images using Image Histogram Optimization", Fifth Iranian Conference on Machine Vision and Image Processing (MVIP2005), Tabriz, Iran, Nov. 2008.
19. N. Alijanpour, H. Ebrahimnezhad, A. Ebrahimi, "Inner Distance Based Hand Gesture Recognition for Device Control", International Conference on Innovations in Information Technology (Innovations 2008), IEEE, Al Ain, United Arab Emirates, Dec 2008.
20. N. Alijanpour, H. Ebrahimnezhad, A. Ebrahimi, "Hand Gesture Recognition by Combining the geometric and shape context features to control the wheelchair", 15th Iranian Conference on Biomedical Engineering (ICBME 2008), Mashhad, Iran, Feb. 2009 (printed in Persian).
21. F. Hourali, H. Ebrahimnezhad, M. R. Alsharif, MD.Foisal Hossain, "Ear Recognition Based on Rotation Invariant Transformed DCT", The 8th International Conference on Applications and Principles of Information Science (APIS 2009), pp. 19-22, University of Ryukyus, Okinawa, Japan, Jan. 2009.
22. H. Ranjzad, H. Ebrahimnezhad, M. R. Alsharif, MD.Foisal Hossain, "Iris Feature Extraction using Geometrical Properties of Texture Lines", The 8th International Conference on Applications and Principles of Information Science (APIS 2009), pp. 259-262, University of Ryukyus, Okinawa, Japan, Jan. 2009.
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Technical Reports:

1. Design and Construct of Wireless Modem in FM Frequency Range, 1997
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3. Segmentation of MS Lesions in MRI Images, 2001

MSc Thesis Supervision:

1. Object removal in video sequence, Saeed Kamel
2. Hand gesture recognition, Nasibeh Alijanpour
3. Iris segmentation and Recognition, Hamed Ranjzaad
4. Image segmentation by Integrating Color, Texture and Shape Information, Mehryar Emambakhsh
5. Pupil detection, Rasoul Kheirollahi.
6. Lip segmentation for audio Visual Speech Recognition, Reza Banimahd
7. Speaker change Detection, Ebrahim keramatizaadeh
8. Car detection in Image, Hossein Soleymani
9. Object detection in Image by Poisson equation feature, Mohamad Anvaripour
10. Obstacles detection in road using stereo vision for intelligent vehicle Navigation, Kaavous Abdolmaleki
11. Traffic sign detection and recognition in image, Haaleh Arabi
12. Shape recognition based on geometric and occluding contour features, Zeynab Imaani
13. Semantic-based image segmentation, Araz Sholehkerdaar
14. Object Categorizing in natural images by extracting its parts and using grammar between them, Sima Soltanpour
15. Human action recognition from silhouette image sequences, Maryam Ziaefard
16. Dynamic texture detection and segmentation in video sequence, Nima Frouzanfar
17. Human pose tracking in video sequence, Ghasem Khademi
18. Human age estimation from facial image, Mohamad Ali Hajizadeh
19. Image retrieval by fusing shape, texture and color information, Farnaz Gholipour
20. 3D objects retrieval from features of 2D views, Mohammad Ramezani
21. Sign language recognition from hand images, Zhila Mousavian
22. Face retrieval using semantic descriptors, Mohammad Ghaseri
23. 3D model segmentation based on geometric feature, Mahsa Mirloo
24. Dynamic hand gesture recognition for human computer interaction as a 3D mouse, Behnam Maleki
25. Classification of EEG-VEP signals using machine learning algorithms, Ali Momennezhad
26. Digital Watermarking for 3D mesh models, Amir Masoud Molaye
27. Rain and fog detection and removal in video sequences, Gelareh Malekshahi
28. 3D Model fitting and reconstruction from clouds of points, Naeimeh Soltanieh
29. Human Eye gaze estimation using appearance features of eye under natural head movements, Hamidreza Emamjome

30. Object Recognition Based on Sparse Representation of Shape Features, Khadije Mahdikhanelou
31. Palmprint Recognition using Directional Features, Pouya Akhoundzadeh
32. Human Interaction Recognition using Visual Features, Saman Nikzad
33. Synthesis of Articulated Object Motion Based on the Movement of Other Objectes, Lida Asgharian
34. Content Based Video Indexing, Salar Razavi.
35. Video Summarization of Wireless Endoscopy Capsule by Clustering, Mehrdokht Bordbar
36. Facial Video Compression for Visual Communication, Omid Abachian
37. Recognition of Plant Species based on their Leaf Image, Behnam Saadat.
38. Analysis of Metal Microstructures by Extracting Texture Features of Crystals in Metallographic Images, Taher Khaghani.
39. Endoscopy Wireless Capsule Video Summarization based on Clustering Method, Mehrdokht Bordbar
40. Face Recognition Robust to Pose variation, Arezo Sadeghzadeh.
41. Correspondence Finding in Non-Rigid 3D Models, Davoud Yadegari.
42. Object Recognition from Shape, Texture and Color Features to Categorize Butterfly Species, Behzad Mohammadpour.
43. Non-Rigid Shape Matching in Images, Fariba Amini.
44. Object Recognition in Image Robust to View Angle, Fahamieh Sobhani.
45. Recognition of Plant Species based on Their Leaf Images, Behnam Saadat.
46. Segmentation of Images Captured by Kinect Sensors by Fusing Color and Depth Information, Sina Saemi.
47. Human Facial Synthesis based on Example Image, Amirreza Amirfathiyan.
48. Part-Based Fine-Grained Object Recognition usng Color and Texture Features, Farzaneh Javanshir.
49. Precoding MIMO Systems for Interference Reduction, Mehrdad Shokouhi.
50. Motor Imagery EEG Signals Analysis for a Brain Computer Interyface System Application, Hamed Moradkhani.
51. Sketch based Image Retrival, Elnaz Imani.
52. Facial Expression Transfer from Source to Target Person, Haniye Merrikhi.
53. Human Action Recognition in Sport Movement, Kazem Mohammadian
54. Matching the Corresponding Components between Objects in The Same Family in the two Images, Jabraeil Ranjbar.

Ph.D. Thesis Supervision:

1. Vahid Mehrdad, 3D Object Retrieval from Geometric Features
2. Saeid Mansouri, 3D Model Compression using Surface Processing
3. Mohammad Ali Hajizadeh, Animated 3D Model Compression
4. Faranak Shamsafar, Human Pose Estimation Using Deep Learning
5. Mahsa Mirloo, Non-Rigid Deformable 3D Object Retrieval
6. Khadijeh Mahdikhanelou, 3D Hand Pose Estimation
7. Lida Asgharian, 3D Mesh Editing
8. Hanie Merrikhi, Robot Grasping using image and point cloud
9. Amirreza Amirfathiyan, 3D Shape Correspondence and Matching
10. Amir Masoud Taheri, Ensemble Deep Learning for Classification and Regression
11. Habib Rasi, Explainable Convolutional Neural Networks for Image Classification
12. Amin Asgari, Graph Neural Network for Classification
13. Jabraeil Ranjbar, Vision Transformer for Image Segmentation

Datasets:

1. Sahand Dynamic Hand Gesture Database - This database contains 11 Dynamic gestures designed to convey the functions of mouse and touch screens to computers. (Behnam Maleki, Hossein Ebrahimnezhad). link:
2. Sahand LMC Sign Language Database - This database comprises of 32 class including 24 American letters (J and Z are excluded because they are dynamic gestures) and numbers from 0 to 9 (gesture for 6 and w, also gestures for 9 and F are same). Each class of database contains 2000 samples. The database is collected by a webcam and Leap Motion Controller (LMC). (Khadijeh Mahdikhanelou, Hossein Ebrahimnezhad).
links: <http://ee.sut.ac.ir/showcvmain.aspx?id=5> <https://hadikhaneloo.wixsite.com/sahandsignlanguage>