

# Curriculum Vitae



Name	Date of Birth	Gender	Marital Status
Mohammad Karimi Moridani	21/09/1983, LANGROUD, IRAN	Male	Married

Campus Address	Permanent Address
Assistant Professor of Biomedical Engineering Islamic Azad University, Tehran Medical Sciences, Tehran, Iran	<b>Postal Address:</b> Unit 4, No. 29, Between the 2nd and 3rd Volcanoes, 182th Street, Tehran-Pars, Tehran, IRAN. <b>Email:</b> karimi.m@iautmu.ac.ir

Areas of Interest	
1) Image and Signal Processing	2) Machine Learning/Deep Learning
3) Neural Networks and Applications	4) Statistical Analysis
5) Fuzzy Theory	6) Optimization Theory
7) Bioengineering	8) Modeling

Education
<b>2011-2015: Ph.D.:</b> Biomedical Engineering, Islamic Azad University, Science and Research Branch, Tehran, Iran.
<b>2006-2008: M.Sc.:</b> Biomedical Engineering, Islamic Azad University, Science and Research Branch, Tehran, Iran.

Projects	
<b>Ph.D. Thesis</b>	Mortality Prediction of Cardiovascular and Cerebrovascular Patient Admitted in ICU Using Nonlinear Methods and Clinical Rules
<b>M.Sc. Thesis</b>	ECG Imaging to Ischemic Episode Detection
<b>B.Sc. Projects</b>	DC Motor Control with PD&PID Controller in MATLAB Environment

Professional Experience	
<b>Teaching Experience:</b>	<b>2007-2008:</b> Teaching Electrical Circuit Course, Linear Control Systems, MATLAB Programming, SPICE Programming at the Islamic Azad University of Lahijan, Guilan, Iran.
	<b>2009-2016:</b> Teaching Electronic, Integrated Circuits, and Discrete-Time Signal Processing Courses and Computer Networks at the Islamic Azad University of Garmsar, Garmsar, Iran.
	<b>2011-2018:</b> Teaching Electronic, Electrical Circuits, Microprocessor at the Islamic Azad University of Islamshahr, Islamshahr, Iran.
	<b>2012-Present:</b> Teaching Medical Informatics, Systemic Programming, Microprocessor, MATLAB Software at Islamic Azad University, Tehran Medical Sciences, Tehran, Iran.
	<b>Supervisory Experience:</b> 55 Undergraduates; 9 Masters students; 2 Ph.D student
<b>Computer Skills:</b>	<input type="checkbox"/> <b>Matlab Professional Programmer</b> <input type="checkbox"/> Simulink <input type="checkbox"/> Fuzzy Logic <input type="checkbox"/> Neural Network <input type="checkbox"/> Graphical User Interface (GUI) <input type="checkbox"/> <b>Programming Languages:</b> Python, Assembly (808), C++ <input type="checkbox"/> <b>Software Packages:</b> PSPICE, ORCAD, EWB

## Publications:

Published Books
<b>Mohammad Karimi Moridani (Author);</b> Tutorial of MATLAB Software and Simulink, Persian language, Islamic Azad University Publisher; Iran, 2018.
<b>Mohammad Karimi Moridani (Translation to Persian);</b> Neural Networks Architectures Examples Using MATLAB, By j. Smith; Islamic Azad University Publisher; Iran; 2018.

Book Chapters
<b>Mohammad Karimi Moridani;</b> Comparative Functional Magnetic Resonance Imaging Using Brain Imaging Modalities; Biomedical and Environmental Sensing; 63-70; 2009.
Journal Publications
<b>Mohammad Karimi Moridani,</b> Seyed Kamaledin Setarehdan, Ali Motie Nasrabadi, Esmail Hajinasrollah; A Novel Approach to Mortality Prediction of ICU Cardiovascular Patient Based on Fuzzy Logic Method; Biomedical Signal Processing and Control; 2018; 45:160-173.

<p><b><u>Mohammad Karimi Moridani</u></b>, Shabnam Ghahari, Implementation of Edge Detection as an Efficient Algorithm to the Evaluation of the Dental Caries; <i>Advances in BioResearch</i>; 2017; 8 (2): 233-241.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Majid Pouladian, A NOVEL METHOD TO ISCHEMIC HEART DISEASE DETECTION BASED ON NON-INVASIVE ECG IMAGING, MK MORIDANI, M POULADIAN, <i>Journal of Mechanics in Medicine and Biology</i>,</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Yashar Haghghi Bardineh, Presenting an efficient approach based on novel mapping for mortality prediction in intensive care unit cardiovascular patients, <i>MethodsX</i>, 5,2018.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Hanieh Farhadi, Heart rate variability as a biomarker for epilepsy seizure prediction; <i>Bratislava Medical Journal</i>; 2017; 118 (1): 3–8.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Seyed Kamaledin Setarehdan, Ali Motie Nasrabadi, Esmail Hajinasrollah; Non-Linear Feature Extraction from HRV Signal for Mortality Prediction of ICU Cardiovascular Patient; <i>Journal of Medical Engineering &amp; Technology</i>; 2016; 40 (3): 87-98.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Seyed Kamaledin Setarehdan, Ali Motie Nasrabadi, Esmail Hajinasrollah; New Algorithm of Mortality Risk Prediction for Cardiovascular Patients Admitted in Intensive Care Unit Using of Artificial Neural Networks; <i>International Journal of Clinical and Experimental Medicine</i> 08/2015; 8 (6): 8916-8926.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Seyed Kamaledin Setarehdan, Ali Motie Nasrabadi, Esmail Hajinasrollah; Analysis of Heart Rate Variability as a Predictor of Mortality in Cardiovascular Patients of Intensive Care Unit; <i>Biocybernetics and Biomedical Engineering</i> 06/2015; DOI: 10.1016/j. be. 2015.05.004</p>
<p>Soroor Behbahani, <b><u>Mohammad Karimi Moridani</u></b>, Nonlinear Poincaré Analysis of Respiratory Efforts in Sleep Apnea: <i>Bratislava Medical Journal</i>, 08/2015; 116 (7): 426-432; DOI:10.4149/BLL_2015_081.</p>
<p>Ahad Karimi Moridani, Seyyedeh Hoor Fakhrmoosavy, <b><u>Mohammad Karimi Moridani</u></b>; Vehicle Detection and Tracking in Roadway Traffic Analysis Using Kalman Filter; <i>International Journal of Imaging and Robotics</i>; 15(2):47-52, 2015.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Seyed Kamaledin Setarehdan, Ali Motie Nasrabadi, Esmail Hajinasrollah; Mortality Risk Assessment of ICU Cardiovascular Patients Using Physiological Variables; <i>Universal Journal of Biomedical Engineering</i>; 1:6-9; 2013.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>; Detection and Quantification of Coronary Atherosclerotic Plaque Using Different Imaging Modalities; <i>American Journal of Biomedical Engineering</i>; 1:1-6; 2011.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>; Detection Ischemic Episodes from Electrocardiogram Signal using Wavelet Transform. <i>Journal of Biomedical Science and Engineering</i>; 02 (04): 239-244; 2009.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>; Functional Brain Imaging with Use of a New and Powerful Neuroimaging Technique. <i>Journal of Biomedical Science and Engineering</i>; 02 (03): 173-176; 2009.</p>
<p><b>Conferences</b></p>
<p>Soroor Behbahani, <b><u>Mohammad Karimi Moridani</u></b>, Nasrin Kianfar: Cardiac Signal Processing to discriminate Normal and Atrial Fibrillation Signals, Seventh National Symposium on Electrical Engineering, Majlesi, Isfahan, Iran, 2018.</p>
<p><b><u>Mohammad Karimi Moridani</u></b>, Mandana Kia, Fatemeh Choopani, Development of Computer-Aided Diagnosis System to Evaluate the Lung Efficiency Using Electrical Impedance Tomography, Kharazmi University, Tehran ,Iran, 1-9, 2018.</p>

**Mohammad Karimi Moridani**, Mahdyar Heydar, Sina Jabbari, A Reliable Algorithm Based on Combination of EMG, ECG and EEG Signals for Sleep Apnea Detection, 5th Conference on Knowledge-Based Engineering and Innovation, Iran University of Science and Technology, Iran University of Science and Technology, Tehran, Iran, 2018.

**Mohammad Karimi Moridani**, Golnaz Abadi; Neuromuscular Skeletal Arm Modeling to Analysis of Stability and Movement Control; International Conference on Researches in Science & Engineering; Turkey, 2016.

**Mohammad Karimi Moridani**, Shabnam Ghahari, Fatemeh Gholami: Early Caries Detection in Tooth-Based on Histogram and Power Spectral Analysis, 1st Langaroud Conference On Electrical Engineering, 2015.

**Mohammad Karimi Moridani**, Fatemeh Gholami, Shabnam Ghahari, Darush Gholami: Face Tracking for Diagnosis and Treatment Plan in Orthodontic Patients, 1st Langaroud Conference On Electrical Engineering, 2015.

**Mohammad Karimi Moridani**, Sorooor Behbahani: Improvement of the Storage Capacity for Hopfield Network Associative Memory. 1th National Conference on Computer Engineering and Information Retrieval; 1-9; 2013.

**Mohammad Karimi Moridani**; Visualization of Coronary Atherosclerotic Plaques in Patients Using Different Imaging Modalities; 17th Iranian Conference on Biomedical Engineering (ICBME); 1-6; 2010.

**Mohammad Karimi Moridani**, Amir Homayoon Jafari: Presenting a Nonlinear Model to Analysis of the Movement in Neuromuscular Skeletal Arm. 16th Iranian Conference on Biomedical Engineering (ICBME); 1-9; 2010.

**Mohammad Karimi Moridani**; ECG Imaging to Ischemic Episode Detection; 17th Conference on Electrical Engineering (ICEE); 7-13; 2009.

### Presentations

1. ECG Imaging to Ischemic Episode Detection; 17th Conference on Electrical Engineering (ICEE); Science and Technology University, Tehran, Iran, 2009.
2. Visualization of Coronary Atherosclerotic Plaques in Patients Using Different Imaging Modalities; 17th Iranian Conference on Biomedical Engineering (ICBME); Isfahan, Iran, 2010.
3. Presenting a Nonlinear Model to Analysis of the Movement in Neuromuscular Skeletal Arm. 16th Iranian Conference on Biomedical Engineering (ICBME); Tehran University of Medical Sciences, Tehran, Iran, 2010.
4. Improvement of the Storage Capacity for Hopfield Network Associative Memory. 1th National Conference on Computer Engineering and Information Retrieval; Roodsar, Guilan, Iran, 2013.
5. Face Tracking for Diagnosis and Treatment Plan in Orthodontic Patients, 1st Langroud Conference on Electrical Engineering, Langroud, Iran, 2015.
6. Caries Detection in Tooth-Based on Histogram and Power Spectral Analysis, 1st Langroud Conference on Electrical Engineering, Langroud, Iran, 2015.

### Membership

Member of Construction Engineering Organization  
Member of the Association of Medical Engineering  
Member of Young Researcher Club

### Other Skills

**Language:** Advanced English

## References

**Dr. Seyed Kamaledin Setarehdan**

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