

Professor of Biomedical Engineering

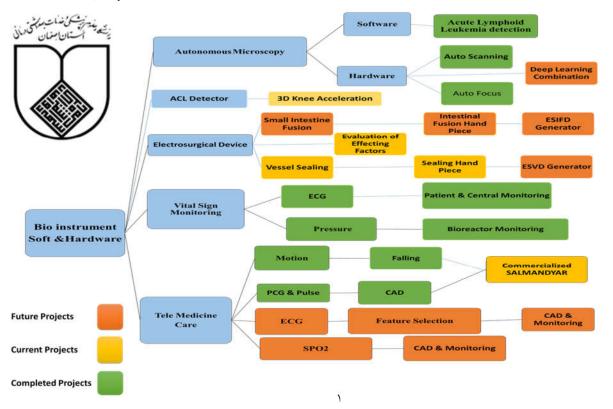
Department of Bioelectrics and Biomedical Engineering, School of Advanced Medical

Technology, Isfahan University of Medical Sciences

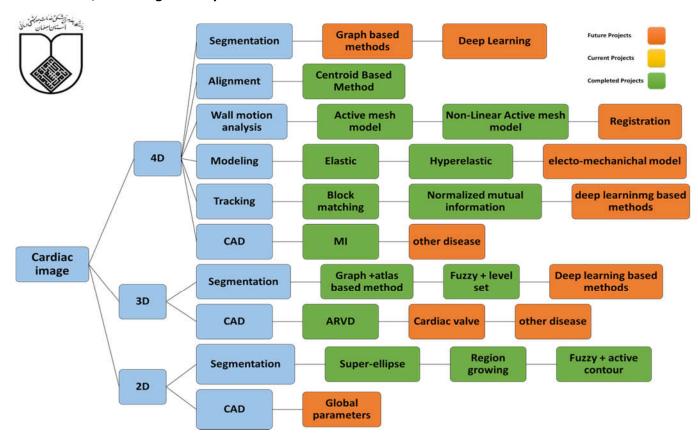
Saeed Kermani obtained his BS from the Department of Electrical Engineering of Isfahan University of Technology in Isfahan, Iran, 1987. In the Iranian University Entrance Exam (Konkour 1361), his rank is 122th among over 100,000 competitors in 1983. He received the MS in Bioelectric Engineering from Sharif University of Technology, Tehran, Iran in 1992 and his PhD in Bioelectric Engineering at Amirkabir University of Technology, Tehran, Iran, in 2008.

He is a full professor of medical engineering at the Department of Bioelectrics in advanced medical technology of Isfahan University of Medical Sciences, Iran. His research interests are development of Biomedical Image analysis on CMRI, Biosignal processing techniques on ECG & BCI and Biomedical instruments. His road map has three branches which shows in below:

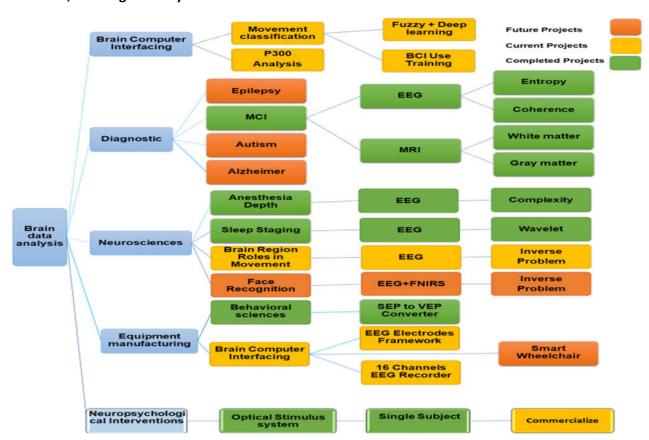
ROAD MAP1, implement bio instruments



ROAD MAP2, cardiac signal Analysis



ROAD MAP3, Brain signal Analysis



Selective Papers:	Year
An insight into fluorescence and magnetic resonance bioimaging using a multifunctional polyethyleneimine-passivated gadocarbon dots nanoconstruct assembled with AS1411	
Z Farahbakhsh, M Zamani, V Nasirian, L Shariati, S Kermani,	2023
Microchimica Acta 190 (7), 275	
Automated camera lucida method with colored images through integration of hardware and software in microscopic zooming	
F Vahabi, S Kermani, Z Vahabi, N Pestechian	<u>2023</u>
Journal of Medical Signals & Sensors 13 (2), 160-164	
A New Approach of PCG Analyzing for screening some of Cardiovascular Diseases	
Ehsan Mohammadi , Saeed Kermani \ast , Mahdi Nourian-Zavareh , Alale Zare , Hamed Aghapanah-Roudsari , Maryam Samieinasab , Hamid Sanei	2022
Journal of Isfahan Medical School, Volume: 40 Issue: 661, 2022, ISSN: 1027-7595 eISSN: 1735-854	
Wavelet-Based Biphase Analysis of Brain Rhythms in Automated Wake–Sleep Classification	
E Mohammadi, B Makkiabadi, MB Shamsollahi, P Reisi, S Kermani*	2022
International Journal of Neural Systems 32 (02), 2250004	
Automated drawing tube (camera lucida) method in light microscopy images analysis can comes true	
F Vahabi, S Kermani*, Z Vahabi, N Pestechian	2021
Journal of Microscopy and Ultrastructure 9 (4), 170	
A Multichannel Intraluminal Impedance Gastroesophageal Reflux Characterization Algorithm Based On Sparse Representation	
AR Kenari, H Rabbani*, S Kermani, M Raisi, M Soheilipour, P Adibi	2021
IEEE Journal of Biomedical and Health Informatics 25 (9), 3576-3586	
On the bioactivity and mechanical properties of gehlenite nanobioceramic: A comparative study	
A Bigham, S. Kermani*, AH Aghajanian, M Rafienia	2020
Journal of Medical Signals and Sensors 10 (2), 105	
NF-RCNN: Heart localization and right ventricle wall motion abnormality detection in cardiac MRI	2020

Physica Medica 70, 65-74	
Automatic detection of acute lymphoblastic leukaemia based on extending the multifractal features	
M Abbasi, S Kermani*, A Tajebib, M Moradi Amin, M Abbasi	2020
IET Image Processing 14 (1), 132-137	
Corrigendum: Automatic detection of acute lymphoblastic leukaemia based on extending the multifractal features	2020
M Abbasi, S Kermani*, A Tajebib	
The Effect of Neuropsychological Interventions on color recognitions in children with low vision by optical stimulus system: A single subject study	
E Moazeni, S kermani*, S Faramarzi, F Tavakolli, Journal of Isfahan Medical School	2019
37(539), pp. 989-993,	
Estimation and Evaluation of New Features from Phonocardiogram for Detecting Cardiovascular Abnormalities	
M Nourian-Zavareh,., S Kermani,., M. Hashemi-Jazi, M, Samieinasab,	2019
Journal of Isfahan Medical School, 36(506), pp. 1444-1449	
Design and implementation of optical stimulus system for rehabilitation and development of visual functions in children with low vision	
S Kermani*, E Moazeni, F Tavakoli, A Kermani,	2019
Optik 198, 163210	
Automatic detection of acute lymphoblastic leukemia based on extending the multifractal features	
S Kermani*, A Talebi, MM Amin,	2019
IET Image Processing	
Extraction Of Left Ventricular Wall Mechanical Indexes Using Four-Dimensional Image Analysis Of Mri, Based On A Nonlinear Hyperelastic Model	2019
H Yousefi-Banaem, S Kermani*, H Sanei, A Daneshmehr	
Iranian Congress of Radiology 34 (4), 100-100	

S Kermani*, MG Oghli, A Mohammadzadeh, R Kafieh

information transition	
MG Oghli, A Mohammadzadeh, R Kafieh, S Kermani*	2018
Physica Medica 54, 103-116	
<u>Introduction of low to high frequencies bispectrum rate feature for deep sleep detection from awakening by electroencephalogram</u>	
E Mohammadi, S Kermani*, B Amra	2018
Tehran University Medical Journal TUMS Publications 76 (5), 326-330	
The design and validation of a hybrid digital-signal-processing plug-in for traditional cochlear implant speech processors	2018
F Hajiaghababa, HR Marateb, S Kermani	2018
Computer methods and programs in biomedicine 159, 103-109	
Designing an Inverter-based Operational Transconductance Amplifier-capacitor Filter with Low Power Consumption for Biomedical Applications	
S Yousefinezhad, S Kermani*, S Hosseinnia	2018
Journal of medical signals and sensors 8 (1), 53	
A novel feature ranking method for prediction of cancer stages using proteomics data	
E Saghapour, S Kermani*, M Sehhati	2017
PloS one 12 (9), e0184203	
Controversial cytogenetic observations in mammalian somatic cells exposed to extremely low frequency electromagnetic radiation: A review and future research recommendations.	
D Shahbazi-Gahrouei, S Sadat Setayandeh, F Aminolroayaei, S Kermani	2017
Journal of Medical Sciences 18 (3), 143-148	
A novel and more efficient approach for automatic diagnosis of acute lymphoblastic leukemic cells based on combining geometrical and statistical features of blood cells	
MR Abbasi, S Kermani*, A Talebi	2017
Journal of Isfahan Medical School 35 (433), 643-647	
Automatic separation of awakening from sleep epochs based on bispectrum analysis of electroencephalogram signals	2017

Journal Of Isfahan Medical School (IUMS) 35 (4480033), 1271-1275	
Proposing an approach for diagnosis of mild cognitive impairment based on approximate entropy	
B T Shabanian, S Kermani*, M Barekatain, M Kashefpoor	2017
Journal Of Isfahan Medical School (IUMS) 34 (407), 1356-1361	
Prediction of myocardial infarction by assessing regional cardiac wall in CMR images through active mesh modeling	
HS H Yousefi-Banaem, S Kermani*, S Asiaei	2017
Computers in Biology and Medicine 80, 56-64	
Detecting Infarct Region in Cardiac Magnetic Resonance Images Through Weighted Normalized Mutual Information	
H Yousefi-Banaem, S Kerman*i, H Sanei, A Daneshmehr	2017
Iranian Journal of Radiology 14 (3)	
A novel detector algorithm for swing and stance phases based on knee acceleration variation in gait analysis among normal and ACL-deficient subjects S Kermani*, S.,Fazlali, H.,Sadeghi Journal Of Mazandaran University Of Medical Sciences 26 (141)	2016
Computer aided detection and classification of acute lymphoblastic leukemia cell subtypes based on microscopic image analysis	
M MoradiAmin, A Memari, N Samadzadehaghdam, S Kermani, A Talebi	2016
Microscopy research and technique 79 (10), 908-916	
A Combined Spatial Fuzzy C-Means and Level Set Approach for Endocardium Segmentation in MRI Image Series	
H Yousefi-Banaem, S Kermani*, O Srrafzadeh	2016
Archives of Cardiovascular Imaging 4 (3)	
Application of hyperelastic-based active mesh model in cardiac motion recovery	
H Yousefi-Banaem, S Kermani*, A Daneshmehr, H Saneie	2016
Journal of medical signals and sensors 6 (3), 141	

E Mohammadi, S Kermani, B Amra

Diagnosis of mild cognitive impairment (MCI) via estimating the density of gray matter using voxel-based morphometry (VBM) in the brain magnetic resonance imaging (MRI) Karimi, Z., Kermani, S*., Barekatain M	2016
Journal of Isfahan Medical School 33 (363), 2204	
A novel detector algorithm for swing and stance phases based on knee acceleration variation in gait analysis among normal and ACL-deficient subjects	
Kermani, S*.,Fazlali, H.,Sadeghi H	2016
Journal of Mazandaran University of Medical Sciences 26 (141), 95	
Enhanced recognition of acute lymphoblastic leukemia cells in microscopic images based on feature reduction using principle component analysis	
M MoradiAmin, N Samadzadehaghdam, S Kerman*i, A Talebi	2015
Frontiers in Biomedical Technologies 2 (3), 128-136	
Automatic color segmentation of breast infrared images using a Gaussian mixture model	
S Kermani*, N Samadzadehaghdam, M EtehadTavakol	2015
Optik 126 (21), 3288-3294	
Evaluation and Estimation of gray matter volume using voxel-based morphometry of the brain magnetic resonance imaging (MRI) in normal elderly people and those with mild Kermani, S*.,Karimi, Z.,Barekatain M	2015
Journal of Isfahan Medical School 33 (353), 1649	
Recognition of acute lymphoblastic leukemia cells in microscopic images using k-means clustering and support vector machine classifier	2015
MM Amin, S Kermani*, A Talebi, MG Oghli	2012
Journal of medical signals and sensors 5 (1), 49	
An Undecimated wavelet-based method for cochlear implant speech processing	
F Hajiaghababa, S Kermani*, HR Marateb	2014
Journal of medical signals and sensors 4 (4), 247	
An improved spectral subtraction algorithm for noise reduction in cochlear implants	
Mozaffarilegha, M.,Kermani S*	2014
International Journal of Scientific & Engineering Research 5 (3), 1214-1219	

in the raphe nuclei of adult male rat	
M Shahbazi, D., Shiri, L., Alaei, H., Naghdi, N., Kermani, S., Afrouzi, H., Kiani	2014
Journal of Isfahan Medical School 32 (298), 1354	
Improving speech intelligibility using ideal binary mask View in Scopus	
Naseri, N., Kermani S*	2014
Journal of Isfahan Medical School 31 (259)	
Extremely low-frequency electromagnetic field influences the survival and proliferation effect of human adipose derived stem cells	
S Razavi, M Salimi, D Shahbazi-Gahrouei, S Karbasi, S Kermani	2014
Advanced biomedical research 3 (25)	
An Improved Spectral Subtraction Algorithm for Noise Reduction in Cochlear Implants with Increasing Number of Channels.	
M Mozaffarilegha, S Kermani*	2013
Journal of Isfahan Medical School 31 (257)	
An accurate multimodal 3-D vessel segmentation method based on brightness variations on OCT layers and curvelet domain fundus image analysis	
R Kafieh, H Rabbani, F Hajizadeh, M Ommani, S Kermani	2013
IEEE Transactions on Biomedical Engineering 60 (10), 2815-2823	
An improved spatial FCM algorithm for cardiac image segmentation	
H Yousefi-Banaem, S Kermani*, O Sarrafzadeh, D Khodadad	2013
2013 13th Iranian Conference on Fuzzy Systems (IFSC), 1-4	
Heart Motion Estimation Using a Deformable Model and Multislice Computerized Tomography Images.	
H Khajehpour, S Kermani*, M Hashemi, M Karami	2013
Journal of Isfahan Medical School 31 (234)	
An improved spatial FCM algorithm for cardiac image segmentation	2013
HY Banaem, S Kermani*, O Sarrafzadeh, D Khodadad	2013

A review of algorithms for segmentation of optical coherence tomography from retina	
R Kafieh, H Rabbani, S Kermani	2013
Journal of medical signals and sensors 3 (1), 45	
Desired accuracy estimation of noise function from ecg signal by fuzzy approach	
Z Vahabi, S Kermani	2012
Journal of medical signals and sensors 2 (3), 176	
A comparison between the hp-version of finite element method with EIDORS for electrical impedance tomography	
N Saeedizadeh, S Kermani*, H Rabbani	2011
Journal of medical signals and sensors 1 (3), 200	
Arrhythmia detection based on Morphological and time-frequency Features of t-wave in Electrocardiogram	
E Zeraatkar, S Kermani*, A Mehridehnavi, A Aminzadeh, E Zeraatkar,	2011
Journal of medical signals and sensors 1 (2), 99	
Improving QRS detection for artifacts reduction	
E Zeraatkar, S Kermani*, A Mehridehnavi, A Aminzadeh	2010
2010 17th Iranian Conference of Biomedical Engineering (ICBME), 1-4	
Quantitative analysis of left ventricular performance from sequences of cardiac magnetic resonance imaging using active mesh model	
S Kermani, MH Moradi, H Abrishami-Moghaddam, H Saneei, MJ Marashi,	2009
Computerized Medical Imaging and Graphics 33 (3), 222-234	
3D Point Wise Tracking of the Left Ventricle over Cardiac Image Sequences Using Active Mesh and Physical Models	
S Kermani, MH Moradi, H Abrishami-Moghaddam, H Saneei	2008
Journal of Applied Sciences 8 (24), 4500-4511	
A New Approach for Quantification of 3D Cardiac Wall Motion Tracking Using Active Mesh	2008

Iranian Conference on Fuzzy Systems: 27/08/2013-29/08/2013

Ratio 650 (154), 230	
Assessment of gated single photon emission computerized tomography cardiac wall motion by using different reconstruction methods and filters in comparison with quantitative	
D Shahbazi-Gahrouei, A Arabpour, S Kermani, F Rastgoo	2008
Journal of Medical Sciences 8 (4), 342-349	
A fully 3D system for cardiac wall deformation analysis in MRI data	
FJ Dinan, P Mosayebi, HA Moghadam, M Giti, S Kermani*	2007
International Conference on Functional Imaging and Modeling of the Heart, 12-21	
Myocardial viability assessment with gated SPECT ^{99m} Tc-Tetrofosmin % wall thickening comparison with F-18 FDG-PET.	
D Shahbazi-Gahrouei, A Arabpour, S Kermani*, F Rastgoo, R Sciagra,	2005
Journal of Medical Sciences 8 (4), 19-29	
By Cascade Connection Of General Power Mosfets, A Low-Cost, High Performance Pulser Is Designed For Ultrasound Imaging	2004
S Kermani*	
Medical image analysis: Progress over two decades and the challenges ahead.	
S Kermani*, MH Moradi, H Abrishami-Moghaddam, H Saneei,	
Journal of Applied Sciences 8 (24), 1119-1127	

S Kermani*, MH Moradi, HA Moghadam, H Saneei

Patents:		
1	Scrolling, Screening and Imaging System for	2019
	Diagnostic LAB Microscope	
2	Design 3D Autonomous Chaotic Oscillator for the	2013
	Demonstrating States of the Nonlinear and Chaotic	
	System as a training system of Chaos theorem	
3	Design and Implement of Pulse Generator For	2012
	Exciting Ultrasound Probes	

Tecl	hnological Products:	
1	Hard & Software; ECG and Heart rate Monitoring (1992
	Tehran sina Co) and 8 bed central monitoring	
2	Hardware & Software; Biosignal Monitoring and 8 bed	1998
	central monitoring Esfahan, AVIS Co)	
3	Hardware & Software; EEG recorder and Analyser for	1999
	Neurophysiology lab	
4	Software; Prediction of myocardial infarction by assessing regional	2017
	cardiac wall in CMR images through active mesh modeling	20.47
5	Software; Automatic detection of acute lymphoblastic leukemia	2017
6	Hardware; Two Channel Bioreactor Pressure Monitor and Supervisor	2017
7	Software; A hybrid graph-based approach for right ventricle segmentation in cardiac MRI by long axis information transition	2018
8	Sofware; Salmanyar: Elderly Health Monitoring Software	2019
9	Hardware; Design and implementation of optical stimulus system	2019
	for rehabilitation and development of visual functions in children with low vision	
10	Hardware; Refurbish of Dartec HC Series Biomedical Load Frame in Biosynthetic Material Lab	2019
11	Hardware; Design and implementation of online monitoring system for diagnosis of ACL-deficient	2021
12	Hardware; Design of Flexible Electrode Framework As	2022
	EEG Recording System For Using BCI	
13	Hardware; Design and implementation of a small ultra-	2023
	low power wireless wearable device for long-term ECG	
	signal monitoring	
14	Hardware; Design and Implementation Sofware and Hardware based on precision EEG for Training of BCI users	2023
	Hardware based on precision LEG for Hairling of Det asers	