Dr Saeed Kermani

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.

Ranked 840th among 400,000 competitors in national universities attendance exam in 2001

Selective Papers:

A New Approach of PCG Analyzing for screening some of Cardiovascular Diseases

Ehsan Mohammadi , Saeed Kermani * , 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

Journal of Microscopy and Ultrastructure 9 (4), 170

2021

A Multichannel Intraluminal Impedance Gastroesophageal Reflux Characterization Algorithm Based On Sparse Representation

AR Kenari, H Rabbani*, S Kermani, M Raisi, M Soheilipour, P Adibi

IEEE Journal of Biomedical and Health Informatics 25 (9), 3576-3586

2021

On the bioactivity and mechanical properties of gehlenite nanobioceramic: A comparative study

A Bigham, S. Kermani*, AH Aghajanian, M Rafienia

Journal of Medical Signals and Sensors 10 (2), 105

2020

NF-RCNN: Heart localization and right ventricle wall motion abnormality detection in cardiac MRI

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

Physica Medica 70, 65-74

2020

Automatic detection of acute lymphoblastic leukaemia based on extending the multifractal features

M Abbasi, S Kermani*, A Tajebib, M Moradi Amin, M Abbasi

IET Image Processing 14 (1), 132-137

2020

Corrigendum: Automatic detection of acute lymphoblastic leukaemia based on extending the multifractal features

M Abbasi, S Kermani*, A Tajebib

2020

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

37(539), pp. 989-993,

2019

Estimation and Evaluation of New Features from Phonocardiogram for Detecting Cardiovascular Abnormalities

M Nourian-Zavareh,., S Kermani,., M. Hashemi-Jazi, M, Samieinasab,

Journal of Isfahan Medical School, 36(506), pp. 1444-1449

2019

Design and implementation of optical stimulus system for rehabilitation and development of visual functions in children with low vision

2019

S Kermani*, E Moazeni, F Tavakoli, A Kermani,

Optik 198, 163210

Automatic detection of acute lymphoblastic leukemia based on extending the multifractal features

2019

S Kermani*, A Talebi, MM Amin,

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

A hybrid graph-based approach for right ventricle segmentation in cardiac MRI by long axis information transition

2018

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

Physica Medica 54, 103-116

Introduction of low to high frequencies bispectrum rate feature for deep sleep detection from awakening by electroencephalogram

2018

E Mohammadi, S Kermani*, B Amra

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

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

2018

S Yousefinezhad, S Kermani*, S Hosseinnia

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

E Mohammadi, S Kermani, B Amra — 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 — 2016

S Kermani*, S.,Fazlali, H.,Sadeghi
Journal Of Mazandaran University Of Medical Sciences 26 (141)

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

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
MM Amin, S Kermani*, A Talebi, MG Oghli — 2015
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

The effect of extremely low-frequency magnetic fields on the level of serotonin metabolite 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

HY Banaem, S Kermani*, O Sarrafzadeh, D Khodadad — 2013

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

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

S Kermani*, MH Moradi, HA Moghadam, H Saneei 2008

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

S Kermani* 2004

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

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

Technological Products:		
1	Hard & Software; ECG and Heart rate Monitoring (Tehran sina Co) and 8 bed central monitoring	**1992**
2	Hard & Software; Biosignal Monitoring and 8 bed central monitoring Esfahan, AVIS Co)	**1998**
3	Hard & Software; EEG recorder and Analyser for Neurophysiology lab	**1999**
4	Software; Prediction of myocardial infarction by assessing regional cardiac wall in CMR images through active mesh modeling	**2017**
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: elder care application for android mobiles	**2018**
9	Hardware; Design and implementation of optical stimulus system for rehabilitation and development of visual functions in children with low vision	**2019**
10	Hardware; Refurbish of Dartec HC Series Biomedical Load Frame in Biosynthetic Material Lab	**2019**