

## Dr. Alireza Ahmadian



- **Associate Professor, Tehran University of Medical Sciences, Department of Biomedical Systems & Biophysics.**

- **Deputy of Research Centre for Science and Technology in Medicine, RCSTIM**

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Date and Place of Birth: 1965 , Tehran

Nationality: Iranian

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Languages: Persian, English

### Academic Qualifications:

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• 1983-1988 Isfahan University of Technology. Department of Electrical Engineering. Bachelor of Science B.Sc: Communication Systems

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• 1989-1992 Tehran University. Department of Electrical Engineering. Master of Science MSc: Digital Communication Systems

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• 1993-1997 Imperial College of Science and Technology in Medicine, London. Department of Bioengineering, Biomedical imaging Group. Doctor of Philosophy Ph.D: Biomedical Image Processing Thesis Title: Flexible Progressive Medical Image Transmission and Compression Schemes Using Multiresolution Orthogonal Wavelet Transforms.

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• 1999-2001 King's College London, Department of Electronics Engineering. Postdoctoral Position, Research Associate. Project Title: Wireless Picture Archiving and Communication System W-PACS

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### IT Skills:

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- Programming : ANSI C , Matlab.
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- Image Processing Software: ITK/VTK, Khoros, AVS, and Midas
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- Operating Systems: Windows, Linux, Sun Solaris.

### **Appointment:**

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- (2000-Present) Associate Professor, Tehran University of Medical Sciences, TUMS Department of Biomedical Systems & Biophysics
- (2006-Present) Deputy of Research Centre for Science & Technology in Medicine, RCSTIM.
- (2010- Present) Head of Biomedical Engineering and Biophysics Department, Tehran University of Medical Sciences, TUMS
- (2006-Present) Senior Member of Institute of Electrical and Electronics Engineers, USA, IEEE
- (2007-Present) Head of Image Guided Surgery Systems, RCSTIM

### **Administrative Responsibilities:**

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- Head of Medical Informatics Department at Tehran University of Medical Sciences, TUMS , 2004-2008
- Member of steering committee of Research Centre for Science and Technology in Medicine , 2003-Present
- Head of medical informatics research group of RCSTIM , 2004-Present
- Executive member of virtual university steering committee at MSRT , (2001-2005)
- Head of IT Department at Ministry of Science, Research and Technology , (2001-2005)
- Member of scientific boarding committee of biomedical engineering at Ministry of Health, Treatment and Education, MHTE , 2003-Present
- Executive member of BME board of Education at Ministry of Health and Medical Education , 2006-Present
- Head of Biomedical Engineering and Biophysics Department, Tehran University of Medical Sciences, TUMS , 2009-Present

### **Professional Activities:**

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- Research Assistant at Iran Telecommunication Research Center, Speech Processing Group 1991- 1993.
- Supervisor for signal & image processing laboratory, Imperial College, 1995-1997
- Project manager for implementing a pilot PACS system at imaging center of Emam hospital, 1998- 2000.
- Planning a postgraduate course for health informatics, approved by education authority of TUMS.
- Planning and setting up biomedical signal and image processing laboratory at TUMS.
- Reviewer for several conference and journal papers in the field of biomedical image processing.
- Supervising over 25 graduate/postgraduate students at TUMS.
- Project manager for 15 research projects collaborated by TUMS, research centers and private sectors.

### **Graduate Teaching Courses:**

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- Digital Signal Processing, DSP (2000-Present).
- Digital Image Processing, DIP (2001-Present).
- Biomedical Signal & Image Processing (2003-2005)
- Programming with MATLAB (2000-Present)
- Biomedical Signal Processing, BSP (2003-Present)
- Random Variables and Stochastic Processes(2005)
- Applied Mathematics (2002-2003)
- Information Technology in Medicine (2003-2004)
- Applied Statistics (2003-2005)
- Seminars in Biomedical Engineering (2001-Present)
- Medical Image Processing Using MATLAB (Imperial College, 1997)
- Statistical Pattern Recognition (2010-present)

#### **Session Chaired at Conferences:**

- Telemedicine Panel at International symposium on telecommunication, Tehran IST2001.
- Image Processing Panel at Visualization, Imaging, and Image Processing, IASTED-VIIP 2005, Spain.

#### **Research Projects:**

- 1 - Design and implementation of a web-based system for analysis and transmission of ECG signals
- 2 - Design and implementing an automated system for segmentation and polyp detection of colon images.
- 3 - Implementing a computer aided diagnosis (CAD) system for analysis and enhancement of mammography images.
- 4 - Analysis, design and implementing a mini PACS system for Emam Hospitals
- 5 - Design and implementing a pilot system for texture classification of ultrasound liver images.
- 6 - Design and implementing a PC based system for analysis and transmission of ECG signals.
- 7 - Design of Colonic Center-line Extraction Software for Virtual Camera Navigation in by CT-images of Colon
- 8 - Simulation of Ultra-Wide Band (UWB) system for wireless detection of Heart Rate Variability (HRV) in MATLAB/C environment
- 9 - Computed tomography (CT) Metal artifact reduction using sinogram correction in MATLAB/C environment
- 10 - Design and Implementation of a User Interface for Airway Tree Segmentation and 3D Visualization
- 11 - Designing and implementation of GUI for myocardial motion analysis processor in B-Mode echocardiography images based on MATLAB environment
- 12 - Design and Implementation of An ITK, VTK Based Segmentation Engine With Application of Brain Tumors Segmentation in MRI
- 13 - Evaluation of an optical tracking device for image guided surgery system
- 14 - Design and Implementation of an Image guided surgery system for Brain navigation

15 - Computed Tomography (CT) Metal artifact reduction using sinogram correction in MATLAB/C environment

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16 - Design and Implementation of a GUI for Automatic Segmentation of oral Contrast Agent in CT Images: Application in Correction of Oral Contrast Artifacts in CT-Based Attenuation Correction in PET

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17 - Micro-Controller Based ECG Simulation and Real-Time AR Detection

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18 - Evaluation of UWB Transceiver for Wireless Cardiac and Respiratory Motion Estimation

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19 - Simulation of Ultra-Wide Band (UWB) system for wireless detection of Heart Rate Variability (HRV) in MATLAB/C environment

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20 - An Efficient Piecewise Modelling of ECG Signals Based on Hermitian Basis Functions

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21 - A Blind Multi Secret key Watermarking of ECG Signals on Medical Images Using EZW Algorithm

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22 - Automated Path Planning system for Virtual Bronchoscopy

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23 - Improvement of Image Quality and Patient's Dose Reduction in 64 Slice CT Scanner by Optimization of X-ray Spectra Filtration Using Experimental Measurement and Monte Carlo Simulation

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### **Graduate Thesis Supervised:**

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1 - Progressive medical image transmission using embedded zerotree wavelet (EZW) algorithm, 2001.

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2 - Hardware & software implementation for a fetal monitoring system, 2002.

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3 - Modeling of 2D array transducer for beam optimization in 3D ultrasound imaging, 2002.

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4 - Detection of microcalcification in digital mamography images using wavelet & fuzzy logic , 2002.

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5 - Implementation of an image indexing method for medical images, 2002.

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6 - Textuer feature extraction for classification of liver sonography images for diagnose of liver diseases, 2003.

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7 - Comparison of laser-ultrasound detection systems sensitivity with a broadband ultrasonic source for biomedical applications, PhD Thesis, 2004.

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8 - Speckle de-noising of ultrasound images using wavelet & Bayesian method , 2004.

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9 - ECG feature extraction using wavelet & neural networks, 2005.

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10 - An efficient colon segmentation and polyp detection for CT colonography images using multi-stage algorithm and 3D analysis, 2005.

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11 - Classification of microscopic endometrial images using morphological & wavelet analysis 2005.

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12 - Design and implementation of three dimensional (3D) path planning for virtual bronchoscopy, 2006

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13 - ECG modeling using nonlinear fuzzy techniques for arrhythmia detection, 2006.

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14 - Watermarking of ECG on medical images using embedded zerotree wavelet algorithm, 2006.

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15 - 3D Segmentation of the Colon using Deformable Models, 2005.

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16 - Evaluation of preprocessing methods on the functionality of ICA algorithm using artificial activated fMRI data, 2007.

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17 - Evaluation of the Accuracy of Fiber Crossing Detection Using Different Tractography Methods on Diffusion Tensor Imaging (DTI) Data, 2007..

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18 - Automatic Segmentation of Colonic Boundaries in CT Scan Images Using Geometric Deformable Model, 2007

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- 19 - Intrathoracic Airway Tree Segmentation From CT Images Using Fuzzy Connectivity Method, 2008
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- 20 - Myocardial Motion Analysis in B-Mode echocardiography Images For Diagnosis of Cardiac Failures, 2008
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- 21 - mammography mass detection based on wavelet and ranklet transform, 2008
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- 22 - Design and implementation of thoracic non-rigid CT and PET image registration, 2010.
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- 23 - Atlas-Based Segmentation of Peri-Ventricular MR Images of Normal Human Brain by Nonrigid Registration, 2009.
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- 24 - Evaluation of Brain tumor deformation using elastics models, 2010.
- 
- 25 - Design and implementation of ultrasound and MRI image registration on simulated phantom of brain apply to calculate brain shift, 2011
- 
- 26 - Measurement and analysis of brain shift in frontal region of skull in MRI brain images using deformable models, 2011
- 
- 27 - Fiducial free registration for Image guided surgery 2011

### Publications:

#### Journal:

- 1- S. Karimifard, A. Ahmadian, M. Khoshnevisan, "[A Robust Methods In Diagnosing Morphological Heart Arrhythmias Based On Hermitian Model of Higher Order Statistics](#)" Biomedical engineering online , 2011
- 2- A. Akbarzadeh, M.R. Ay, A. Ahmadian, N. Riahi Alam, H. Zaidi, "[Impact of Using Different Tissue Classes on the Accuracy of MR-based Attenuation Correction in PET-MRI](#)" IEEE , November 4, 2011
- 3- Mohammad-Saleh Nambakhsh, Alireza Ahmadian, Habib Zaidi, "[A Contextual Based Multiple Watermarking of PET Images by Patient ID and ECG Signal](#)" Computer Methods and Programs in Biomedicine, IO 4(2011)-pp 418-425 , 2010
- 4- Sina Zarei Mahmoodabadi, Alireza Ahmadian, Mohammadjavad Abolhasani, Paul Babyn, Javad Alirezaie, "[A fast expert system for electrocardiogram arrhythmia detection](#)" Expert Systems, Vol. 27, No. 3, pp 180-200 , July 2010
- 5- Mehrsima Abdoli, Mohammad Reza Ay, Alireza Ahmadian, "[A virtual sinogram method to reduce dental metallic implant artefacts in computed tomography- based attenuation correction for PET](#)" Nuclear Medicine Communications 2010, Vol 31 No 1, pp 22-31 , 2010
- 6- Mahdi Marsousi, Kaveh Abhari, Alireza Ahmadian, Javad Alirezaie, Senior Member, IEEE, "[LEFT VENTRICLE MASS EXTRACTION UTILIZING A MULTI-STEP PROBABILISTIC APPROACH](#)" In press ,
- 7- Mehrsima Abdoli, Mohammad Reza Ay, Alireza Ahmadian, Rudi A. J. O. Dierckx, Habib Zaidi, "[Reduction of dental filling metallic artifacts in CT-based attenuation correction of PET data using weighted virtual sinograms optimized by a genetic algorithm](#)" Medical Physics, Vol. 37 (12), December 2010 ,
- 8- Azadeh Sharafi, Mehran Baboli, Mohammad Eshghi, Alireza Ahmadian, "[Respiration-Rate Estimation of a Moving Target Using Impulse-Based Ultra Wideband Radars](#)" Australasian physical & engineering sciences in medicine (APES 57R4) ,
- 9- Mahdi Marsousi-Javad Alirezaie (senior member IEEE)-Alireza Ahmadian (senior member IEEE)-Armen Kocharian, "[segmenting echocardiography images using B-spline and active ellipse model](#)" In press ,
- 10- F. Darki, A.R. Ahmadian, H. Soltanian Zadeh, M. Zarei, M.A. Oghabian, "[Improvement of White Matter Fiber Tracking Based on Diffusion- Tensor MR Imaging Data Using Modified Speed Functions](#)" Iran Journal of

Radiology,6(4),pp 231-236 , 2009

- 11- Sarkar, MD Abolhassani, F Farahmand, AR Ahmadian, R Saber, "[Research activities at the research center for science and technology in medicine](#)" Iranian Journal of Public Health, Vol.38, Suppl. 1 , 2009
- 12- Sarkar, MD Abolhassani, F Farahmand, AR Ahmadian, R Saber, "[Research activities at the research center for science and technology in medicine](#)" Iranian Journal of Public Health, Vol.38, Suppl. 1, 2009 , 2009
- 13- A. Ahmadian M. R. Ay, J. H. Bidgoli, S. Sarkar and H.b Zaidi, "[Correction of Oral Contrast Artifacts in CT-Based Attenuation Correction of PET Images Using an Automated Segmentation Algorithm](#)" Eur. J. Nucl. Med. Mol. Imaging, 2008, 35, 1812-1823. , 19 February 2008
- 14- Mohammad S. Nambakhsh, A. Ahmadian, R. Dilmaghani, M. Ghavami, "[A Blind EZW-based Watermarking of ECG signal into Medical Images](#)" Submitted to Elsevier Journal of Signal , 2007
- 15- Vahid Tavakoli, Alireza Ahmadian, Mohammad D. Abolhassani, "[An evaluation of moment Based Optical Flow Techniques for Myocardial Motion Analysis in B-mode Echocardiography Images](#)" Journal of Technical Acoustics, , 2007
- 16- M. R. Ay, J. H. Bidgoli, S. Sarkar, A. R. Ahmadian, "[Automatic Segmentation of Oral Contrast Enhanced CT Images for Artifact Free Attenuation Correction in PET/CT](#)" European Journal of Nuclear Medicine & Molecular Imaging, Vol. 34, , Oct
- 17- Tassilo Klein, Joerg Traub, Hubert Hautmann, Alireza Ahmadian, Nassir Navab, "[Fiducial Free Registration Procedure for Navigated Bronchoscopy](#)" Lecture Notes in Computer Science (LNCS), SpringerLink , 2007
- 18- Alizadeh H., Abolhassani M.D. , Ahmadian A., Salimpour Y, "[Study of denoising in TEOAE signals using an appropriate mother wavelet function](#)" Journal of Audiology of Tehran University of Medical Science, Vol. 16, No.1 2007. pp 25-35. , 2007
- 19- Hejazi M., Abolhassani M. D., Ahmadian A., Frenz M., Jaeger M., Niederhauser J.J. and Amjadi A., "[A Comparison of Laser-Ultrasound Detection System Sensitivity with a Broad-Band Ultrasonic Source for Biomedical Applications](#)" Archives of Medical Research, Volume 37, Issue 3, Pages 322-327 , April 2006
- 20- M.S.Nambakhsh, A.Ahmadian, M.Ghavami, R.Dilmaghani, "[A Novel Blind Watermarking of ECG Signals on Medical Images Using EZW Algorithm](#)" Iranian Journal of Medical Physics (IJMP), Vol.3, No.10 , Spring 2006
- 21- J. Hasani Bidgoli, A. Ahmadian, S. Akhlaghpour, R. Aghazadeh Zoroufi, "[An Efficient Colon Segmentation Technique Using a Two-stage Algorithm and Extracted Local Feature of Colonography Images](#)" Iranian Journal of Medical Physics, Vol.2, No.9 , Winter 2006
- 22- M. Negahdar, A.Ahmadian, N.Navab, K.Firouznia , "[Automated Path Planning Algorithm for Virtual Bronchoscopy](#)" Iranian Journal of Medical Physics (IJMP), Vol.3, No.11 , Summer 2006
- 23- B. Sharif, A. Ahmadian, M.A. Oghabian, N. Izadi Mood, M.Khubdel, "[Classification of Endometrial Images for Aiding the Diagnosis of Hyperplasia Using Logarithmic Gabor Wavelet](#)" Iranian Journal of Medical Physics, Vol.3, No.10 , Spring 2006
- 24- Abbasi M., Abolhassani M.D., Miranbeigi M. H., Ahmadian, A, "[Discrimination of skin layers from B-scan ultrasound images using feature matching & neuro-fuzzy classifier](#)" Iranian Journal of Medical Physics, Vol. 2, No. 9, 2006, pp71-80 , 2006
- 25- Karimifard, A. Ahmadian , M. Khoshnevisan, "[Modeling Higher-Order Statistics of ECG Signals Using Hermitian Basis Functions to Aid Arrhythmia Detection](#)" Iranian Journal of Medical Physics(IJMP), Vol.3, No.11 , Summer 2006

**Conference:**

- 1- Samaneh Alimohamadi<sup>1</sup>, Parastoo Farnia<sup>1, 2</sup>, Javad Hasani Bidgoli<sup>1</sup>, Alireza Ahmadian<sup>1, 2\*</sup>, Senior Member, IEEE , Javad Alirezaie<sup>3</sup>, "[An Efficient Extraction of Bone Surface Using Diffusion Filters in Ultrasound Images of Frontal Bones](#)" The 11th International Conference on Information Sciences, Signal Processing and their Applications, 2011
- 2- Parastoo Farnia, Alireza Ahmadian\*, Alireza Khoshnevisan, AmirHossein Jaberzadeh, Nasim Dadashi Serej, Anahita F. Kazerooni,, "[An efficient Point Based Registration of Intra-operative Ultrasound images with MR images for computation of brain shift; a Phantom Study](#)" 33rd Annual International IEEE EMBS Conference, August 30 - September 3, 2011
- 3- Hossein Y. Banaem, Alireza Ahmadian, Hooshang Saberi,Davood Khodadad,Alireza Daneshmehr, "[Brain tumor modeling: glioma growth and int chemotherapy](#)" International Conference on Graphic and Image Processing, Saturday 1 October 2011
- 4- Davood khodadad,Alireza Ahmadian, Mohammadreza Ay,Armaghan Fard Esfahani, Hossein Yousefi Banaem,Habib Zaidi, "[B-spline based Free Form Deformation Thoracic non-rigid registration of CT and PET images](#)" International conference on graphic and image processing (ICGIP 2011),
- 5- Anahita Fathi Kazerooni, Alireza Ahmadian, Nassim Dadashi Serej, Hamidreza Saligheh Rad, Hooshang Saberi, Hossein Yousefi, Parastoo Farnia, "[Segmentation of Brain Tumors in MRI Images Using Multi-scale Gradient Vector Flow](#)" 33rd Annual International IEEE EMBS Conference, August 30 - September 3, 2011
- 6- Mahdi Marsousi, Javad Alirezaie ,Damon Bazargan, Alireza Ahmadian, Armen Kocharian, "[Active Ellipse Model and Automatic Chamber detection in Apical Views of Echocardiography Images](#)" The International Conference on Image Processing, September 26-29, 2010
- 7- Fahimeh Mohagheghian, A. Ahmadian, J. Alirezaie, H. Saberi, "[Atlas-based Segmentation of MR Brain Images via Symmetric Image Registration](#)" The International Conference on Image Processing, September 26-29, 2010
- 8- F. Yousefi Rizi, H. Ahmadi Noubari, A. Ahmadian, J. Alirezaie, "[Biomedical Image Denoising using Dual Tree Complex Wavelet Transform](#)" The International Conference on Image Processing, September 26-29, 2010
- 9- Fahimeh mohagheghian-Alireza Ahmadian-, "[Symmetric Multi-scale image registration](#)" 32 nd annual international conference of the IEEE EMBS Buenos Aires ,Argentina August 31-september 4 2010,
- 10- Mehran Baboli<sup>1</sup>, Azadeh Sharafi, Alireza Ahmadian, and Saeed KarimiFard, "[A Framework for Simulation of UWB System for Heart Rate Detection](#)" 2nd International Conference on Biomedical and Pharmaceutical , 2-4 December 2009 Biopolis, Singapore
- 11- Mehran Baboli, Seyed Ali Ghorashi, Namdar Saniei, Alireza Ahmadian, "[A New Wavelet Based Algorithm for Estimating Respiratory Motion Rate Using UWB Radar](#)" 2nd International Conference on Biomedical and Pharmaceutical, 2-4 December 2009
- 12- Ershad Sharifahmadian , Alireza Ahmadian, "[Adaptive Signal Processing Algorithm for Remote Detection of Heart Rate \(HR\) Using Ultra- ideband Waveforms based on Principal Component Analysis](#)" 31st Annual International Conference of the IEEE EMBS,Minneapolis, Minnesota, USA,, September 2-6, 2009
- 13- M. Abdoli, M.R. Ay, A. Ahmadian and H. Zaidi, "[Metal Artifact Reduction in CT-Based Attenuation Correction of PET Data Using the Virtual Sinogram Concept](#)" The 3rd International Conference on Bioinformatics and Biomedical Engineering (IEEE iCBBE 2009), June 11th to 13th, 2009, Beijing, China, in press
- 14- M.R. Ay, A. Maleki, H. Ghadiri, P. Ghafarian, A. Ahmadian and H. Zaidi, "[The Influence of X-ray Spectra Filtration on Image Quality and Patient Dose in the GE VCT 64-Slice Cardiac CT Scanner](#)" The 3rd International Conference on Bioinformatics and Biomedical Engineering (IEEE iCBBE 2009), June 11th to 13th, 2009,

Beijing, China, in press

- 15- Fereshteh Yousefi Rizi, Alireza Ahmadian, Nima Sahba, Vahid Tavakoli, Emad Fatemizadeh, "[A Hybrid Fuzzy Based Algorithm for 3D Human Airway Segmentation](#)" The 2nd International Conference on Bioinformatics and Biomedical Engineering, 2008. ICBBE 2008, 2008
- 16- M. Abdoli, M.R Ay , A. Ahmadian, N. Sahba and H. Zaidi , "[A novel approach for reducing dental filling artefacts in CT-based attenuation correction of head and neck oncologic PET/CT data](#)" 4th European Congress of the International Federation of Medical and Biological Engineering, Antwerp, Belgium, 23-27 November 2008 ECIFMBE 2008, IFMBE Proceedings 22, pp. 492–495,
- 17- Tavakoli V., Sahba N., Ahmadian A, "[Adaptive Multi-resolution myocardial Motion Analysis of B-Mode Echocardiography Images using Combined Local/Global Optical Flow](#)" Proceeding of 2nd International Conference on Bioinformatics and Biomedical Engineering, May 16-18 2008
- 18- Vahid Tavakoli, Nima Sahba, Alireza Ahmadian , Mohammad D. Abolhassani, Fereshteh Y. Rizi, A. Amini, "[Adaptive Multi-resolution Myocardial Motion Analysis of B-Mode Echocardiography Images using Combined Local/Global Optical Flow](#)" The 2nd International Conference on Bioinformatics and Biomedical Engineering ICBBE2008, Shanghai, China,
- 19- J.H. Bidgoli , Fereshteh Y. Rizi, A. Ahmadian, "[An Automatic Colonic Polyp Detection Method Based on Global Normal Convergence Approaches](#)" Submitted to the 4th International Conference on Biomedical Engineering, Biomed 2008, Malaysia., 2008
- 20- Fereshteh Y. Rizi, J.H. Bidgoli, A. Ahmadian, J. Alirezaie, "[An Efficient Fuzzy Connectivity Method for Airway Tree Segmentation Using Fuzzy C-mean Algorithm](#)" submitted to the 4th International Conference on Biomedical Engineering, Biomed 2008, Malaysia. , 2008
- 21- Mohammad D. Abolhassani, Yousef Salimpour, Alireza Ahmadian, Vahid Tavakoli, "[Design of an Optimized Mother Wavelet Function for TEOAE Signal Denoising](#)" The 2nd International Conference on Bioinformatics and Biomedical Engineering, may 16-18 ,2008
- 22- Fereshteh Y. Rizi, A. Ahmadian, J. Alirezaie, N. Sahba, V. Tavakkoli, E. Fatemizadeh, N. Rezaie, "[A Hybrid Fuzzy Based Algorithm for 3D Human Airway Trees Segmentation](#)" The 2nd International Conference on Bioinformatics and Biomedical Engineering ICBBE2008, Shanghai, China, 2007
- 23- R. Dilmaghani, A. Ahmadian, M. Ghavami, "[A matrix representation to increase the resolution of a Region of Interest \(ROI\) for medical images](#)" 16th IST Mobile and Wireless Communications Volume 1-5 July., 2007
- 24- N. Sahba, A. Ahmaian, V. Tavakoli, N. R. Alam, F. Y. Rizi, M. Giti , "[A Multi-Stage Hybrid Method for Mammography Mass Detection](#)" The 2nd International Conference on Bioinformatics and Biomedical Engineering ICBBE2008, Shanghai, China, 2007
- 25- Boroomand, A. Ahmadian, M. A. Oghabian, J. Alirezaie, C. Beckman, "[An Efficient Hybrid Wavelet-ICA algorithm for Analyzing Simulated fMRI Data in Noisy Environm](#)" The 7th IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2007, Dec. 15-18, Cairo, Egypt., 2007
- 26- A. Ahmadian, S. Karimifard, H. Sadoughi, M. Abdoli , "[An Efficient Piecewise Modeling of ECG Signals Based on Hermitian Basis Functions](#)" Proceedings of the 29th Annual International Conference of the IEEE EMBS Cité Internationale, Lyon, France, August 23-26, 2007
- 27- S.Sh.F.Hamidpour, A. Ahmadian, J.H. bidgoli, R.A. Zoroofi, "[Automatic Segmentation of Colonic Boundaries in CT Scan Images Using Geometric Deformable Model](#)" 4th Iranian Conference on Machine Vision and Image Processing, Mashhad, 14-15 Feb 2007

- 28- M.R. Ay, J.H. Bidgoli, S. Sarkar and A. Ahmadian. , "[Automatic Segmentation of Oral Contrast Enhanced CT Images for Artifact Free Attenuation Correction in PET/CT](#)" Oral presentation at the European Association of Nuclear Medicine Annual Congress, 13-19 October 2007, Copenhagen, Denmark. Eur J Nucl Med Mol Imaging, Vol 34, Suppl 2, S115. ,
- 29- J.H. Bidgoli, M.R. Ay, S. Sarkar, A. Ahmadian, H. Zaidi, "[Correction of Oral Contrast Artifacts in CT- Based Attenuation Correction of PET Images Using an Automated Segmentation Algorithm](#)" IEEE Nuclear Science Symposium Conference, NSS, ,
- 30- F. Dargi, M.A.Oghabian, A.Ahmadian, H.Soltanian Zadeh, M.Zarei, "[Diffusion Tensor Digital Phantom for crossing Fibers Detection](#)" 4th Iranian Conference on Machine Vision and Image Processing, Mashhad, 14-15 Feb 2007
- 31- Sh. F. Hamidpour, A. Ahmadian, R.A Zoroofi, J.H. Bidgoli, "[Hybrid Segmentation of Colon Boundaries in CT Images Based on Geometric Deformable Model](#)" The IEEE International Conference on Signal Processing and Communication, ICSPC07,24-27 November 2007 Dubai, UAE, 2007
- 32- F. Dargi, M. A. Oghabian, A. Ahmadian,H. Soltanian Zadeh, M. Zarei, and A. Boroomand, "[Modified Fast Marching Tractography Algorithm and Its Ability to Detect Fibre Crossing](#)" Proceedings of the 29th Annual International Conference of the IEEE EMBS Cité Internationale, Lyon, France , August 23-26, 2007
- 33- S. Karimifard, A. Ahmadian, "[Morphological Heart Arrhythmia Classification Using Hermitian Model of Higher-Order Statistics](#)" Proceedings of the 29th Annual International Conference of the IEEE EMBS Cité Internationale, Lyon, France, August 23-26, 2007
- 34- J.H.Bidgoli, A. Ahmadian, "[A Multi-Stage Approach for CT Colon Image Segmentation](#)" 1st Iranian-German Workshop on Medical Engineering,Munich, 2006 September 8-15
- 35- M.S. Nambakhsh , A.Ahmadian , M.Ghavami, R.Dilmaghani,, "[A novel blind Watermarking of ECG signals on medical images using EZW algorithm](#)" Proceeding of IEEE Engineering in Medicine and Biology 28th Annual Conference New York, USA, 2006
- 36- Sh.F.Hamidpour, A. Ahmadian, "[Colon Image Segmentation Using Deformable Models - A Geometric Approach](#)" 1st Iranian-German Workshop on Medical Engineering, Munich, 2006 September 8-15
- 37- S. Karimi-Fard, A. Ahmadian, M. Khoshnevisan, "[Morphological Heart Arrhythmia Detection Using Hermitian Basis Functions and kNN Classifier](#)" Proceeding of IEEE Engineering in Medicine and Biology 28th Annual Conference New York, USA , 2006
- 38- M. Negahdar, A. Ahmadian, N. Navab, K. Firouznia, "[Path Planning for Virtual Bronchoscopy](#)" Proceeding of IEEE Engineering in Medicine and Biology 28th Annual Conference New York, USA , 2006
- 39- M.R.Negahdar, A.Ahmadian, N.Navab,K.Firouznia, "[Stiff and Efficient Middle Axis Extraction of Airways for Virtual Bronchoscopy](#)" first International Symposium on Telemedicine and Electronic Health,Tehran, Iran, 1-2 Nov 2006
- 40- A. Ahmadian, A. Mostafa, , M. D. Abolhassani, Y. Salimpour, "[A texture classification method for diffused liver diseases using Gabor wavelets](#)" Proceeding of IEEE Engineering in Medicine and Biology 27th Annual Conference Shanghai, 2005
- 41- J. H. Bidgoli, A. Ahmadian, S. Akhlaghpor, N. R. Alam, S. Z. Mahmoodabadi, "[An Efficient Colon Segmentation method for Oral Contrast-Enhanced CT Colonography](#)" Proceedings of the 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference Shanghai, China, September 1-4, 2005

- 42- S. Z. Mahmoodabadi, A. Ahmadian, M. D. Abolhasani, M. Eslami, J. H. Bidgoli, "[ECG Feature Extraction Based on Multiresolution Wavelet Transform](#)" Proceedings of the 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference Shanghai, China, September 1-4, 2005
- 43- S. Z. Mahmoodabadi, A. Ahmadian, M. D. Abolhasani, "[ECG FEATURE EXTRACTION USING DAUBECHIES WAVELETS](#)" Proceeding of the Fifth IASTED International Conference VISUALIZATION, IMAGING, AND IMAGE PROCESSING, Benidorm, Spain, September 7-9, 2005
- 44- A. Taki, M.D. Abolhassani, A. Ahmadian, "[Modeling of 2D array transducer for beam optimization in 3D Ultrasound Images](#)" Proceeding of the IASTD International Conference Biomedical Engineering, Austria, Feb. 16-18, 2005
- 45- Y.Salimpour, M.D. Abolhassani, A.Ahmadian, K.Barin, "[MULTIRESOLUTION ANALYSIS OF TRANSIENT EVOKED OTOACOUSTIC EMISSION](#)" Proceedings of the 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference Shanghai, China, September 1-4, 2005
- 46- B. Sharif, A. Ahmadian, M.O Oghabian, and N., Ezadi, "[Texture Segmentation of Endometrial Images for Aiding Diagnosis of Hyperplasia](#)" IEEE Region 8 EUROCON 2005 conference, Belgrade , November 21-24, 2005
- 47- Ahmadian A., Mostafa A. Abolhassani M.D., Riahi Alam N, "[A method for Texture Classification of Ultrasonic Liver Images based on Gabor Wavelet](#)" International Conference on Signal Processing (icsp04), China, 2004
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