Hamidreza Saligheh Rad, Ph.D.

Contact Information	Quantitative Medical Imaging Systems Group (QMISG) Research Center for Molecular and Cellular Imaging Tehran University of Medical Sciences (TUMS), Tehran, Iran Imam Hospital Complex-Keshavarz Blvd. - Tehran - Iran *Voice:* (+98) 216.658.1505 – Ext.114, Cell: (+98) 912.314.1161 Fax: (+98) 216.643.8630, E-mail*:* h-salighehrad@tums.ac.ir

Education

Queen's University, Kingston, Canada   **September 2001 - December 2005**

Department of Electrical and Computer Engineering

Ph.D., Communications, 2001-2005, GPA: 93/100, includes research, Ph.D. level course-work. Dissertation topic:

"Space-time-frequency characterization for MIMO outdoor radio propagation channels"

- Advisor: Prof. Saeed Gazor

Teaching Assistantship   **September 2001 - January 2005**

Co-taught undergraduate and graduate level courses for the electrical engineering students: Shared responsibility for lectures, exams, homework assignments, quizzes and grades.

- Digital Signal Processing (DSP)
- Signals and Systems II
- Signals and Systems I

Laboratory Development   **May - September 2001**

Development of a laboratory for ELEC-421; Digital Signal Processing (DSP), for fourth year undergraduate students. The job is done on TMS320C6211/6711, products of Texas Instruments Inc. A complete laboratory manual for this lab has been designed in four experiments: http://www.ece.queensu.ca/hpages/faculty/gazor/labelec421/labelec421.html

Isfahan University of Technology, Isfahan, Iran   **September 1997 - September 2000**

Department of Electrical and Computer Engineering

M.Sc., Communications, 1997-2000, GPA: 92.3/100, includes research, master's level coursework.

- Dissertation topic:

"Space vector modulation based on classification method for three-phase multi-level voltage source inverters"

Advisor: Dr. Alireza Bakhshai

Teaching Assistantship   **September 1999 - January 2000**

Co-taught undergraduate level courses for the electrical engineering students: shared responsibility for lectures, exams, homework assignments, quizzes and grades.

- Control Systems
- Communication Systems I
- Communication Systems II

Sharif University of Technology, Tehran, Iran **September 1993 - September 1997**

Electrical Engineering Department

B.Sc., Control systems, 1993-1997, GPA: 82.5/100

- Dissertation topic:

"Applications of active noise control for noise cancelation inside moving vehicles"
Advisor: Dr. Mohammad Haeri

Academic Appointments	**Tehran University of Medical Sciences**, Tehran, Iran **December 2010 – Ongoing**

Tehran University of Medical Sciences, Tehran, Iran   **December 2010 – Ongoing**
Research Center for Molecular and Cellular Imaging (RCMCI)

Director, Quantitative MR Imaging and Spectroscopy Group (QMISG)
http://iamt.tums.ac.ir/rcmci/qmisg/en/

Tehran University of Medical Sciences, Tehran, Iran   **December 2010 – Ongoing**
Department of Medical Physics and Biomedical Engineering, *Deputy of International Affairs*

Assistant Professor, includes research, teaching and advising graduate students
http://www.tums.ac.ir/faculties/h-salighehrad

Leadership and Collaboration in Magnetic Resonance Imaging (MRI) and Positron Emission Tomography (PET) Research
- Diagnosis and staging soft-tissue tumors like ewing-sarcoma and osteo-sarcoma employing single- voxel and multi-voxel magnetic resonance spectroscopy (MRS) at 1.5T and 3T
- Grading spinal injuries like glial scar employing single-voxel MRS at 3T
- Bone detection and segmentation in PET/MRI of brain and pelvis
- Bone water concentration as an emerging metric for the bone quality on the Iranian nation

Teaching Graduate Courses
- Principles of MRI
- Advanced Topics in MRI
- Digital Signal Processing

University of Pennsylvania, Philadelphia, USA   **May 2008 – February 2010**
Laboratory for Structural NMR Imaging (LSNI)
Postdoctoral Fellow, includes research, training graduate students and part-time teaching
http://www.uphs.upenn.edu/radiology/depa/lsni/members.html
- Advisor: Prof. Felix Wehrli

Leadership and Collaboration in Magnetic Resonance Imaging (MRI) Research
- Quantification of bone water in cortical bone using MRI
- Motion correction employing projection (linear and radial) navigators

- High field (7T) Proton-1H and Phosphorous-31P micro-MRI of trabecular and cortical bone

Harvard University, Cambridge, USA   **January 2006 – February 2008**
School of Engineering and Applied Sciences (SEAS) and *Harvard Medical School (HMS)*
Postdoctoral Research Scholar, includes research, student supervision in the Ph.D. and master level, as well as undergraduate level teaching.

- Advisors: Prof. Vahid Tarokh and Dr. Reza Nezafat

Exploring Some New Fields of Research   **February 2006 – November 2007**
- RF pulse design for magnetization transfer imaging (MTI)
- Inverse imaging via solving 3D linear and non-Linear inverse problems
- Advanced communication and networking techniques for satellite communications

Student Supervision on Ph.D. Related Topics   **January 2007 – Ongoing**
Supervision of three master students in the area of "multiple-input multiple-output (MIMO) channel modeling and evaluation" that includes project definition, students' supervision on their thesis and research works progress, evaluation of the obtained results and guiding the students to write conference and journals articles. For more details, see the "Research Interests".
- Information theoretic approaches to antenna design in MIMO systems
- Capacity analysis of MIMO wireless systems using realistic channel models
- Modeling and evaluation of wideband and ultra-wideband wireless channels

Instructorship   **September 2007 - December 2007**
Co-teaching undergraduate second year course: shared responsibility for exams, homework assignments, quizzes and grades.
Applied mathematics I

Executive Appointments	**ISMRM Iranian Chapter** *Chairman*	**(2014 – Present)**
	Iranian Professional Courses on MRI *Director*	**(2014—Present)**
	National Brain Mapping Center *Co-Principal Investigator*	**(2014—Present)**
	Institute for Advanced Medical Technologies *Vice-Chairman for International Affairs*	**(2013—Present)**
	Research Center for Molecular and Cellular Imaging *Research Deputy and Co-founder*	**(2013—Present)**
	Iranian Congress of Radiology *Chairman, Medical Imaging Physics Committee*	**(2013—Present)**
Research Interests		

My major research interest falls in the area of advanced image acquisition and processing techniques for Magnetic Resonance Imaging (MRI) and Spectroscopy in Medicine. As my second interest, I conduct research in Wireless Communication Channel Modeling. These include:

- **Magnetic Resonance Imaging**

- Clinical Application of Single-Voxel and Multi-Voxel MR Spectroscopy in Brain, Spine and Musculoskeletal System

Magnetic resonance spectroscopy (MRS) allows the non-invasive measurement of selected biological compounds in vivo. Feasibility was first demonstrated in humans in the mid-1980s. Since that time, much experience has been accumulated with the use of MRS in both research and clinical applications. Nearly all MRI scanners have the capability to perform MRS, and MRS techniques still continue to improve, even after two decades of development. MRS has been applied to the study of all major pathologies, particularly in the brain, but has also found application in other organ systems as well, like musculoskeletal and spine. In spite of this considerable research effort and the unique biochemical information provided, only limited integration of MRS into clinical practice has occurred to date. Here at the Tehran University of Medical Sciences, I have established close collaborations among technical research as well as clinics to explore potentials of MRS as an emerging technique into clinics, and in a few selected problems like quantification of soft-tissue tumors (e.g. ewing- sarcoma and osteo-sarcoma), brain tumors and spinal injuries (e.g. glial scar).

- MRI-Guided Attenuation and Scatter Correction Positron Emission Tomography (PET) in Brain and Pelvis:

Reliable attenuation correction methods for quantitative 3D PET require accurate delineation of both the organ contour and spatial distribution of attenuation coefficients. To this end, it is necessary to carefully segment body organs into three different categories of soft tissue (e.g. muscle and fat), hard tissue (e.g. bone) and air (e.g. lung cavity). Conventional MRI (cMRI) techniques can easily segment out the soft-tissue, while they usually confuse bone and air since they both do not enough visible signals in cMRI. Therefore, advanced MR imaging techniques like UTE-based methods are required to distinguish bone from air. Here at Tehran University of Medical Sciences, I have established strong collaborations with our nuclear medicine center to conduct mutual research, starting with PET/MR imaging in brain and pelvis.

- Ultra-Short Echo-Time (UTE) Imaging for Quantification of Bone Water in Cortical Bone:

A significant portion of the bones mechanical competence is attributed to the composition and micro-architecture of cortical bone. Although the age-related thinning of the cortex is partially offset by periosteal expansion, this process is accompanied by other remodeling changes that adversely affect bone quality.
Key among these is an age-related increase in cortical porosity that is exacerbated in osteoporosis. Although the mechanism for this process is poorly understood, there is evidence from histomorphometry that in the femoral neck of hip fracture patients, Haversian canals are expanded as a result of formation of "composite" osteonal systems in which a single canal is surrounded by multiple packets of osteonal bone. In this study, we proposed a new 3D hybrid-radial variable-TE sequence with half-pulse selective excitation to image the micro-structure of the cortical bone and to accurately quantify the bone water and bone porosity, by inference, in cortical bone, specifically in the tibial shaft. The experiment was designed at 123MHz on a TIM Trio MR system (Siemens Medical Solutions). In this project, I developed all imaging pulse sequences, reconstruction codes and analysis techniques to precisely capture and to analyze the acquired bone water signal. I managed a clinical study to analyze sixty five subjects in different

age ranges in order to establish a base-line for the new introduced metric of bone water concentration.

- Motion Correction for High-Resolution Trabecular Bone Imaging Employing Projection Navigators:

High-resolution magnetic resonance imaging (micro-MRI) captures structural details of trabecular bone (TB) that are reflective of metabolic bone disease and treatment. Necessary resolutions to resolve TB are in the order of the structure's thickness: $\sim$100-200µm.
Three-dimensional imaging of TB is hindered by involuntary rigid body motion as it causes significant blurring of the TB structure. Motion correction techniques that are developed to correct for different types of motion (translation, rotation, etc), and to provide high precision on the order of a half voxel dimension, still suffer from: 1) not enough signal-to-noise ratio (SNR) for high-precision detection, and 2) not enough degrees of freedom for both translation and rotation detection. In this study, I proposed a novel motion detection/correction technique based on acquiring high SNR low-resolution full images as navigators using advanced SNR enhancement techniques. I also developed all required pulse sequences as well as reconstruction codes in MATLAB in order to implement it on a Siemens 1.5T MAGNETOM Sonata scanner.

- Compressed Sensing MRI:

MRI requires a relatively long scan time compared to other biomedical imaging modalities, which makes it also expensive. MRI data are collected in the spatial-frequency domain, denoted by k-space. MRI data acquisition can be accelerated by undersampling k -space from the Nyquist rate. As a new project in the field, I have introduced high performance compressed sensing algorithms to accelerate the current time-consuming micro-MRI of trabecular as well as whole body MR Angiography (MRA).

- High Field (7T) In vivo Phosphorus (31P) Imaging of Cortical Bone:

Phosphorus concentration of bone plays an important role in the maintenance of bone strength in disorders such as osteomalacia which is characterized by hypomineralization of bone. 31P MRI potentially provides a noninvasive method to evaluate the degree of bone mineralization, however it is difficult to obtain sufficient SNR at desirable resolutions due to the extremely short T2* ($\sim$220µsec) and long T1 ($\sim$50sec) of bone phosphorus, as well as its relatively small gyromagnetic ratio. We estimate that 31P SNR at 7T is intrinsically about 1000 times less than that of muscle water. For this reason, optimization of the imaging hardware, pulse sequence and post processing is particularly important. In this study, we constructed small surface coils for use in a 7T whole-body MRI scanner and developed a 3D radial concentric-cone imaging sequence to image 31P of tibial cortical bone in vivo.

- Large Flip Angle RF Pulse Design with Inverse Scattering Transform

Magnetization transfer (MT) contrast can be used in MRI as an endogenous tissue contrast. Large flip angle, off-resonance RF pulses are commonly used for MT contrast generation. Small tip angle approximation and SLR techniques are two robust and efficient methods in design of low flip angle pulses, however they are not practical in high flip angle (>180) pulse design. In this study, I investigated the use of inverse scattering transform (IST) as an alternative strategy for high flip angle pulse design.

- **Wireless Channel Modeling**

- Space-Time-Frequency Characterization of Wireless Channels:

Wave propagation in two- dimensional and three-dimensional random scattering media, MIMO multi-carrier wireless channels, narrowband and wideband wireless channel characterization, straight and non-straight movements of the mobile station (MS), random movements of MS and/or scatterers, fading statistics of Rayleigh channels, modeling and evaluation of MIMO relay channels (Ph.D. work and individual works to advise master students)

- Capacity Evaluation of Wireless Channels:

Information theoretic approaches to antenna design in MIMO systems, capacity analysis of MIMO systems employing realistic channel correlation models (individual works to advise master students)

- **Space-Time Coding Techniques**
- Space-Time Coding Ambiguities:
Identification of space-time coding ambiguities in joint adaptive channel estimation and detection

- **Image Processing**
Inverse Imaging:
Theoretical methods in inverse imaging and 3D image reconstruction

Teaching Interests   My main teaching interests fall in the area of magnetic resonance imaging and digital signal processing, for both graduate and undergraduate levels. These include:
- Biomedical signal and image processing
- Principles of MRI
- Principles of Clinical MRS
- Diffusion MRI in Clinics
- Signals and Systems I & II
- Digital signal processing

Honors and Awards
- Advisor on the best Msc. Thesis Award, Department of Medical Physics and Biomedical Engineering, TUMS, September 2013.
- Best Poster Award, 7th Annual Postdoc Symposium, UPenn, October 2007
- NSERC Postdoctoral Fellowship (PDF), national, 2006-08
- Ontario Graduate Scholarship (OGS), provincial, Queen's University, 2005-06
- Ontario Graduate Scholarship (OGS), provincial, Queens's University, 2004-05
- IEEE Canada Vehicular Technology Travel Bursary, academic, Queen's University, 2004
- IEEE Award for CCECE Conference Participation, academic, Queen's University, 2004
- Queen's University Graduate Student Award, institutional, Queen's University, 2004
- Queen's University Graduate Award (QGA), institutional, Queen's University, 2001-2005
- Nortel Networks Graduate Fellowship, national, Queen's University, 2002-03
- Tuition Bursary, institutional, Queen's University, 2002-05

- Sun Microsystems of Canada Scholarship in Computational Science, Provincial, Queen's University, 2002-03
- Gold Medalist: M.Sc., institutional, Isfahan University of Technology (IUT), 1999
- Excellence Research Award, institutional, IUT, 1998
- 3rd Place Medalist: B.Sc., institutional, Sharif University of Technology, 1997
- 39th Place: Nationwide entrance exam of universities, national, Kamal High School, 1993
- 13th Place: Fifth Physics Olympiad, national, Kamal High School, 1992

Publications　　　　**Book Chapter**

1. A Fathi Kazerooni, MH A'arabi, M Ay and H Saligheh Rad, "Generation of MR-Based Attenuation Correction Map of PET Images in the Brain Employing Joint Segmentation of Skull and Soft-Tissue from Single Short-TE MR Imaging Modality", Springer International Publishing Switzerland 2015.
2. MH A'arabi and H Saligheh Rad, "Diffusion Map: A Novel Visualizing Biomarker for Diffusion Tensor Imaging of Human Brain White Matter", in Computational Diffusion MRI, Due January 22, 2015.
3. MA Parto Dezfouli, and H Saligheh Rad, "Quantification of Proton Magnetic Resonance Spectroscopy (1H-MRS)", In Current Applications of Chemometrics, Nova Science Publishing, 2014.
4. HS Rad and V Tarokh, "Analog Transmission," in the handbook of computer networks, H Bidgoli, first revision, June 2006.

Peer-Reviewed ISI Journal Papers

1. S Abbasi Rad, H Saligheh Rad, "Quantifying Human Cortical Bone Bound and Free Water in vivo from Ultrashort Echo-Time MRI: A Model-Based Approach", *In Press*, Radiology, 2016.
2. A Parto Dezfouli, A Ahmadian, A Frangi, M Rad, H Saligheh Rad, "Quantification of 1H-MRS Signals Based on Sparse Metabolite Profiles in the Time-Frequency Domain" *In Press*, NMR in Biomedicine, 2016.
3. S Afolabi Adebileje, Keyvan Ghasemi, H Tanimowo Aiyelabegan, H Saligheh Rad, "Accurate classification of brain gliomas by discriminate dictionary learning based on projective dictionary pair learning of proton magnetic resonance spectra", Magn. Reson. Chem. 2016.
4. F Fadaie, N Mohammadi Mobarakeh, Sayed S Hashemi Fesharaki, M H Harirchian, H Hadizadeh Kharazi, H Saligheh Rad, J Mehvari Habibabadi, "1H-MRS metabolite's ratios show temporal alternation in temporal lobe seizure: Comparison between interictal and postictal phases", Epilepsy Research 128 (2016) 158–162.
5. A Fathi Kazerooni, M Ay, S Arfaie, P Khateri, and H Saligheh Rad, "Single STE-MR Acquisition in MR-based Attenuation Correction of Brain PET Imaging Employing a Fully Automated and Reproducible Level-set Segmentation Approach", Molecular Imaging and Biology, 2016: p. 1-10.
6. A Fathi Kazerooni, M Malek, H Haghighatkhah, S Parviz, M Nabil, L Torbati, S Assili, H Saligheh Rad, M Gity, "Semi-Quantitative Dynamic Contrast Enhanced MRI for Accurate Classification of Complex Adnexal Masses", *In Press,* Journal of Magnetic Resonance Imaging, 2016.
7. H Saligheh Rad, A Fathi Kazerooni, "Know-How on Clinical MRI Research in Iran", Journal of the American College of Radiology, 2016, 13(6), 750-753.

8. A Akbari, S Abbasi Rad, H Saligheh Rad, "T1 Correlates Age: A Short-TE MR Relaxometry Study in vivo on Human Cortical Bone Free Water at 1.5T", Bone, 2016. 83: p. 17-22.

9. P Khateri, H Saligheh Rad, AH Jafari, A Fathi Kazerooni, A Akbarzadeh, M Shojae Moghadam, A Aryan, P Ghafarian, MR Ay "Generation of 4-Class Attenuation Map for MRI Based Attenuation Correction of PET Data in the Head Area Using a Novel Combination of STE/DIXON-MRI and FCM Clustering", Journal of Molecular Imaging and Biology, 2015, 17(6), 884-892.

10. H Saligheh Rad and AM Pistea, "On the Cross-Correlation Properties of MIMO Wideband Channels under Non-isotropic Propagation Conditions", International Journal of Antennas and Propagation, 2015.

11. M Miri, M Mohseni, A Madadi, K Firouznia, H Saligheh Rad, F Azmoudeh Ardalan, A Fathi Kazerooni, A Haidari, R Taslimi, H Ghanaati, "On Efficacy of 1H-MRSI and DWI for Non-Invasive Brain Glioma Grading", Iranian Journal of Radiology, 2015

12. C Li, A Seifert, H Saligheh Rad, C Rajapakse, W Sun, S Chun, B Lam, F Wehrli, "MRI Measures of Cortical Bone Water Concentration: Dependence on Age and Pore Volume Fraction", Journal of Radiology, 2014

13. A Fathi Kazerooni, M Mohseni, S Rezaei, G Bakhshandehpour, and H Saligheh Rad, "Multi-parametric (ADC/PWI/T2-W) Image Fusion Approach for Accurate Semi-Automatic Segmentation of Tumorous Regions in Glioblastoma Multiforme", Journal of Magnetic Resonance Materials in Physics, Biology and Medicine (MAGMA), 2015, 28(1), 13-22.

14. A Mehranian, H Saligheh Rad, A Rahmim, MR Ay, H Zaidi, "Smoothly clipped absolute deviation (SCAD) regularization for compressed sensing MRI using an augmented Lagrangian scheme", Magnetic Resonance Imaging, 2013 Oct; 31(8):1399-411.

15. N Rahimian, H Saligheh Rad, H Vafaeyan, K Firouz-Nia, M H Harirchian, "Magnetic resonance spectroscopic findings of chronic lesions in primary progressive multiple sclerosis compared to relapsing remitting subtype", Iranian Journal of Radiology, 2013.

16. P Khateri, H Saligheh Rad, A H Jafari, M R Ay, "A Novel Segmentation Approach for Implementation of MRAC in Head PET/MRI Employing Short-TE MRI and 2-Point Dixon Method in a Fuzzy C-Means Framework", Nuclear Instruments and Methods in Physics Research, 734 (2014): 171-174.

17. J Zamani, AN Moghaddam, HS Rad, "Compressed Sensing Cardiac MRI Exploiting Spatio-temporal Sparsity", Journal of Cardiovascular Magnetic Resonance, 2013; vol. 15; Suppl 1; pp. E14.

18. A Rezvanizadeh, K Firouznia, M Salehi-Sadaghiani, M Mohseni, D Gharaei, H Ghanaati, H Saligheh Rad, and M Masoudnia, "The Effects of Voxel Localization and Time of Echo on the Diagnostic Accuracy of Cystic Brain Tumors in 3 Tesla Magnetic Resonance Spectroscopy", Iranian Journal of Radiology, 2013; Vol. 9, Issue 4, pp. 195.

19. P Khateri, H Saligheh Rad, A Fathi and M Ay, "Generation of Attenuation Map for MR-Based Attenuation Correction of PET Data in the Head Area Employing 3D Short Echo-Time MR Imaging", Nuclear Instruments and Methods in Physics Research A, 702 (2013): 133-136.

20. AM Pistea and H Saligheh Rad, "Three-Dimensional Space-Time-Frequency Description of WB and UWB MIMO Channels," IEEE Communication Letters, 16(2), pp.205-207, 2012.

21. C Li, JF Magland, H Saligheh Rad, HK Song and FW Wehrli, "Comparison of Optimized Soft-Tissue Suppression Schemes for Creating Short-T2 Contrast with Ultra-short Echo Time MRI," Magnetic Resonance in Medicine, vol. 68(3), pp. 680-689, 2012.

22. A Fathi Kazerooni, M Rabbani, M Yazdchi, S Kasiri and H Saligheh Rad, "Effects of Electric and Magnetic Loadings on Bone Surface Remodeling: A Model Modification and Simulation", Biomedizinische Technik/Biomedical Engineering 2011; 56 (3): 167–173.

23. H Saligheh Rad, SCB Lam, JF Magland, H Ong, C Li, HK Song, J Love, FW Wehrli,"Quantifying cortical bone water in vivo by three-dimensional ultra-short echo-time MRI", NMR in biomedicine, vol. 24 (7), pp. 855-864, August 2011.

24. K Shahtalebi, GR Bakhshi and H Saligheh Rad, "Parallel Optimization of Time-Varying Adaptive Algorithms for Interference Cancellation in Code Division Multiple Access Systems," IET Communication Journal, Vol. 4, no. 16, pp. 1963–1973, November 2010.

25. P Shariatpanahi, BH Khalaj, AA Shishegar and H Saligheh Rad, "Decorrelating Closely Spaced Antennas by Pattern Design in Uniform Scattering Environments," IET Microwaves, Antennas and Propagations, vol 4, no. 11, pp. 1903–1909, November 2010.

26. H Saligheh Rad and S Gazor, "Space-Time-Frequency Characterization of 3D Non-Isotropic MIMO Multicarrier Propagation Channels Employing Directional Antennas," EURASIP Journal on Wireless Communications and Networking, doi: 10.1155/2008/893705, 14 pages, 2008.

27. H Saligheh Rad and S Gazor, "Effects of Mobile Rotational Movements in Wireless Propagation," IET Communications, vol. 2, no. 9, pp. 1109–1117, October 2008.

28. H Saligheh Rad and S Gazor, "The Impact of Non-Isotropic Scattering and Directional Antennas on MIMO Multicarrier Mobile Communication Channels," IEEE Transactions on Communications, vol. 56, no. 4, pp. 642–652, April 2008.

29. S Gazor and H Saligheh Rad, "Space-Time-Frequency Characterization of MIMO Wireless Channels," IEEE Transactions on Wireless Communications, vol. 5, no.9, pp. 2369–2375, September 2006.

30. S Gazor and H Saligheh Rad, "Space-Time Coding Ambiguities in Joint Adaptive Channel Estimation and Detection," IEEE Transactions on Signal Processing, no. 2, vol. 52, pp.:372–384, February 2004.

31. H Saligheh Rad, M Saeedifard and A Bakhshai, "SVM Classification Algorithm; A General and Efficient PWM Technique for Three-Phase Multilevel Inverters," Esteghlal Research Journal, Isfahan University of Technology (IUT), Isfahan, Iran, 2004.

32. M Saeedifard, H Saligheh Rad, A Bakhshai and R Iravani, "A Neuro-Based Classification Algorithm for Implementation of Space Vector Modulation for Multi-Level Converters," European Power Electronics and Drives Journal.

Peer-Reviewed Journal Papers

1. A Akbari, S Abbasi-Rad, N Tondro, M Shojaee-Moghaddam, and H Saligheh Rad1, "Can MRI Estimate the Cortical Bone Quality? A Feasibility Study Employing Short-TE MRI", Siemens MAGNETOM Flash Journal, ISMRM issue, 1/2015.

2. N Mohammadi, MH A'arabi, F Fadaei, A Fathi Kazerooni, J Mehvari Habibabadi, MH Harirchian, S Hashemi Fesharaki, S Sarkar, and H Saligheh Rad, "A Novel 1H-MRS Quantification Approach Based on Spectral Fitting for Lateralization/Localization of Seizure Foci in Patients with Temporal Lobe Epilepsy", Journal of Frontiers in Biomedical Technologies (FBT), 2015.

3. A. Fathi Kazerooni, M. Nabil, and H. Saligheh Rad "Accurate Classification of Complex Adnexal Masses Employing an Automated Decision Tree Based on Quantitative DCE-MRI", Siemens MAGNETOM Flash Journal, ASTRO issue, 4/2014.

4. A Fathi Kazerooni, M Mohseni, M Miri, H Saligheh Rad, "Accurate Segmentation of Tumorous Regions in High-Grade Glioma Employing a Multi-parametric

(ADC/PWI/T2-W) Image Fusion Approach", Journal of Frontiers in Biomedical Engineering, 1 (1), 48-53, 2014.

Peer-Reviewed Conference Papers

1. M Safari, A Fathi Kazerooni, M Babaie, M Nabil, M Rostami, P Ghavami, M Saneie Taheri, H Saligheh Rad, "The Role of Heterogeneity Analysis for Differential Diagnosis in Diffusion-Weighted Images of Meningioma Brain Tumors", 24th ISMRM Scientific Meeting 2016, Singapore.
2. M Beigi, A Fathi Kazerooni, M Safari, M Alamolhoda, A Ameri, S Moghdam, M Shojaee Moghadam, H Saligheh Rad "Can Diffusion Weighted MRI Assess Early Response of Lymphadenopathy to Induction Chemotherapy in Nasopharyngeal Cancer: A Heterogeneity Analysis Approach", 24th ISMRM Scientific Meeting 2016, Singapore.
3. M Safari, A Fathi Kazerooni, M Babaei, M Rostamie, P Ghavami, M Sanei Taheri, H Saligheh Rad, "Diffusion Weighted Imaging as Strong Biomarker for Differential Diagnosis of Meningioma Brain Tumors", International Symposium on Biomedical Imaging (ISBI'16), the Clarion Congress Hotel in Prague, Czech Republic, April 13-16, 2016.
4. S Assili, A Fathi Kazerooni, M Nabil, L Agha-Ghazvini, J Pirayesh Islamian, H Saligheh Rad, "An Automated Decision Tree Based on DCE-MRI and DWI Clinical Parameters for Classification of Parotid Tumors", 32nd Annual Scientific meeting of ESMRMB, Congress, Edinburgh, UK, 2015.
5. J Zamani, H Saligheh Rad, A Nasiraei Moghaddam, "Distributed Compressed Sensing to Accelerate Cine Cardiac MRI", the SCMR/Euro CMR Joint Scientific Sessions,February 5-7, 2015,Nice, France.
6. A Fathi Kazerooni, M Safari, H Haghighatkhah, M Nabil, S Assili, H Saligheh Rad, "Diffusion Weighted Imaging in Accurate Classification of Complex Ovarian Masses: A Whole-Tumor Heterogeneity Quantification Approach", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
7. M Nabil, A Fathi Kazerooni, S Assili, H Haghighatkhah, H Saligheh Rad, "A Simple and Clinically Applicable Decision Tree for Accurate Classification of Complex Adnexal Masses Based on Quantitative DCE-MRI", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
8. K Ghassemi, M Khanmohammadi Khorami, and H Saligheh Rad, "One-Class Classifier for Accurate Brain Tissue Classification from Noisy 1H-MRS Spectra", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
9. S Abbasi Rad, A Akbari, N Tondro, H Saligheh Rad, "Cortical Bone Porosity: A Novel MRI-Based Clinical Biomarker to Assess Cortical Bone Quality In Vivo", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
10. E Kia, A Fathi Kazerooni, S Navaei Lavasani, A Ahmadian, H Saligheh Rad, "The Effect of Groupwise Elastic Registration in Discrimination of Benign and Malignant Ovarian Cancers by Pharmacokinetic Parameters", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
11. P Moradi Birgani, A Fathi Kazerooni, H Haghighatkhah, P Fadavi, M Shojaei Moghaddam, M Ashtiyani and H Saligheh Rad, "Accurate Bone Marrow Extraction from T1-w Images and ADC-maps in Patients with Metastatic Cancer: A Texture-Based Segmentation Approach", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
12. S Navaei Lavasani, M Gity, M Nabil, A Fathi Kazerooni, H Saligheh Rad, "Accurate Discrimination of Benign and Malignant Breast Cancer in Suspicious Tumors Based on Semi-Quantitative DCE-MRI Employing Support Vector Machine", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.
13. S Navaei Lavasani, M Gity, A Fathi Kazerooni, H Saligheh Rad, "Accurate Segmentation of Breast Lesions Based on Wavelet Kinetics: Comparison with Semi-Quantitative Features", Multimedia Electronic Poster

14. S Assili, A Fathi Kazerooni, M Nabil M Safari, L Agha-Ghazvini, H Saligheh Rad, "Accurate Classification of Parotid Tumors Based on Histogram Analysis of ADC-maps", 23rd ISMRM Scientific Meeting 2015, Toronto, ON, Canada.

15. A Fathi Kazerooni, M Nabil, S Assili, H Saligheh Rad, "A Simple and Clinically Applicable Decision Tree for Accurate Classification of Complex Adnexal Masses Based on Quantitative DCE-MRI", ISMRM Workshop on Magnetic Resonance in Cancer: Challenges & Unmet Needs, November 6-9, 2014, Austin, TX, USA.

16. E Kia, S Lavasani, A Fathi Kazerooni, A Ahmadian, H Saligheh Rad, "The effect of Groupwise elastic registration in discrimination of benign and malignant ovarian cancers by pharmacokinetic parameters", ISMRM Workshop on Magnetic Resonance in Cancer: Challenges & Unmet Needs, November 6-9, 2014, Austin, TX, USA.

17. S Navaei Lavasani, P Gity, M Nabil, A Fathi Kazerooni, H Saligheh Rad ,"Accurate Discrimination of Benign and Malignant Breast Cancer in suspicious Tumors Base on Semi-Quantitative DCE-MRI Employing Support Vector Machine", ISMRM Workshop on Magnetic Resonance in Cancer: Challenges & Unmet Needs, November 6-9, 2014, Austin, TX, USA.

18. K Ghasemi, M Khanmohammadi Khorami, H Saligheh Rad, "One-Class Classifier for Accurate Brain Tissue Classification from Noisy 1H-MRS Spectra", ISMRM Workshop on Magnetic Resonance in Cancer: Challenges & Unmet Needs, November 6-9, 2014, Austin, TX, USA.

19. A Sarrami Foroushani, M Nasr Esfahany, and H Salighe Rad, Madjid Shakiba, Anahita Fathi, Mohsen Shojaei Moghaddam, "Quantification of Blood Flow and Wall Shear Stress in Ascending Aorta Using Time-Resolved Two-dimensional Phase-Contrast Magnetic Resonance Imaging", The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014), 24-27 February, Kish Island, Iran.

20. A Fathi Kazerooni, MH A'arabi, and H Saligheh Rad, "Generation of MR-based Attenuation Correction Map of PET Images in the Brain Employing Joint Segmentation of Skull and Soft Tissue from Single Short-TE MR Imaging Modality", MICCAI 2014 Workshop on Computational Methods for Molecular Imaging (CMMI'14), September 14, 2014, Massachusetts Institute of Technology (MIT) in Cambridge Mass., USA.

21. MH A'arabi, S Adebileje, M Shandiz, and H Saligheh Rad, "A New Approach for Visualization of Dynamic PET Images Employing Diffusion-Map Space", MICCAI 2014 Workshop on Computational Methods for Molecular Imaging (CMMI'14), September 14, 2014, Massachusetts Institute of Technology (MIT) in Cambridge Mass., USA.

22. A Akbari, S Abbasi Rad, M Shojaei Moghaddam, N Tondro, H Saligheh Rad, "Introducing a Novel Clinical Biomarker to Assess Human Bone Health Employing Conventional MRI", 15th Asia Oceania Congress of Radiology (AOCR2014), September 24-28, 2014, Kobe, Japan.

23. MH A'arabi, A Fathi Kazerooni, N Mohammadi and H Saligheh Rad, "Efficiency of Diffusion Tensor Imaging in the Estimation of Brain Connectivity; A Simulation Study", The Fourth Biennial Conference on Resting State / Brain Connectivity, September 11-13, 2014, Massachusetts Institute of Technology (MIT) in Cambridge Mass., USA.

24. MA Parto Dezfouli, M Parto Dezfouli, and H Saligheh Rad, "A Novel Approach for Baseline Correction in 1H-MRS Signals Based on Ensemble Empirical Mode Decomposition", 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'14), August 26-30, 2014, Chicago, Illinois, USA.

25. MH A'arabi, A Fathi Kazerooni, N Salehi, and H Saligheh Rad, "A High Throughput and Efficient Visualization Method for Diffusion Tensor Imaging of Human Brain Employing Diffusion-Map Space ", 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'14), August 26-30, 2014, Chicago, Illinois, USA.

26. A Fathi Kazerooni, MH Aarabi, M R Ay, H Saligheh Rad ,"A Fully Automated and Reproducible Level-set Segmentation Approach for Generation of MR-based Attenuation Correction Map of PET Images in the Brain Employing Single STE-MR Imaging Modality", 3rd Conference on PET/MR and SPECT/MR (PSMR2014).

27. MH Aarabi, A Fathi Kazerooni, P Khateri, M R Ay and H Saligheh Rad , "A Robust MR-Based Attenuation Map Generation in Short-TE MR Images of the Head Employing Hybrid Spatial Fuzzy C-Means Clustering and Intensity Inhomogeneity Correction", 3rd Conference on PET/MR and SPECT/MR (PSMR2014).

28. M Shirin Shandiz, MH Aarabi, P Ghafarian, M Bakhshayesh Karam, H Saligheh Rad and M R Ay, "A hybrid method for generation of attenuation map for MR-based attenuation correction of PET data in prostate PET/MR imaging", 3rd Conference on PET/MR and SPECT/MR (PSMR2014).

29. M Aarabi, A Fathi Kazerooni, H Saligheh Rad, "Joint Segmentation of Human Brain Skull and Soft-Tissue from Single Short-TE MR Imaging Modality", 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014)

30. E Eqlimi, A Eshaghi, N Riyahi Alam, A Ahmadian, M A Sahraian and H Saligheh Rad, "Wavelet Graphs on Mutual Information Functional Connectivity for MS Patients in Resting State fMRI", 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014)

31. F Sanaei Nezhad, H Soltanian-Zadeh, H Saligheh Rad, "Automatic Bone Segmentation in Pelvis Area with Bone Marrow Metastases Employing Local Level-Set with Prior information; Applications in Breast Cancer Treatment Monitoring and Surgical Planning", 28th International Congress and Exhibition on Computer Assisted Radiology and Surgery (CARS2014), 2014

32. A Fathi Kazerooni, M Mohseni, H Saligheh Rad, "Multi-parametric (ADC/PWI/T2-W) Image Fusion Approach for Accurate Semi-Automatic Segmentation of Tumorous Regions in Glioblastoma Multiforme",28th International Congress and Exhibition on Computer Assisted Radiology and Surgery (CARS2014), 2014

33. M H A'arabi, A Fathi Kazerooni and Hamidreza Saligheh Rad, "Diffusion-Map: A Novel Visualizing Biomarker for Diffusion Tensor Imaging of Human Brain White Matter", MICCAI 2014 Workshop on Computational Diffusion MRI (CDMRI14).

34. A Fathi Kazerooni, MH Aarabi, E Kia, H Saligheh Rad, "Optimal Decision Tree for Classification of Benign and Malignant Ovarian Masses Based on DCE-MRI Quantitative Parameters Employing Hierarchical Clustering Approach", Proceedings of 22nd ISMRM Scientific Meeting and Exhibition, 2014, Milan, Italy

35. E Kia, A Fathi Kazerooni, A Ahmadian, H Saligheh Rad, "A Groupwise Non-Rigid Registration Approach for Accurate Quantification of DCE-MRI in Characterizing Ovarian Cancers", Proceedings of 22nd ISMRM Scientific Meeting and Exhibition, 2014, Milan, Italy

36. A Akbari, S Abbasi Rad, M Shojaee-Moghaddam and H Saligheh Rad, "Investigation of Relationship between Free-Water T1 and Age in Human Cortical Bone Employing Short-TE 1H-MRI at 1.5T", Proceedings of 22nd ISMRM Scientific Meeting and Exhibition, 2014, Milan, Italy

37. E Eqlimi, N Riyahi Alam, MA Sahraian, A Eshaghi and H Salighe Rad, " Mutual Information Weighted Graphs for Resting State Functional Connectivity in fMRI Data", Proceedings of 22nd ISMRM Scientific Meeting and Exhibition, 2014, Milan, Italy

38. A Sarrami Foroushani, M Nasr Esfahany, H Saligheh Rad, M Shakiba, A Fathi, M Shojaei Moghaddam, "Quantification of Blood Flow and Wall Shear Stress in Ascending Aorta Using Time-Resolved Two-dimensional Phase-Contrast Magnetic Resonance Imaging", The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014), 24-27 February, Kish Island, Iran

39. F. Sanaei Nezhad, H. Saligheh Rad, H. Soltanian-Zadeh, "Segmentation of Bone From ADC-Maps in Pelvis Area Using Local Level-set and Prior Information", IEEE International Symposium on Biomedical Imaging (ISBI), 2014.

40. M. Khanmohammadia, H. Saligheh Rad, K. Ghasemi, A. Madadi,"Unsupervised Classification of Brain Tumors Employing 1H-MRSI",4th Iranian Biennial Chemometrics Seminar, Shiraz, Iran, 30-31 October 2013.

41. A Madadi, M Mohseni, A Fathi Kazerooni, S Karimi Alavijeh, H Saligheh Rad, "Accurate Quantification of Metabolites' Ratios in Glial Brain Tumors Employing 1H-MRSI at 3T", ESMRMB 2013, Tolouse/FR.

42. A Fathi Kazerooni, M Mohseni, H Saligheh Rad, "Accurate Segmentation of Tumorous Regions in High-Grade Glioma Employing a Multi-parametric (ADC/PWI/T2W) Image Fusion Approach", ESMRMB 2013, Tolouse/FR.

43. K Ghassemi, A Fathi Kazerooni, M Mohseni, A Madadi, H Saligheh Rad, "GA-QDA Based Feature Selection Classifier for Diagnosis of Brain Gliomas", ESMRMB 2013, Tolouse/FR.

44. A Akbari, S Abbasi Rad, H Saligheh Rad, "Quantifying T1 Relaxivity of the Cortical Bone in-vivo Employing Short-TE MRI; A Feasibility Study", ESMRMB 2013, Tolouse/FR.

45. H Vafaeyan, N Rahimian, A Madadi, M H Harirchian, H Saligheh Rad, "Accurate Quantification of In-Vivo 1H-MRSI for Multiple Sclerosis at 3T; A Reproducibility Study", ESMRMB 2013, Tolouse/FR.

46. S Karimi Alavijeh, A Madadi, M Oghabian, M Malek, H Saligheh Rad, "Accurate Quantification of Cho/Cr in Osteosarcoma Employing Clinical 1H-MRSI at 3T; A Comparison Study with Normal Tissue", ESMRMB 2013, Tolouse/FR.

47. H Vafaeyan, N Rahimian, A Madadi, S Karimi, M Harirchian,F Faeghi ,K Firoznia and H Saligheh Rad, "Accurate Quantification of NAA/Cr and NAA/Cho in Multiple Sclerosis Employing 1H-MRSI at 3T", the ISMRM Workshop on Multiple Sclerosis as a Whole-Brain Disease in London, 26-28 June 2013 , England, UK.

48. R Rafiei, A Madadi, S Karimi, and H Saligheh Rad, "Baseline Estimation in 1H-MR Spectroscopy Imaging of the Normal Brain; A Correlation Study between Different Regions", Proceedings of 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.

49. F Sanaei Nezhad, A Fathi Kazerooni, A Padhani, H Soltanian Zadeh, and H Saligheh Rad, "Accurate Monitoring of the Treatment Response in Bone Marrow Metastatic Cancers Based on ADC Histogram Analysis Employing an Automatic Multiparametric (T1/ADC) Bone Marrow Registration/Segmentation Approach", Proceedings of 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.

50. A Fathi Kazerooni, L Torbati, M Malek, and H Saligheh Rad, "A Novel Non-Rigid Registration Approach for Accurate Quantification of Dynamic Contrast Enhanced MR Imaging (DCEMRI) in Ovary Employing Residual Complexity Framework", Proceedings of 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.

51. A Fathi Kazerooni, M Mohseni, M Miri, K Firouznia, H Saligheh Rad, "Segmentation-based estimation of relative Cerebral Blood Volume (rCBV) in Dynamic Susceptibility Contrast (DSC) enhanced MR images of brain tumors", Proceedings of 29th ESMRMB congress 2012, Lisbon/PT.

52. P Khateri, H Saligheh Rad, M Ay, "Determination of Attenuation Map at 511 keV Employing 3D Short Echo-Time MR Imaging in the Head Area: Application in MR-Based AC of PET data", European Conference of Nuclear Medicine and Molecular Imaging, Vol. 39, pp. S369-S369.

53. A Mehranian, H Saligheh Rad, MR Ay, A Rahmim, H Zaidi, "Smoothly Clipped Absolute Deviation (SCAD) Regularization for Compressed Sensing MRI Using an

Augmented Lagrangian Scheme", IEEE Nuclear Science Symposium and Medical Imaging Conference Record (NSS/MIC), 2012, pp. 3646-3653.

54. A Fathi Kazerooni, A Ahmadian, H Saberi, V Asayesh and H Saligheh Rad, "A Wavelet- Based Similarity Measure to Register Pre-/Intra-Operative MR Images of the Brain", The 2012 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV'2012)", Las Vegas, Nevada.

55. P Khateri, H Saligheh Rad, A Fathi Kazerooni, M Ay, "Generation of Attenuation Map for MR-Based Attenuation Correction of PET Data in the Head Area Employing 3D Short Echo-Time MR Imaging", The first PET/MR and SPECT/MR conference on New Paradigms for Combined Modalities in Molecular Imaging Conference, 2012, Elba Island, Italy.

56. J Zamani, H Saligheh Rad, and A Nasiraei Moghaddam, "Application of Split Bregman Optimization Method for Compressed Sensing CE-MRA", Proceedings of IEEE Engineering in Medicine and Biology (EMBC'12), August 2012, San Diego, USA.

57. J Zamani, A Nasiraei Moghaddam and H Saligheh Rad, "PILS-CS: Accelerating Partially Parallel Imaging with Localized Sensitivities (PILS) Using Compressed Sensing (CS)", Proceedings of IEEE Engineering in Medicine and Biology (EMBC'12), August 2012, San Diogo, USA.

58. J Zamani, A Nasiraei Moghaddam and H Saligheh Rad, "Patterns for K-Space Under-Sampling in Compressed Sensing MRI", Proceedings of Iranian Society for Biomedical Engineering (ISBME'12), December 2012, Tehran, Iran.

59. P Khateri, H Saligheh Rad, A Fathi and M Ay, "Generation of Attenuation Map for MR-Based Attenuation Correction of PET Data in the Head Area Employing 3D Short Echo-Time MR Imaging", Proceedings of PET/MR and SPECT/MR: New Paradigms for Combined Modalities in Molecular Imaging Conference (PSMR'12), May 2012, La Biodola, Italy.

60. A Fathi Kazerooni, A Ahmadian, H Saberi, J Alirezaie and H Saligheh Rad, "An Efficient Algorithm for Registration of Pre- and Intra- Operative Brain MRI Images to Correct Intensity Inhomogeneity", Proceedings of the 11th International Conference on Information Sciences, Signal Processing and their Applications (ISSPA'12), July 2012, Montreal, Canada.

61. H Saligheh Rad, AM Pistea, M Mohseni and A Kazemi, "High Precision Quantification of 1H- MRSI Spectra in Brain and Musculoskeletal Tumors," Proceedings of 20th ISMRM Scientific Meeting and Exhibition, Melbourne, Australia.

62. A Mehranian, H Saligheh Rad, M Ay and A Rahmim, "3D TV-Based Compressed MR Image Reconstruction Using a Primal Dual Algorithm," Proceedings of 20th ISMRM Scientific Meeting and Exhibition, Melbourne, Australia.

63. A Fathi Kazerooni, A Ahmadian, N Dadashi Serej, H Saligheh Rad, H Saberi, H Yousefi and P Farnia, "Segmentation of Brain Tumors in MRI Images Using Multi-scale Gradient Vector Flow", Proceedings of 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'11), September 2011, Boston, USA.

64. P-H Tsai, AC Seifert, AC Wright, H Saligheh Rad, JF Magland, HK Song, MB Leonard and FW Wehrli, "Feasibility of in vivo phosphorus imaging of cortical bone at 7T in humans," Proceedings of 19th ISMRM Scientific Meeting and Exhibition, April 2011, Montreal, Canada.

65. M Mahrooghi and H Saligheh Rad, "Compressive Sensing for micro-MRI of Trabecular Bone Using Smooth Projected Landweber (SPL)," Proceedings of 19th ISMRM Scientific Meeting and Exhibition, April 2011, Montreal, Canada.

66. H Saligheh Rad, SCB Lam, JF Magland, J Love and FW Wehrli, "Quantifying Proton Density in Cortical Bone In-Vivo by 3D Ultra-short Echo-time Imaging," candidate for the best e-poster award, Proceedings of 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.

67. H Saligheh Rad, J Love, JF Magland, M Leonard and FW Wehrli, "Bone Water Concentration as a New Metric for Cortical Bone Quality," oral presentation, Proceedings of 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.

68. CS Rajapakse, H Saligheh Rad, SCB Lam, J Love, JF Magland and FW Wehrli, "Ultra-Short Echo-Time Imaging Based Estimation of Cortical Bone Stiffness," Proceedings of 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.

69. SCB Lam, H Salilgheh Rad, JF Magland and FW Wehrli, "Automatic segmentation of MR images for long-bone cross-section parametric analysis," Proceedings of 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.

70. JF Magland, H Saligheh Rad and FW Wehrli, "Correcting for Gradient Imperfections in Ultra- Short Echo Time Imaging," Proceedings of 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.

71. FW Wehrli, H Saligheh Rad, MB Leonard, J Magland, J Love, HK Song and H Peachey, "Cortical Bone Water Measured by UTE MRI Far Exceeds Variations in Mineral Density," Proceedings of 2010 ASBMR, 2010.

72. AM Pistea, T Palade, A Moldovan and H Saligheh Rad, "Cross correlation Function for Wideband MIMO Channels: Derivation and Analysis," Proceedings of the 6th International Wireless Communications and Mobile Computing Conference, pp. 819–823, Caen, France, 2010.

73. AM Pistea and H Saligheh Rad, "Wideband and UWB Communication Channels with Directional Antenna Arrays in Non-isotropic Propagation Environment," Proceedings of PIERS, 2010.

74. GR Bakhshi, K Shahtalebi and H Saligheh Rad, "A Novel Full-Three-Dimensional MIMO Mobile-to-Mobile Channel Reference Model," Proceeding of 3rd International Conference on Signal Processing and Communication Systems (ICSPCS'2009), Nebraska, USA, September 2009.

75. H Saligheh Rad, MJ Wald, JF Magland and FW Wehrli, "High Precision Translational Motion Correction for Micro-MRI of Trabecular Bone Using Cartesian Navigators," oral presentation, Proceedings of 17th ISMRM Scientific Meeting and Exhibition, April 2009, Hawaii.

76. JF Magland, AC Wright, H Saligheh-Rad and FW Wehrli, "Low-SAR Trabecular Bone Micro- MRI for use at Ultra-High Field," poster presentation, Proceedings of 17th ISMRM Scientific Meeting and Exhibition, April 2009, Hawaii.

77. YA Bhagat, MJ Wald, CS Rajapakse, H Saligheh Rad, JF Magland, MB Leonard and FW Wehrli, "Evaluation of Motion Corruption on Image Quality in Micro MRI of Trabecular Bone: Impact on Structural Parameters," poster presentation, Proceedings of 17th ISMRM Scientific Meeting and Exhibition, April 2009, Hawaii.

78. O Darvishi, B Abolhassani, H Saligheh Rad, "On the efficiency of directional antennas in MIMO communication systems", IEEE Sarnoff Symposium, 2009. SARNOFF'09, pp. 1-5.

79. H Saligheh Rad, MJ Wald, JF Magland and FW Wehrli, "Motion Correction for High-Resolution Trabecular Bone Imaging via Low-Resolution Full Radial Navigators," winner of the best poster award at 7th Annual Postdoc Research Symposium, UPenn, October 2008.

80. O Darvishi, B Abolhassani and H Saligheh Rad, "Characterization of the impact of power normalization on the MIMO mutual information," Proceedings of 4th International Symposium on Telecommunications, August 2008, Tehran, Iran.

81. P Shariatpanahi, AA Shishegar, BH Khalaj and H Saligheh Rad, "Low SNR Regime Capacity Analysis of MIMO Systems Using Directional Antennas", Proceedings of International Symposium on Telecommunications 2008 (IST'08), Tehran, August 2008.

82. O Darvishi, B Abolhassani and H Saligheh Rad, "Impact of Physical Channel Properties on the Capacity of MIMO Communication Systems", Proceedings of 16th Iranian Conference on Electrical Engineering (ICEE'08), May 2008, Tehran, Iran.

83. O Darvishi, B Abolhassani and H Saligheh Rad, "On the Efficiency of Directional Antennas in MIMO Communication Systems," Proceedings of 2009 IEEE Sarnoff Symposium, March 2008, Princeton, NJ, USA.

84. S Ghavami, H Alikhanian , B Abolhassani and H Saligheh Rad, "Blind Multiuser Data Estimation in Asynchronous and Unequal Power DS-SS Systems without any Prior Knowledge of Spreading Sequences," Proceedings of 2009 IEEE Sarnoff Symposium, Princeton, New Jersey.

85. K Shahtalebi, GR Bakhshi and H Saligheh Rad, "Interference Cancellation in Coherent CDMA Systems Using Parallel Iterative Algorithms," Proceedings of International Symposium on Telecommunications 2008 (IST'08), Tehran, August 2008.

86. P Shariatpanahi, BH Khalaj, AA Shishegar and H Saligheh Rad, "Decorrelating Closely-Placed Antennas by Pattern Design in Uniform Scattering Environments", International Conference on Advanced Communication Technology 2008 (ICACT'08), Korea, Feb 2008.

87. K Shahtalebi, GR Bakhshi and H Saligheh Rad, "Interference Cancellation in Non-Coherent CDMA Systems Using Parallel Iterative Algorithms," Proceedings of IEEE Wireless Communications and Networking Conference 2008 (WCNC'08), March 2008, Las Vegas, USA.

88. H Saligheh Rad, S Gazor and P Shariatpanahi, "Non-Fixed Scatterers and Their Effects on MIMO Multicarrier Fading Communication Channels," IEEE Global Communications Conference 2007 (GLOBECOM'07), July 2007.

89. H Saligheh Rad and S Gazor, "Space-Time-Frequency Characterization of 3D Non-Isotropic MIMO Multicarrier Propagation Channels Employing Directional Antennas," IEEE Wireless Communications and Networking Conference 2007 (WCNC'07), March 2007.

90. M Saeedifard, H Saligheh Rad, A Bakhshai and R Iravani, "A Fast and Universal Neuro-Based SVM Algorithm for Multi-Level Converters," IEEE APEC'07.

91. H Saligheh Rad and S Gazor, "A Cross-Correlation Model for Non-Isotropic Scattering with Non-Omnidirectional Antennas in MIMO Propagation Channels," 6th IEEE Workshop on Signal Processing Advances in Wireless Communications 2005 (SPAWC'05), pp. 251–255, June 2005.

92. H Saligheh Rad, S Gazor, "A 3D correlation model for MIMO non-isotropic scattering with arbitrary antenna arrays", IEEE Wireless Communications and Networking Conference, 2005, (WCNC'05), pp. 938-943, vol. 2.

93. H Saligheh Rad and S Gazor, "A 3D Correlation Model for MIMO Non-Isotropic Scattering with Arbitrary Antenna Arrays," Wireless Communications and Networking Conference 2004, (WCNC'04), pp. 938–943, vol. 3, August 2004.

94. H Saligheh Rad and S Gazor, "The Effect of Mobile Station Rotation on a Correlation Model for Microcellular Environments," IEEE Global Telecommunications Conference, 2004 (GLOBE- COM '04), pp. 3058–3062, vol. 5, July 2004.

95. H Saligheh Rad and S Gazor, "MIMO Space-Time Correlation Model for Microcellular Environments," 5th IEEE Workshop on Signal Processing Advances in Wireless Communications 2004 (SPAWC'04), pp. 125–129, Lisbon, Portugal, July 11-14, 2004.

96. J Wu, H Saligheh Rad, SD Blostein and S Gazor, "Matrix Form Lapped Space Time Block Coding in Frequency Selective Channels," 22nd Biennial Symposium on Communications, Department of Electrical and Computer Engineering, Queen's University, Kingston, May 31 - June 3, 2004.

97. S Gazor and H Saligheh Rad, "Time-Varying Coding for Space-Time Ambiguities," Proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing, (ICASSP'04), Montreal, May 2004.

98. H Saligheh Rad, S Gazor, K Shahtalebi, "Spatial-temporal-frequency decomposition for 3D MIMO microcellular environments", Canadian Conference on Electrical and Computer Engineering 2004 (CCECE'04), Vol. 3, pp. 1229-1232, Niagara Falls, May 2004.

99. NA Ali, H Saligheh Rad, S Gazor and H Mouftah, "WMPLS Throughput Efficiency in Multi- path Rayleigh Fading Environments," Canadian Conference on Electrical and Computer Engineering 2004 (CCECE'04), Niagara Falls, May 2004.

100. H Saligheh Rad and S Gazor, "An Optimal Receiver for Transmission Diversity Over Uncertain Channels," Proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing, (ICASSP'03), vol. 4, pp. IV: 341-344, Hong Kong, April 6–10, 2003.

101. H Saligheh Rad and S Gazor, "Transmission Diversity Ambiguities and Adaptive Channel Tracking," Proceedings of Seventh International Symposium on Signal Processing and Its Applications, (ISSPA'03), 2003, vol. 1, pp. 45–48, July 1-4, 2003.

102. S Gazor and H Saligheh Rad, "Joint Estimation and Detection for Transmit Diversity Over Fast Fading Channels," Proceedings of Seventh International Symposium on Signal Processing and its Applications, (ISSPA'03), 2003, vol. 1, pp. 37–40, July 1-4, 2003.

103. H Saligheh Rad and S Gazor, "A MIMO Channel Model and Simulator," Special Forum for Design and Developers, GLOBCOM'03, December 2003.

104. A Bakhshai and H Saligheh Rad, "Space Vector Modulation Based on Classification Method in Three-Phase Multi-Level Voltage Source Inverters," IEEE Industry Applications Conference, Thirty-Sixth IAS Annual Meeting, vol. 1, pp. 597–602, 30 Sept.-4 Oct. 2001.

105. H Saligheh Rad and A Bakhshai, "Space Vector Modulation Based on Vector Classification Methods in Three-Phase Three-Level Voltage Source Inverters," Proceedings of 9th - Iranian Conference on Electrical Engineering, (ICEE'01), May 2001.

Grants   **University**

- Differentiation of Various Tumorous Regions in Multi-parametric MRI (DWI/PWI/T2/MRS) of Glioblastoma Multiforme Tumor Employing Multi-Variate Classification Methods; Ongoing; TUMS
- Determination of Glioma's Target Volume For Conformal Radiotherapy and IMRT Treatment Planning Using Diffusion Tensor Magnetic Resonance Imaging; Ongoing; TUMS
- Quantification of Diffusion Tensor Images (DTI) to Detect Abnormal Regions in Epileptic Patients Brain; Ongoing; TUMS

- Segmentation and classification of breast cancer tumors using quantitative DCE-MRI, finished in 2015, TUMS
- Optimization of Tensor Reconstruction and DTI Image Processing for Facial Nerve Tractography in Vestibular Schwannoma Patients, finished in 2015, TUMS
- Dictionary Learning Approach in Quantifying Magnetic Resonance Spectroscopy Signals, finished in 2015, International Office, TUMS
- Advanced Skull Segmentation Method Employing Short-TE MRI in Model-based Framework, , finished in 2014, TUMS
- Presentation of Non-Rigid Registration algorithm for Dynamic Contrast Enhanced Magnetic Resonance Images (DCE-MRI) in Ovary region based on pharmacokinetics parameters, finished in 2014, TUMS
- Quantifying metabolites concentration in 1H-MRS of brain, finished in 2014, TUMS
- Feasibility of quantifying proton density in cortical bone employing short-TE MRI technique, finished in 2014, TUMS
- Detecting Seizure Focal Point Employing 1H-MRSI, finished in 2014, TUMS
- Feature extraction from UTE-MR Images of cortical bone to quantify osteoporosis, finished in 2014, TUMS

Research Centers

- Bone quality assessment by complementary role of QCT and MRI via a dual purpose MR/CT phantom; Ongoing; Advanced Diagnostic and Interventional Radiology Research Center/ TUMS
- Investigation of the competing/completing role of DWI-MRI vs. PET/CT in bone marrow metastatic breast cancer in pelvis region; Ongoing; Cancer Research Center/ TUMS
- Reconstruction of Pseudo-CT Images Using a Statistical Atlas of the Bone for Accurate Segmentation of Skull from MR Images; Ongoing; Research Center for Molecular and Cellular Imaging/ TUMS;
- Ex-vivo quantification of cortical bone porosity via Relaxometry and Densitometry of bone water employing STE-MRI ; Ongoing; Osteoporosis Research Center/TUMS;
- Introducing MR-based novel clinical bio-markers to evaluate cortical bone quality and discriminating between normal and osteoporotic patients; Ongoing; Osteoporosis Research Center/TUMS;
- Accurate Quantification of Iron using MRI and Design and Fabrication of a Calibration/Validating Phantom; Ongoing; Advanced Diagnostic and Interventional Radiology Research Center/ TUMS
- A novel multi-parametric (DWI/DSC-MRI) image fusion approach for accurate quantification of various regions in glioma brain tumors; Finished in 2014; Research Center for Molecular and Cellular Imaging/ TUMS

Industry

- Generation of Image-Based Radiological Evidences for Differential Diagnosis of Patients with Mild Cognitive Impairment from Alzheimer's Disease Employing Multi-parametric MRI (PWI/DTI/T1-w); A Baseline Study; Ongoing; Cognitive Sciences and Technologies Council (COGC).

Presentations

Invited Talks
- "What a Physicist Can Add in Clinical Neuroimaging; ISMRM Mission", 2nd Iranian Human Brain Mapping, 14-16 November 2015, Milad Convention Center, Tehran, Iran.
- "Quantitative MRI in Cancer", Institute of Biochemistry and Biophysics (IBB), University of Tehran, November 3, 2015, Tehran, Iran.

- "An Introduction on the Iranian Chapter of the International Society for Magnetic Resonance in Medicine (ISMRM)", Cardiovascular MRI Conference, October 16th 2015, Aseman Hotel, Isfahan, Iran.
- "Lessons from MR Image Processing Research", 6th Iranian Imaging Informatics Conference, August 5-7 2015, Milad Convention Center, Tehran, Iran.
- "What is the role of Magnetic Resonance Imaging in the Quantitative Assessment of Osteoporosis?", Department of Electrical and Computer Engineering, University of Sheffield, UK, June 13th, 2015.
- "Quantitative MRI in Cancer; Current Status and Future Needs", Department of Electrical and Computer Engineering, University of Sheffield, UK, June 15th, 2015.
- "qMRI in Cancer Quantification", 31st Iranian Congress of Radiology, May 5th 2015, Milad Tower Convention Center, Tehran, Iran.
- "Quantitative MRI; The Critical Role of MR Physicist in Imaging Centers"; Jan 21, 2015, Shahroud University, Shahroud, Iran.
- "Quantitative MRI; the Role of MR Physicists"; 11th Iranian Conference of Medical Physics, Nov 6-8, 2014, Tehran, Iran.
- "Imaging Protocols in Oncology Patients", 30th Iranian Congress of Radiology, May 13-16, 2014, Tehran, Iran.
- "MRI Goes Functional", 30th Iranian Congress of Radiology, May 13-16, 2014, Tehran, Iran.
- "What does Quantitative MR Imaging mean?", 30th Iranian Congress of Radiology, May 13-16, 2014, Tehran, Iran.
- "Quantitative MRI", 5th Conference on Imaging Informatics, Jan 24-26, 2014, Shiraz, Iran
- "Quick Overview on the Role of MRI to Assess Osteoporosis", 20th Iranian Conference on Biomedical Engineering, Tehran, Iran, December 2013.
- "What is the Role of Magnetic Resonance Imaging in the Quantitative Assessment of Osteoporosis?", Osteoporosis Seminar, EMRI/IOF, Tehran, Iran, 30 October 2013.
- "Quantifying Cortical Bone Proton Density In Vivo: Technical Design and Clinical Study," Science and Engineering Department, Land Forces Academy, Sibiu, Romania, July 2011.
- "Bone Water Concentration as a New Metric for Cortical Bone Quality," Engineering and Medical Center, Isfahan University, Department of Electrical and Computer Engineering, Isfahan University of Technology, Isfahan, Iran, and Electrical Engineering Department, Sharif University of Technology, Tehran, Iran, September 2009.
- "High Precision Translational Motion Correction for Micro-MRI of Trabecular Bone Using Cartesian Navigators," Engineering and Medical Center, Isfahan University, and Department of Electrical and Computer Engineering, Isfahan University of Technology, Isfahan, Iran, January 2009.
- "Frequency Selective Pulses for Magnetic Resonance Imaging," International Seminar of Electrical Engineering Department, Sharif University of Technology, Tehran, Iran, September 2007.
- "Modeling and Evaluation of Outdoor Wireless Channels," International Seminar of Electrical Engineering Department, Sharif University of Technology, Tehran, Iran, January 2007.
- "Correlation Modeling of Wireless Propagation Media," Electrical Engineering Department, Oxford University, Oxford, Britain, February 2007.

Oral Presentations

- A Fathi Kazerooni, M Safari, H Haghighatkhah, M Nabil, S Assili, **H Saligheh Rad**, "Diffusion Weighted Imaging in Accurate Classification of Complex Ovarian Masses: A Whole-Tumor Heterogeneity Quantification Approach", 23rd ISMRM Scientific Meeting and Exhibition, 2015, Toronto, Canada.
- "Accurate Segmentation of Tumorous Regions in High-Grade Glioma Employing a Multi-parametric (ADC/PWI/T2W) Image Fusion Approach", ESMRMB 2013, Tolouse/FR, October 2013.
- "Quantifying T1 Relaxivity of the Cortical Bone in-vivo Employing Short-TE MRI; A Feasibility Study", ESMRMB 2013, Tolouse/FR, October 2013.
- "WASPI: Water- and Fat-Suppressed Projection MR Imaging," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, December 2009.
- "SWIFT: Sweep Imaging with Fourier Transformation," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, December 2009.
- "Soft Tissue Suppression," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, September 2009.
- "Gradient Eddy Currents in MRI; Principles and Compensation Techniques," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, May 2009.
- "Designing Long-T2 (Soft Tissue) Suppression Pulses for Ultra-short Echo Time Imaging," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, February 2009.
- "TELEX: A Practical T2-Selective RF Excitation Pulse," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, November 2008.
- "Motion Correction via Radial Navigators," Laboratory for Structural NMR Imaging, University of Pennsylvania, Philadelphia, PA, August 2008.
- "Non-Fixed Scatterers and Their Effects on MIMO Multicarrier Fading Communication Channels," IEEE Global Communications Conference 2007 (GLOBECOM'07), Washington DC, November 2007.
- "Spatial-Temporal-Frequency Decomposition for Uncorrelated 3D MIMO Microcellular Wireless Channels," Canadian Conference on Electrical and Computer Engineering 2004 (CCECE'04), Niagara Falls, May 2004.
- "Matrix Form Lapped Space Time Block Coding in Frequency Selective Channels," 22nd Biennial Symposium on Communications, Department of Electrical and Computer Engineering, Queen's University, Kingston, May 31 - June 3, 2004.
- "Transmission Diversity Ambiguities and Adaptive Channel Tracking," Seventh International Symposium on Signal Processing and its Applications, ISSPA'03, France, July 2003.
- "Joint estimation and detection for transmit diversity over fast fading channels," Seventh International Symposium on Signal Processing and Its Applications, ISSPA'03, France, July 2003.
- "MIMO Systems for Wireless Communications: Some advances in MIMO Channel Modeling and Space-Time Coding," Presentation for the Ph.D. Comprehensive Exam-Part II (Proposal Session), Department of Electrical and Computer Engineering, Queen's University, Canada, June 2003.
- "An Optimal Receiver for Transmission Diversity over Uncertain Channels," Canadian Conference on Electrical and Computer Engineering 2003, May 2003, Montreal, Canada.

- "New Trends in Spatial Channel Modeling for Wireless Communications and its application for MIMO systems," Presentation for the Ph.D. Comprehensive Exam-Part I, Department of Electrical and Computer Engineering, Queen's University, Canada, June 2002.
- "MIMO Systems for Fading Channels," Presentation for the Wireless Communications Course, Department of Electrical and Computer Engineering, Queen's University, Canada, December 2001.

Poster Presentations

- "GA-QDA Based Feature Selection Classifier for Diagnosis of Brain Gliomas", ESMRMB 2013, Tolouse/FR.
- "Accurate Quantification of In-Vivo 1H-MRSI for Multiple Sclerosis at 3T; A Reproducibility Study", ESMRMB 2013, Tolouse/FR.
- "Accurate Quantification of Cho/Cr in Osteosarcoma Employing Clinical 1H-MRSI at 3T; A Comparison Study with Normal Tissue", ESMRMB 2013, Tolouse/FR.
- "Accurate Quantification of Metabolites' Ratios in Glial Brain Tumors Employing 1H-MRSI at 3T", ESMRMB 2013, Tolouse/FR.
- "Baseline Estimation in 1H-MR Spectroscopy Imaging of the Normal Brain; A Correlation Study between Different Regions", 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.
- "A Novel Non-Rigid Registration Approach for Accurate Quantification of Dynamic Contrast Enhanced MR Imaging (DCEMRI) in Ovary Employing Residual Complexity Framework", 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.
- "Accurate Monitoring of the Treatment Response in Bone Marrow Metastatic Cancers Based on ADC Histogram Analysis Employing an Automatic Multiparametric (T1/ADC) Bone Marrow Registration/Segmentation Approach", 21st ISMRM Scientific Meeting and Exhibition, 2013, Salt Lake City, Utah, USA.
- "Quantifying Proton Density in Cortical Bone In-Vivo by 3D Ultra-short Echo-time Imaging," candidate for the best e-poster award, at 18th ISMRM Scientific Meeting and Exhibition, April 2010, Stockholm, Sweden.
- "Motion Correction for High-Resolution Trabecular Bone Imaging via Low-Resolution Full Radial Navigators," winner of the best poster award at 7th Annual Postdoc Research Symposium, UPenn, October 2008.
- "A cross-correlation model for non-isotropic scattering with non-omnidirectional antennas in MIMO propagation channels," 2005 IEEE 6th Workshop on Signal Processing Advances in Wireless Communications, New York, USA, June 2005.
- "MIMO Space-Time Correlation Model for Microcellular Environments," Fifth IEEE Workshop on Signal Processing, Advances in Wireless Communications, Lisboa, Portugal, July 2004.
- "Time-Varying Coding for Space-Time Ambiguities," IEEE International Conference on Acoustics, Speech, and Signal Processing, (ICASSP'04), Montreal, May 2004.

Workshops

- "Magnetic Resonance Spectroscopy and Perfusion Imaging", 20th Iranian Conference on Biomedical Engineering (ICBME 2013), Tehran, Iran, December 2013.
- "An Overview on Magnetic Resonance Spectroscopy and Perfusion Cardiac Imaging", Mashhad University of Medical Sciences, Mashhad, Iran, June 2013.
- "Basics of Magnetic Resonance Spectroscopy and Perfusion Imaging for MRI Technologists", Iran.
- "Basic course on MR Physics for MRI Technologists", Iran.
- "Intermediate Course on MR Physics for MRI Technologists", Iran.

Professional Memberships	- IAMP (Iranian Association of Medical Physicists) - ISR (Iranian Society of Radiology) - ESMRMB (European Society for Magnetic Resonance in Medicine and Biology) - ISMRM (International Society for Magnetic Resonance in Medicine) - IEEE (Institute of Electrical and Electronics Engineers, Inc.) - Harvard University Alumni Association - Queen's University Alumni Association - Sharif University of Technology Alumni Association - Engineers without Borders (Canada and USA sections)

Professional Memberships

- IAMP (Iranian Association of Medical Physicists)
- ISR (Iranian Society of Radiology)
- ESMRMB (European Society for Magnetic Resonance in Medicine and Biology)
- ISMRM (International Society for Magnetic Resonance in Medicine)
- IEEE (Institute of Electrical and Electronics Engineers, Inc.)
- Harvard University Alumni Association
- Queen's University Alumni Association
- Sharif University of Technology Alumni Association
- Engineers without Borders (Canada and USA sections)

Article Reviews

- Journal of Magnetic Resonance Imaging
- Journal of Magnetic Resonance in Medicine
- International Journal of Imaging Systems and Technology
- IEEE Transactions on Signal Processing
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Communications
- EURASIP Journal on Wireless Communications and Networking
- EURASIP Journal on Applied Signal Processing
- Proceedings of the IEEE
- Electronics and Telecommunications Research Institute (ETRI) Journal
- Signal Processing for Mobile Communications Handbook, CRC Press
- Handbook of Computer Networks, John Wiley & Sons, Inc.
- Journal of Communications and Networks
- IEEE International Conference on Communications, ICC'05-ICC'06
- IEEE International Symposium on Information Theory 2006, ISIT'06
- IEEE Vehicular Technology Conference, VTC'03-VTC'06
- 5th International Symposium on Communication systems, Networks, and Digital Signal Processing
- International Symposium on Signal Processing and its Applications, ISSPA'07
- Wireless Communication and Networking Conference, 2006-07

Hobbies and Activities

- Hiking, biking, jogging, mountain climbing, horse riding