Sahar Rezaei

Assistant Professor of Medical Physics

Imam Reza General Hospital, Tabriz University of Medical Sciences, Tabriz, Iran

Profile

Gender: Female

Marital Status: Single

Country of Origin: Iran

Present Nationality: Iranian

Research Profiles ID

Scopus ID: 21741519200

ORCID ID: 0000-0002-2746-6594

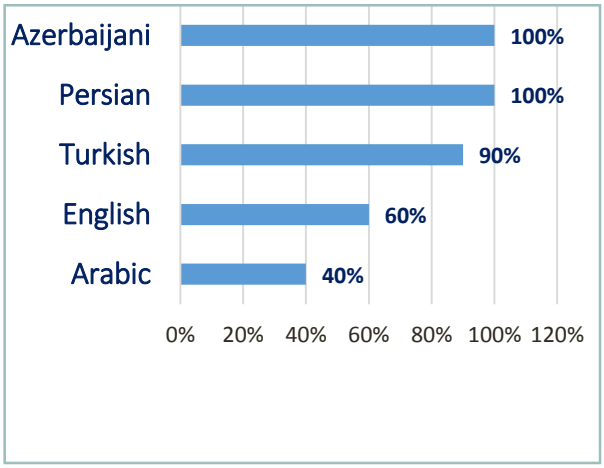
Education

2008 B. Sc. Graduate of Physic, Urmia University, Urmia, Iran.

2014 MS.c Graduate of Medical Physics, Tehran University of Medical, Tehran, Iran.

2020 Ph.D Graduate of Medical Physics, Tehran University of Medical, Tehran, Iran.

Language Skills



Contact

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Areas of Interest

- Medical Imaging
- Molecular Imaging
- Hybrid Imaging
- Quantitative PET & MRI imaging

Current Position

Assistant Professor of Medical Physics, Imam Reza Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Membership of Learned Societies

- International Organization for Medical Physics, Global 2011- Ongoing
- Iranian Association of Medical Physicists, Iran, 2011- Ongoing
- Tehran University of Medical Sciences Exceptional Talents Development Center, Iran, 2016- Ongoing

Computer Skills

- IT Skills: (Internet, Windows, SPSS data Collection, Manipulation, and Analysis)
- Expert in PET quantification and analysis
- Expert in Medical Image Data Analysis Tools such as Amide and Pmod
- Expert in Monte Carlo simulation
- Expert in Matlab Programming
- Expert in Python Programming
- Expert in R Programming
- Expert in COMSOL

Teaching Experiences

- Digital Image processing, Ms.Sc. level, from 2017 until now, Urmia University of Medical Sciences.
- Mathematics used in physics, Ms.Sc level, from 2019 until now, Urmia University of Medical Sciences.
- Sciences Research Methodology, Ms.Sc. level, 2016, Tehran University of Medical Sciences.

Teaching Interests

- Physics of Nuclear Medicine
- Quantitative Analysis in Nuclear Medicine Imaging
- Nuclear Medicine and PET/CT technology and techniques
- Molecular Imaging
- Principles and advanced methods in Medical imaging and image analysis
- Physics of Medical Imaging
- Principles of quality management in nuclear medicine
- Safety and quality control
- Image Processing using MATLAB
- Physics of CT & MRI
- Application of Finite Element Analysis in magnetic field
- Mathematics used in physics

Publications

A) Journal Articles

1. **Rezaei S**, Riahi Alam N. Magnetic resonance simulation of nanoparticles on homogeneous tissue in the presence of external magnetic field. Iranian Journal of Biomedical Engineering. 2014 Jun 22; 8(2):151-8.
2. Fathi Kazerooni A, Mohseni M, **Rezaei S**, Bakhshandehpour G, Saligheh Rad H. Multi-parametric (ADC/PWI/T2-w) image fusion approach for accurate semi-automatic segmentation of tumorous regions in glioblastoma multiforme. Magnetic Resonance Materials in Physics, Biology and Medicine. 2015 Feb; 28(1):13-22.
3. **Rezaei S**, Ghafarian P, Jha AK, Rahmim A, Sarkar S, Ay MR. Joint compensation of motion and partial volume effects by iterative deconvolution incorporating wavelet-based denoising in oncologic PET/CT imaging. Physica Medica. 2019 Dec 1; 68:52-60.
4. **Rezaei S**, Ghafarian P, Bakhshayesh-Karam M, Uribe CF, Rahmim A, Sarkar S, Ay MR. The impact of iterative reconstruction protocol, signal-to-background ratio and background activity on measurement of PET spatial resolution. Japanese Journal of Radiology. 2020 Mar; 38(3):231-9.
5. Sanjari Moghaddam H, Mobarak Abadi M, Dolatshahi M, Bayani Ershadi S, Abbasi-Feijani F, **Rezaei S**, Cattarinussi G, Aarabi MH. Effects of prenatal methamphetamine exposure on the developing human brain: A systematic review of neuroimaging studies. ACS Chemical Neuroscience. 2021 Jul 23; 12(15):2729-48.

B)Conference Presentations

Article	Title and Place	Date
Sahar Rezaei, Nader Riyahi-Alam, "Magnetic resonance simulation of nanoparticles on homogeneous tissue in the presence of external magnetic field"	Iranian Conference of Bioelectromagnetic. Tehran, Iran	2013
Sahar Rezaei, Hamidreza Saligheh Rad. "A Review Study on the efficacy of Quantitative DCE-MRI in Breast Lesion Diagnosis"	30th Iranian Congress of Radiology. Tehran. Iran	2014
Sahar Rezaei, Hamidreza Saligheh Rad "A Review Study on the efficacy of Quantitative DCE-MRI in Adnexal Lesion Diagnosis"	30th Iranian Congress of Radiology. Tehran. Iran	2014
Sahar Rezaei, Nader Riyahi-Alam. "Simulation of Nanoparticles Mediated Magnetic Field Enhancement inside Homogenous Tissue in External Magnetic Field and comparison with VSM experimental results"	Word Molecular Imaging Congress. Seoul, Korea	2014
Sahar Rezaei, Nader Riyahi-Alam, Mohsen Ostovari. "Simulation of Gd-based nanoparamagnetic particles mediated magnetic field enhancement inside homogenous tissue in external magnetic field: using Finite Element Method"	International Conference on Superconductivity and Magnetism. Antalya, Turkey	2014

Sahar Rezaei, Nader Riyahi-Alam. Mohsen Ostovari. "Gd-based nanoparticles mediated magnetic field enhancement inside homogenous tissue: simulation using finite element method"	World Congress on Medical Physics and Biomedical Engineering. Toronto, Canada	2015
Sahar Rezaei, Pardis Ghafarian, Mehrdad Bakhshayesh Karam, Arman Rahmim, Saeed Sarkar and Mohammad Reza Ay. "Joint compensation of motion and partial volume effects in oncologic PET/CT imaging"	Iranian Nuclear Medicine Annual Congress. Tehran, Iran	2019
Pardis Ghafarian, **Sahar Rezaei**, Mehrdad Bakhshayesh Karam, Carlos F. Uribe, Arman Rahmim, Saeed Sarkar and Mohammad Reza Ay. "Impact of imaging context and duration as well as reconstruction algorithms on measured PET spatial resolutions"	Iranian Nuclear Medicine Annual Congress. Tehran, Iran	2019
Sahar Rezaei, Pardis Ghafarian, Abhinav K. Jha, Arman Rahmim, Saeed Sarkar and Mohammad Reza Ay. "Joint compensation for motion and partial volume effects in PET/CT images of lung cancer patients: impact on quantification for different image reconstruction methods"	Annual Congress of the European Association of Nuclear Medicine. Barcelona, Spain	2019