

CURRICULUM VITALE

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2019

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Academic Background

2006 to 2010 Department of Radiation Medicine
Shahid Beheshti University
PhD Degree in Radiation Medicine

2008-2010 Division of Nuclear Medicine
Geneva University Hospital
Research Assistant

2002 to 2005 Department of Medical Physics
Iran University of Medical Sciences
MSc. Degree in Medical Physics

2004 to 2005 Division of Nuclear Medicine
Geneva University Hospital
Trainee

1996 to 2000 Faculty of Physics & Nuclear Sciences
Tehran Polytechnic University, Tehran, Iran
BSc. Degree in Physics

Publications

Peer-reviewed Journal Publications:

- 1- P.Sheikhzadeh, H.Sabet, H.Ghadiri, P. Geramifar, **P. Ghafarian**, M.R. Ay "Design, Optimization and Performance Evaluation of BM-PET: a Simulation Study" Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment , 2019, in press
- 2- I.Shiri, **P.Ghafarian**, P.Geramifar, K.H.Y.leung, M.Ghelichoghli, M.Oveisi, A.Rahmim, M.R.Ay "Direct attention correction of brain PET images using only emission data via a deep convolutional encoder-decoder(deep-DAC) " European radiology, 2019, in press
- 3- Z.Etemadi, **P.Ghafarian**, A.Bitarafan-Rajabi, H.Malek, N.Zeraatkar, M.R.Ay "The impact of using virtual sonogram method for quantification and correction of metallic artefacts in cardiac SPECT/CT image, "Iranian Journal of Nuclear Medicine, 2019, in press
- 4- P.Sheikhzadeh, H.Ghadiri, P.Geramifar, **P.Ghafarian**, M.R.Ay "Design and performance evaluation of spheroid geometry for brain PET scanner using Monte Carlo modeling "Iranian Journal of Nuclear Medicine, 2019, Vol. 27, No. 1, pp32-38
- 5- A.Ketabi, **P.Ghafarian**, M.A.Mosleh-Shirazi, S.Rab. Mahdavi, A.Rahmim, M.R.Ay "Impact of image reconstruction methods on quantitative accuracy and variability of FDG-PET volumetric and textural measures in solid tumors "European radiology,2018, pp1-11
- 6- Y.Yaraghi., I. Jabbari, A.Akhavan.,**P.Ghafarian**, S.Monadi, M.Saeb, "Comparison of PET/CT and CT-based tumor delineation and its effects on the radiation treatment planning for non-small cell lung cancer"Iran J Nucl Med, 2018, Vol. 26, No. 1, pp 9-15
- 7- Y.Salimi, M.R Deevband, **P. Ghafarian**, M.R Ay "Uncertainties in effective dose estimation for CT transmission scan in total body PET-CT imaging with Auto mA3D tube current modulation" International Journal of Radiation Research, 2018, Vol. 16, No. 4, pp32-38

- 8- M. Shirin Shandiz, H.S.Rad, **P.Ghafarian**, Kh.Yaghoubi, M.R.Ay "Capturing Bone Signal in MRI of Pelvis, as a Large FOV Region, Using TWIST Sequence and Generating a 5-Class Attenuation Map for Prostate PET/MRI Imaging " *Molecular imaging* ,2018,VOI 17,No 7,pp1-11
- 9- P. Sheikhzadeh, H. Sabet, H. Ghadiri, P. Geramifar, **P. Ghafarian**, M.R Ay "Concept design and Monte Carlo performance evaluation of HeadphonePET: a novel brain-dedicated PET system based on partial cylindrical detectors" *Journal of Instrumentation* ,2018,VOI 13,No 7,pp07008
- 10- A.Ketabi, **P.Ghafarian**, M.A Mosleh-Shirazi, S.R. Mahdavi, M.R. Ay " The influence of using different reconstruction algorithms on sensitivity of quantitative 18F-FDG-PET volumetric measures to background activity variation" *Iranian Journal of Nuclear Medicine* ,2018,VOI 26,No 2,pp87-97
- 11- H. Hemmati, A.Kamali-Asl, **P.Ghafarian**, M.R Ay "Reconstruction/segmentation of attenuation map in TOF-PET based on mixture models" *Annals of nuclear medicine*,2018,pp1-11
- 12- H Hemmati, A Kamali-Asl, **P. Ghafarian**, MR Ay "Mixture model based joint-MAP reconstruction of attenuation and activity maps in TOF-PET" *Journal of Instrumentation*,2018,VOI 13,No 6,ppP06005
- 13- Zahra Etemadi, **P.Ghafarian**, Ahmad Bitarafan-Rajabi, Hadi Malek, Mohammad Reza Ay "Is correction for metallic artefacts mandatory in cardiac SPECT/CT imaging in the presence of pacemaker and implantable cardioverter defibrillator leads? " *Iranian Journal of Nuclear Medicine*, 2018, Vol 26, No1, pp 35-46.
- 14- Fatemeh Sadat Fatemi Nasrollahi, **P.Ghafarian**, Parham Grramifar, Mohammad Reza Ay "Quantification and Reduction of Respiratory Induced Artifact in Attenuation Correction of

PET Data using Respiration Averaged CT: A Simulation and Phantom Study" *Frontiers in Biomedical Technologies* ,2017,Vol3, No3-4, pp 49-59.

- 15- M Shekari, **P. Ghafarian**, S Ahangari, MR Ay "Quantification of the impact of TOF and PSF on PET images using the noise-matching concept: clinical and phantom study" *Nuclear Science and Techniques*, 2017, Vol28, No 11, pp167.
- 16- Roya Sharifpour, **P.Ghafarian**, Arman Rahmim, Mohammad R Ay "Quantification and reduction of respiratory induced artifacts in positron emission tomography/computed tomography using the time-of-flight technique" *Nuclear medicine communications* ,2017,Vol38, No11, pp948-955.
- 17- Hamidreza Hemmati, Alireza Kamali-Asl, Mohammadreza Ay, **P.Ghafarian** "Compton scatter tomography in TOF-PET " *Physics in Medicine & Biology*, 2017, Vol62, No19, pp7641.
- 18- Peyman Sheikhzadeh, Hamid Sabet, Hossein Ghadiri, Parham Geramifar, Hojjat Mahani, **P. Ghafarian**, Mohammad Reza Ay "Development and validation of an accurate GATE model for NeuroPET scanner. " *Physica Medica*, 2017, Vol40, pp 59-65.
- 19- Shabnam Khorasani Gerdekoohi, Naser Vosoughi, Kaveh Tanha, Majid Assadi, **Pardis Ghafarian**, Arman Rahmim, Mohammad Reza Ay"Implementation of absolute quantification in small-animal SPECT imaging: Phantom and animal studies. " *Journal of Applied Clinical Medical Physics*, 2017, Vol18, No 4, pp 215-223.
- 20- Shiri I, Rahmim A, **Ghaffarian P**, Geramifar P, Abdollahi H, Bitarafan-Rajabi A "The impact of image reconstruction settings on 18F-FDG PET radiomic features: multi-scanner phantom and patient studies. " *Eur Radiol.*, 2017 Vol27, No 11, pp 4498-4509.
- 21- Roya Sharifpour, **P.Ghafarian**, Mehrdad Bakhshayesh-Karam, Hamidreza Jamaati, Mohammad Reza Ay "Impact of Time-of-Flight and Point-Spread-Function for Respiratory

Artifact Reduction in PET/CT Imaging: Focus on Standardized Uptake Value" *Tanaffos*, 2017, Vol16, No2, pp127.

- 22- S Zargan, **P. Ghafarian**, A Shabestani Monfared, AA Sharafi, M Bakhshayeshkaram, MR Ay." Evaluation of Radiation Exposure to Staff and Environment Dose from [18F]-FDG in PET/CT and Cyclotron Center using Thermoluminescent Dosimetry" *Journal of Biomedical Physics and Engineering*, 2017, 7(1), pp 1.
- 23- **P. Ghafarian**, Hamidreza Jamaati, Seyed Mohammadreza Hashemian ."A Review on Human Respiratory Modeling".*Tanaffos* 2016, Vol 15, No2, pp 61-69.
- 24- S. Kaviani, N. Zeraatkar, S. Sajedi, N. Gorjizadeh, M.H. Farahani, **P. Ghafarian**, G. El Fakhri, H. Sabete and M.R. Ay. "Development and characterization of a compact hand-held gamma probe system, SURGEOGUIDE, based on NEMA NU3-2004 standards" *Jinst*, 2016, Vol 11, No12, pp T12004.
- 25- M. Shirin Shandiz, H. Saligheh Rad, **P. Ghafarian**, M. Bakhshayesh Karam, A. Akbarzadeh, M.R Ay."MR-guided map for prostate PET-MRI: an intensity and morphologic-based segmentation approach for generating a five-class attenuation map in pelvic region" *Ann Nucl Med*, 2016 in press.
- 26- S. Kaviani, N. Zeraatkar, S. Sajedi, A. Akbarzadeh, N. Gorjizadeh, M. H. Farahani, B. Teimourian, **P. Ghafarian**, H. Sabet and M.R. Ay. " Design and development of a dedicated portable gamma camera system for intra-operative imaging " *Physica Medica*, 2016, Vol. 32, pp 889-897
- 27- P. Khateri, H. Saligheh Rad, A. H. Jafari, A. Fathi Kazerooni, A. Akbarzadeh, M. Shojae Moghadam, A. Aryan, **P. Ghafarian**, M. R. 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" *Molecular Imaging & Biology*, 2015, Vol. 17, No.6, pp 884-892.

- 28- S. Ahangari, **P. Ghafarian**, M. Shekari, H. Ghadiri, M. Bakhshayeshkaram and M.R. Ay " The Impact of Point Spread Function Modeling on Scan Duration in PET Imaging " *Frontiers in Biomedical Technologies*, 2015, Vol. 2, No. 3, pp 137-145.
- 29- 4- M. Shekari, **P. Ghafarian**, S. Ahangari, H. Ghadiri, M. Bakhshayeshkaram and M.R. Ay "Optimizing Image Reconstruction Parameters in Time of Flight PET/CT Imaging: a Phantom Study " *Frontiers in Biomedical Technologies*, 2015, Vol. 2, No. 3, pp 146-154.
- 30- **P. Ghafarian**, S. M. Khamesi and M. R. Golrokh Nodehi "Performance evaluation of the first Hospital Cyclotron installed in masih daneshvari hospital for Production of positron emitter" *Iranian journal of physics research*, (IJPR),2015, vol.15,No. 2,pp269-277.
- 31- **P. Ghafarian** and M. R. Ay, "The Influence of PET and CT Misalignment due to Respiratory Motion on the Cardiac PET/CT Imaging: a Simulation Study", *Frontiers in BIOMEDICAL TECHNOLOGIES*, 2014, Vol.1, No.4, pp 252-257.
- 32- **P. Ghafarian**, M. R. Ay, A. Fard-Esfahani, A. Rahmim and H. Zaidi " Quantification of PET and CT Misalignment Errors Due to Bulk Motion in Cardiac PET/CT Imaging: Phantom and Clinical Studies", *Frontiers in BIOMEDICAL TECHNOLOGIES*, 2014, Vol.1, No.3,pp 159-167.
- 33- A. Emami, H. Ghadiri and **P. Ghafarian**, "Performance Evaluation of Bone Mineral Densitometry Techniques by a Novel Phantom", *Frontiers in BIOMEDICAL TECHNOLOGIES*, 2014, Vol.1, No.4, pp 271-278.
- 34- N. Zeraatkar, S. Sajedi, M.H. Farahani, H. Arabi, S. Sarkar, **P. Ghafarian**, A. Rahmim and M.R. Ay "Resolution-recovery-embedded image reconstruction for a high-resolution animal SPECT system",*Physica Medica*, 2014, Vol. 30, No.7, pp774-78.1

- 35- V. Moji, N. Zeraatkar, M.H. Farahani, M.R. Aghamiri, S. Sajedi, B. Teimourian, **P. Ghafarian**, S. Sarkar and M.R Ay "Performance evaluation of a newly developed high-resolution, dual-head animal SPECT system based on the NEMA NU1-2007 standard", *JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS*, 2014, Vol. 15, No.6, pp 267-278.
- 36- S. Sajedi , N. Zeraatkar, V. Moji, M. H. Farahani, S. Sarkar, H. Arabi, B. Teymoorian, **P. Ghafarian**, A. Rahmim and M.R. Ay "Design and Development of a High Resolution Animal SPECT Scanner Dedicated for Rat and Mouse Imaging", *Nuclear. Instrumentation Methods in Physics Research A*, 2014, Vol. 741, pp 169-176.
- 37- P. Geramifar, M. Shamsaie Zafarghandi, **P. Ghafarian**, A. Rahmim and M. R. Ay "Respiratory-Induced Errors in Tumor Quantification and Delineation in CT Attenuation Corrected PET Images: Effects of Tumor Size, Tumor Location and Respiratory Trace - A Simulation Study Using the 4D XCAT Phantom" *Molecular Imaging & Biology*, 2013, Vol. 15, No. 6, pp 655-665.
- 38- M. R. Ay, A. Mehranian, A. Maleki, H. Ghadiri, **P. Ghafarian** and H. Zaidi "Experimental assessment of the influence of beam hardening filters on image quality and patient dose in volumetric 64-slice x-ray CT scanners", *Phys Med* , 2013, Vol. 29, pp. 249-260.
- 39- B. Teimourian , M. R. Ay, M. Shamsaei-Zafarghandi, **P. Ghafarian**, H. Ghadiri and H. Zaidi "A novel energy mapping approach for CT-based attenuation correction in PET" *Med Phys* 2012, Vol. 39, No. 4, pp 2078-2089
- 40- N. Zeraatkar, M. R. Ay, **P. Ghafarian**, S. Sarkar, P. Geramifar, and A. Rahmim " Monte Carlo-based evaluation of inter-crystal scatter and penetration in the PET subsystem of three GE Discovery PET/CT scanners" *Nuclear. Instrumentation Methods in Physics Research A*, 2011, Vol. 659, pp. 508-514.

- 41- M.R. Ay, A. Mehranian, M. Abdoli, **P. Ghafarian** and H. Zaidi "Qualitative and quantitative assessment of metal artefacts arising from implantable cardiac pacing devices in oncological PET/CT studies: A phantom study" *Molecular Imaging & Biology*, 2011, Vol. 13, pp. 1077-1088.
- 42- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, B. Fallahi, A. Rahmim, T. Schindler, O. Ratib and H. Zaidi "Coronary calcium score scan-based attenuation correction in cardiovascular PET imaging" *Nuclear Medicine Communication*, 2010, Vol. 31, No 9, pp 780-787.
- 43- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, A. Rahmim, T. Schindler, O. Ratib and H. Zaidi " Is Metal Artifact Reduction Mandatory in Cardiac PET/CT Imaging in the Presence of Pacemaker and Implantable Cardioverter Defibrillator leads? " *European Journal of Nuclear Medicine and Molecular Imaging*, 2010, Vol. 38, pp 252–262
- 44- **P. Ghafarian**, A.A. Sharafi, K. Keshavarz, "MCNP4C-based Monte Carlo study of grid performance in diagnostic radiology", *Iranian Journal of Medical Physics*, 2008, Vol 3, Issue 13, 41-48.
- 45- M.R. Ay, S. Sarkar, M. Shahriari and **P. Ghafarian**, "Measurement of Organ Dose in Abdomen-Pelvis CT Exam as a Function of mA, KVp and Scanner Type by Monte Carlo Method", *Iranian J. of Radiation Research*, **1**(4), 187-194, 2004.

Proceeding and Conference Records:

- 1- **P.Ghafarian** "Radiation Protection Fundamentals in PET/CT Facility" *35th Iranian Congress of Radiology , April 23- 26, Tehran,Iran, 2019*
- 2- **P.Ghafarian** "The Role of Protocol Optimization on Interpretation of PET-CT Images" *35th Iranian Congress of Radiology , April 23- 26, Tehran,Iran, 2019*

- 3- Y.Salimi, M.R.Deevband, **P.Ghafarian** “Assessment the effect of CT localizer parameter on radiation dose and image quality of GE CT spiral images, A phantom study” *12th Iranian congress of medical physics,july,2018,Tehran,Iran,Iranian Journal of Medical Physics, vol 15,pp. 323-323, 2018*
- 4- **P.Ghafarian**“ quality control in nuclear medicine” *12th Iranian congress of medical physics,july,2018,Tehran,Iran,Iran J Med Phys. 2018*
- 5- H.S Jozi and **P.Ghafarian**“ Quantitative evaluation of TOF benefits in different tumor regions of Overweight patients in clinical PET/CT scanner” *12th Iranian congress of medical physics,july,2018,Tehran,Iran, Iranian Journal of Medical Physics, vol 15,pp. 84-84, 2018*
- 6- E.Kashian, H. T.Ahangari, V.Dehlaghi, K.Khoshgard, **P.Ghafarian**, H. M.Anijdan,S. Zarifi “ Evaluation of methods of co-segmentation on PET/CT images of lung tumor: simulation study” *12th Iranian congress of medical physics,july,2018,Tehran,Iran, Iranian Journal of Medical Physics, vol 15,pp. 35-35, 2018*
- 7- A.Emami, H.Ghadiri, **P.Ghafarian**, P.Geramifar, M.R.Ay “Monte Carlo simulation of MAMMI PET system and performance evaluation using GATE toolkit” *European Association of Nuclear Medicine Annual Congress, October 13 – 17, 2018, Düsseldorf, Germany, Eur J Nucl Med Mol Imaging, 2018, Vol 45, Issue 1 Supplement ,S714-S714*
- 8- **P.Ghafarian** and R.Sharifpour “Reduction of Contrast Agent Induced Artifact in Dual Modality PET/CT Using TOF Technique” *12th World Congress of the World Federation of Nuclear Medicine and Biology 20-24 April 2018,Melbourne, Australia*
- 9- **P.Ghafarian** and R. Sharifpour and M.R Ay “Assessment of the Impact of Time-of-Flight on Reduction of Metal Induced Artifact in PET/CT Imaging: Phantom Study” *12th World Congress of the World Federation of Nuclear Medicine and biology 20-24 April 2018,Melbourne, Australia*

- 10- **P.Ghafarian**, “The Role of Reconstruction Techniques in PET Quantification” *The 21rd annual and 6rd international congress of Nuclear Medicine and molecular imaging, November 22-24, Mashhad, Iran, 2017, p 94.*
- 11- P.sheikhzadeh, H.Ghadiri, P.Geramifar, **P.Ghafarian**, M.Ay, “Design and evaluation of spheroid geometry PET scanner” *The 21rd annual and 6rd international congress of Nuclear Medicine and molecular imaging, November 22-24, Mashhad, Iran, 2017, p 107.*
- 12- **P.Ghafarian**, “An Overview of PETCT Quality Assurance and Quality Control” *The 21rd annual and 6rd international congress of Nuclear Medicine and molecular imaging, November 22-24, Mashhad, Iran, 2017, p 66.*
- 13- **P.Ghafarian**, “Advanced Clinical Quantification in PETCT” *The 21rd annual and 6rd international congress of Nuclear Medicine and molecular imaging, November 22-24, Mashhad, Iran, 2017, p 93.*
- 14- R.sharifpour, **P. Ghafarian**, M. R. AY, “Evaluation of the Impact of Using TOF Technique on Metal Artifact Reduction in PET/CT Images” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 363,Suppl 2.*
- 15- I.shiri, **P.Ghafarian**, S.ashrafinia, A.Bitarafan-Ragabi, M.Ay, A.Rahmim, “Optimal quantitative SUV metrics over wide range of lesion sizes in advanced image reconstruction (TOF andPSF) for PET” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 427,Suppl 2.*
- 16- A. EmamiH. Ghadiri, **P. Ghafarian**, M. Ay, “Monte Carlo Based Performance estimation of breast PET scanners due to reduction of the ring diameter” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 430,Suppl 2.*

- 17- I. Shiri, **P. Ghafarian**, A. Bitarafan-Rajabi, M. AY, “Sub-centimeter lesion detectability in Point-spread function (PSF) and Time of flight (TOF) reconstructed PET images” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 438,Suppl 2.*
- 18- I.shiri, A.Rahmim,G.Hagianfar,H.Abdollahi,P.Geramifar, **P.Ghafarian**, A.Bitarafan-Ragabi, “Partial volume correction changes intra-tumoral heterogeneity in 18F-FDG PET” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 463,Suppl 2.*
- 19- Z. Mojabi, **P. Ghafarian**, H. Ghadiri, M. Bakhshayeshkaram, M. Ay, “Development of low dose CT protocols with acceptable CT image quality for CTAC of PET data:Phantom Study” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 476,Suppl 2.*
- 20- **P. Ghafarian**, A. Ketabi, M. A. Mosleh-Shirazi, M. R. Ay, “Volume-based assessment of different image reconstruction algorithms and thresholds for FDG-PET/CT based on dose-painting concept” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 758,Suppl 2.*
- 21- A.Ketabi, **P.Ghafarian**, S.Masgoodi, M.A. Mosleh-shirazi, M.R.Ay, “Is the averaged SUV from several hottest voxels an alternative to SUVpeak for quantification of large heterogeneous or small lesions in oncological PET imaging?” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 761,Suppl 2.*
- 22- P. Sheikhzadeh, H. Ghadiri, P. Geramifar, **P. Ghafarian**, M. Ay, “Design optimization of partial cylindrical PET scanner based on trapezoid-shaped block detector and monolithic crystals using Monte Carlo simulation” *European Association of Nuclear Medicine Annual*

Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 432,Suppl 2.

- 23- **P. Ghafarian**, F.Fatemi, P.Geramifar, M.Ay, “Quantification and reduction of respiratory induced errors in attenuation correction of PET data using respiration averaged CT: a simulation study” *European Association of Nuclear Medicine Annual Congress, October 21 – 25, 2017, Vienna, Austria, Eur J Nucl Med Mol Imaging, 2017, Vol 44 , S 473,Suppl 2.*
- 24- **P.Ghafarian**, “The influence of reconstruction techniques in image quality of lung cancer PET/CT imaging” *The 8rd international congress on pulmonary diseases, intensive care and tuberculosis,12-15 october,Tehran,Iran,2017.*
- 25- **P.Ghafarian**, “PET imaging considerations” *The 19rd international congress on cardiovascular updates, 12-15 September, Tehran, Iran,2017.*
- 26- **P.Ghafarian**,“Radiation protection in PET/CT” *The principal of protection for radiation staff in nuclear medicine centers ,Tehran, Iran,2017.*
- 27- **P.Ghafarian**, “Improvement of PET/CT Image Quality Using New Reconstruction Methods” *The fundamental and principal in PET/CT imaging, Tehran, Iran, 2017.*
- 28- Y.Yaraghi, I,Jabbari, **P.Ghafarian**, A.Akhavan, Sh.Monadi, M.Saeb , “Evaluation of FDG-PET/CT role in the radiation treatment planning of non-small cell lung cancer” *The first international clinical oncology congress and the 11th Iranian annual clinical oncology congress Tehran, Iran, 9-11 November,2016, p179-180.*
- 29- Emami, H. Ghadiri, **P. Ghafarian**, P. Geramifar, M.R. Ay, “Breast-dedicated PET scanner based on partial geometry“ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016,Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016,Vol 43, S93, Suppl 1.*

- 30- P. Sheikhzadeh, H. Sabet, H. Ghadiri, **P. Ghafarian**, M.R. Ay “Design and Performance evaluation of a Novel Brain PET Geometry Based on Partial Cylindrical Detector using Monte Carlo simulation “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S94, Suppl 1.*
- 31- I. Shiri, A. Rahmim, H. Abdollahi, **P. Ghafarian**, A. Bitarafan, M.R. Ay, M. BakhshaieshKaram “Radiomics texture features variability and Reproducibility in advance image reconstruction setting of oncological PET/CT “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S150, Suppl 1.*
- 32- Z. Mojabi, **P. Ghafarian**, H. Ghadiri, M. Bakhshayeshkaram, H. Jamaati, M.R. Ay, “Optimization and evaluation of low dose CT protocol for attenuation correction of PET data “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S486, Suppl 1.*
- 33- Shiri, **P. Ghafarian**, A. Bitarafan, M. BakhshaieshKaram, M.R. Ay, “Impact of advanced image reconstruction algorithm on qualitative and quantitative oncological 18F-FDG PET/CT “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S509, Suppl 1.*
- 34- P. Sheikhzadeh, H. Sabet, H. Ghadiri, P. Geramifar, H. Mahani, **P. Ghafarian**, M.R. Ay, “Performance characteristics of NeuroPET system using GATE Monte Carlo simulation “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S512, Suppl 1.*
- 35- Y. Salimi, **P. Ghafarian**, M. Deevband, M. Bakhshayesh Karam, H. Jamaati, M.R. Ay, “The impact of using tube-current-modulation technique for attenuation correction of PET/CT images on image quality and patient dose “ *European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S525, Suppl 1.*

- 36- P. Sheikhzadeh, H. Sabet, H. Ghadiri, **P. Ghafarian**, M.R. Ay, “Design and Performance evaluation of a Novel Brain PET Geometry Based on Partial Cylindrical Detector using Monte Carlo simulation “*European Association of Nuclear Medicine Annual Congress, 15-19 October, 2016, Barcelona, Spain, Eur J Nucl Med Mol Imaging, 2016, Vol 43, S94, Suppl 1.*
- 37- S. Zargan, **P. Ghafarian**, A. Shabestani Monfared, A. A. Sharafi, M. Bakhshayeshkaram and M. R. Ay, “Evaluation of staff and environment exposure from 18-F-FDG at the first PET/T and cyclotron center in Iran” *14rd Iranian Congress of Radiographic Science Association, Tehran, Iran, 2016, p 69-70.*

Nominated as one of the best submitted abstract

- 38- **P. Ghafarian**, “Improvement of clinical value of PET/CT images using new reconstruction“ *20rd Iranian Congress of nuclear medicine, Mahmoudabad, Iran, 2016.*
- 39- R. Sharif Pour, **P. Ghafarian**, A. Doroudinia, M. Bakhshayesh Karam and **M. R. Ay**, “Reduction of Respiratory Induced Artefact in PET/CT Images using TOF Reconstruction “*Poster #029” American College of Nuclear Medicine annual meeting- SNMMI mid-winter meeting, Jan 2016, Orlando, Florida*
- 40- **P. Ghafarian**, S. Zargan, A. Shabestani Monfared, A. A. Sharafi, M. Bakhshayeshkaram and M. R. Ay, “TLD Measurement of Absorbed Dose of Workers in PET/CT Department” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p109.*
- 41- **P. Ghafarian**, S. M. Khamesi, M. R. Golrokh Nodehi and M. R. Ay, “Acceptance Test of the first Hospital Cyclotron for Production of PET tracers in Iran” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 518.*
- 42- **P. Ghafarian**, S. M. Khamesi, M. R. Golrokh Nodehi and M. R. Ay, “Measurement of Photon and Neutron Dose Distribution in Cyclotron Bunker During F18 and N13 Production”

World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 606.

- 43- M. Shekari, **P. Ghafarian**, M. Bakhshayeshkaram and M. R. Ay, “The Impact of time of flight algorithm and PSF modeling on standard uptake value in clinical PET/CT imaging” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 132.*
- 44- S. Ahangari, **P. Ghafarian**, M. Bakhshayeshkaram and M. R. Ay, “Impact of Point spread function modeling on tumor quantification in clinical PET/CT imaging” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 133.*
- 45- H. Saligheh Rad, M. Shirin Shandiz, **P. Ghafarian**, M. H. Arabi, M. Bakhshayeshkaram, N. Shafiei and M. R. Ay, “Generating a four-class attenuation map for MR-based attenuation correction of PET data in pelvis region using an automatic segmentation protocol” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 201.*
- 46- Z. Etemadi, A. Bitaran Rajabi, H. Malek, **P. Ghafarian**, N. Zeraatkar and M. R. Ay, “Can Pacemaker and ICD degrade CT-Based Attenuation Corrected cardiac SPECT images?” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 132.*
- 47- P. Khateri, H. Saligheh Rad, A. Homayoun Jafari, A. Fathi, A. Akbarzadeh, M. Shojae Moghadam, A. Aryan, **P. Ghafarian** and M. R. 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” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 371.*
- 48- M. R. Ay, Z. Etemadi, A. Bitarafan-Rajabi, H. Malek, N. Zeraatkar and **P. Ghafarian**, “Correction of Metal Artefacts Induced from Pacemaker and ICD Leads in CT-Based

Attenuation Correction of Cardiac SPECT data” *World Congress on Medical Physics & Biomedical Engineering, 7-12 June 2015, Toronto, Canada, p 522.*

- 49- **P. Ghafarian**, “A Report on Acceptance Test of GE PET Trace 700 Self-Shield Cyclotron Installed in Masih Daneshvari Hospital” *18rd Iranian Congress of Nuclear Medicine, Tehran, Iran, 2014, p 65.*
- 50- **P. Ghafarian** and S. M. Khamesi, “The Calculation of Photon and Neutron Dose Rate inside The Cyclotron Bunker During The Bombardment of F18 and N13 Targets in GE PET Trace 700 Self-Shield Cyclotron” *18rd Iranian Congress of Nuclear Medicine, Tehran, Iran, 2014, p 81.*
- 51- S. Ahangari, **P. Ghafarian**, M. Shekari, M. Bakhshayeshkaram and M. R. Ay, “Optimization the Acquisition Time in Whole-Body PET/CT Imaging” *18rd Iranian Congress of Nuclear Medicine, Tehran, Iran, 2014, p 75.*
- 52- S. Zargan, A. Shabestari Monfared, **P. Ghafarian**, A. A. Sharafi, M. Bakhshayeshkaram and M. R. Ay, “Experimental Measurement of Absorbed Dose using TLD for Radiation Workers in PET/CT Department” *18rd Iranian Congress of Nuclear Medicine, Tehran, Iran, 2014, p 157.*
- 53- S. Ahangari, **P. Ghafarian**, M. Bakhshayeshkaram and M. R. Ay, “Evaluation of Resolution Recovery in Quantitative of Clinical PET/CT Images” *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 274.*
- 54- M. Shekari, **P. Ghafarian**, M. Bakhshayeshkaram and M. R. Ay, “The Effect of TOF Technique on Acquisition Time in PET/CT Imaging” *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 286.*

- 55- S. Ahangari, **P. Ghafarian**, M. Bakhshayeshkaram and M. R. Ay, "Optimization of Acquisition Time Regarding to Image Quality and Quantitative Analysis" *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 319.*
- 56- H. Soufi, **P. Ghafarian** and S. M. R. Aghamiri, "The Effect of Respiratory Motion on different Lung Tumours Size and Uptake Value in PET/CT images" *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 343.*
- 57- M. Shirin Shandiz, M. H. Arabi, **P. Ghafarian**, M. Bakhshayeshkaram, H. R. Saligherad and M. R. Ay, "A Hybrid Method for Separation of Bone and Air in Pelvic Region of MRI images for Attenuation Correction of PET/MR images" *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 283.*
- 58- M. Shirin Shandiz, M. H. Arabi, **P. Ghafarian**, M. Bakhshayeshkaram, H. R. Saligherad and M. R. Ay, "Evaluation of Acquisition Parameters with Short Echo for Improvement of Bone Signal versus Air Signal for Better Separation of Bone and Air in Attenuation Correction of Clinical PET/MR images" *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 284.*
- 59- S. Zargan, A. Shabestari Monfared, **P. Ghafarian**, A. A. Sharafi, , M. Bakhshayeshkaram and M. R. Ay, "Measurement of Staff Dose and Environment Dose by TLD Dosimeter in PET/CT and Cyclotron Centre of Masih Daneshvari Hospital " *11rd Conference of Iranian Medical Physics, Tehran, Iran, 2014, p 399.*
- 60- M. Shirin Shandiz, M.H. Arabi, **P. Ghafarian**, M. Bakhshayesh Karam, H.R. Salighe 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, 19-21 May 2014, Kos Island, Greece.*
- 61- M. Shirin Shandiz, M.H. Arabi, **P. Ghafarian**, M. Bakhshayesh Karam, H.R. Salighe 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” EJNMMI Physics 2014, 1(Suppl 1): A77.

- 62- **P. Ghafarian** ,M. Kohanpour, S.M. Khamesi and M.R. Golrokh Nodehi, “Performance Evaluation of the First Hospital Cyclotron Installed in Masih Daneshvari Hospital for Production of Positron Emitter Radioisotopes”*1st National Conference on Particle Accelerators & Their Application, 27-28 November 2013-Tehran-Amir Kabir University, p.7*
- 63- **P. Ghafarian** , M.R. Golrokh Nodehi and S.M. Khamesi, “The Calculation of Neutron and Photon Dose Rate as a Function of Distance and Target Current during Fluorine-18 Production in PET Trace 700 Self Shield Cyclotron Installed in Masih Daneshvari Hospital”*1st National Conference on Particle Accelerators & Their Application, 27-28 November 2013-Tehran-Amir Kabir University, p.53*
- 64- **P. Ghafarian** and M. R. Ay "The Influence of Misalignment Artifact Due to Global and Respiratory Motion on Interpretation of Cardiac PET/CT Examination: Clinical and Phantom Studies" *European Association of Nuclear Medicine Annual Congress, 19-23 October 2013, Lyon, France. Eur J Nucl Med Mol, , Vol 20, Issue 2.*
- 65- H. Soufi, **P. Ghafarian** and S.M.R Aghamiri "The Influence of Respiratory Motion Induced Artifacts on SUV Calculation in Lung PET/CT Imaging" *European Association of Nuclear Medicine Annual Congress, 19-23 October 2013, Lyon, France. Eur J Nucl Med Mol, , Vol 20, Issue 2.*
- 66- M. Sedighpoor, **P. Ghafarian**, A. Emami, M. R. Ay, " Evaluation of the influence of respiratory motion misalignment between PET and CT data on diagnosis of heart defects using 4D XCAT phantom and STIR reconstruction " *European Association of Nuclear Medicine Annual Congress, 27-31 October 2012, Milan, Italy. Eur J Nucl Med Mol, S515.*
- 67- M. R. Ay, A. Mehranian, **P. Ghafarian** ,M. Abdoli and H.Zaidi, "Quantification and Correction of Metallic Artifacts Arising from Implantable Cardiac Pacing Devices in PET/CT

- Studies: A Phantom Study" *European Association of Nuclear Medicine Annual Congress*, 27-31 October 2012, Milan, Italy. Eur J Nucl Med Mol, S20.
- 68- M. R. Ay, H. Arabi, M. H. Farahani, N. Zeraatkar, S. Sarkar, S. Sajedi, N. Naderi Rastegar and **P. Ghafarian**, "SurgeoSightTM: An intraoperative hand held Gamma camera for precise localization of sentine lymph nodes" *European Association of Nuclear Medicine Annual Congress*, 27-31 October 2012, Milan, Italy. Eur J Nucl Med Mol, S385.
- 69- M. R. Ay, H. Arabi, M. H. Farahani, N. Zeraatkar, S. Sarkar, S. Sajedi, N. Naderi Rastegar and **P. Ghafarian**, "Design and development of a high resolution small animal imaging system for mice and rat" *European Association of Nuclear Medicine Annual Congress*, 27-31 October 2012, Milan, Italy. Eur J Nucl Med Mol, S441.
- 70- N. Zeraatkar, M. H. Farahani, H. Arabi, S. Sarkar, S. Sajedi, N. Naderi, **P. Ghafarian**, A. Rahmim and M.R. Ay, "An Innovative Rotation-Based Iterative Resolution Recovery for HiReSPECTTM: a Dedicated Small Animal SPECT System" *European Association of Nuclear Medicine Annual Congress*, 27-31 October 2012, Milan, Italy. Eur J Nucl Med Mol, S386-S387.
- 71- **P. Ghafarian**, " The influence of PET and CT data misalignment in cardiac PET/CT examination: an analytic simulation", *Proc. Asia Oceania Congress of Nucl. Med. & Biology*, vol. 20 (suppl. 1), p. 120-121, 2012.
- 72- **P. Ghafarian**, "The influence of metallic artefact reduction on the accuracy of attenuation map generation in cardiac PET/CT imaging", *Proc. Asia Oceania Congress of Nucl. Med. & Biology*, vol. 20 (suppl. 1), p. 121, 2012.
- 73- A. Emami, H. Ghadiri, **P. Ghafarian** and M. R. Ay, "QCT technique optimization by dual energy CT ", *Proc. Asia Oceania Congress of Nucl. Med. & Biology*, vol. 20 (suppl. 1), p. 125, 2012.

- 74- M. Sedigpoor, M. R. Ay, **P. Ghafarian**, P. Farnia " Quantification of the influence of respiratory motion induced misalignment between PET and CT data on diagnosis of heart disease in cardiac PET/CT imaging ", *Proc. Asia Oceania Congress of Nucl. Med. & Biology*, vol. 20 (suppl. 1), p. 129, 2012.
- 75- H. Arabi, M. H. Farahani, N. Zeraatkar, S. Sarkar, S. Sajedi, A. Rahmim, **P. Ghafarian** and M. R. Ay, " High resolution small animal SPECT: HiReSPECT for preclinical imaging", *Proc. Asia Oceania Congress of Nucl. Med. & Biology*, vol. 20 (suppl. 1), p. 93, 2012.
- 76- **P. Ghafarian**, M.R. Ay and J. Hassani " Correction of contrast agent induced artifacts in CT-based attenuation correction of cardiac PET data using a semi-automated segmentation algorithm" *3th International Congress of Nuclear Medicine*, Tehran, Iran, 2011, pp 110.
- 77- A. Emami, H. Ghadiri, M.R. Ay, S. Akhlagpour, **P. Ghafarian** and S. Taghizadeh, "Is percentage error of bone density determined by DEXA technique influenced by density? " *3th International Congress of Nuclear Medicine*, Tehran, Iran, 2011, pp 88.
- 78- Najafi Darmian A, M.R. Ay, **Ghafarian P**, Pouladian M, Shirazi A, Ghadiri H, Akbarzadeh A and Zaidi H "Characterization of scattered radiation profile in volumetric 64-slice x-ray CT scanner: A Monte Carlo study" *IEEE Nuclear Science Symposium & Medical Imaging Conference*, Valencia, Spain, 23-29 October 2011, p. 2692–2696.
- 79- A. Emami, H. Ghadiri, M.R. Ay, S. Akhlagpour, A. Eslami, **P. Ghafarian** and S. Taghizadeh "A New Phantom for Performance Evaluation of Bone Mineral Densitometry Using DEXA and QCT ", *IEEE Nuclear Science Symposium & Medical Imaging Conference*, Valencia, Spain, 23-29 October 2011, p. 3441-3445.
- 80- A. Emami, H. Ghadiri, M.R. Ay, S. Akhlagpour, A. Eslami, **P. Ghafarian** and S. Taghizadeh "A Novel Phantom for Accurate Performance Assessment of Bone Mineral Measurement Techniques: DEXA and QCT ", *5th Kuala Lumpur International Conference on Biomedical Engineering*, 20-23 June 2011, Kuala Lumpur, Malaysia, IFMBE Proceedings 35, p. 47-50

- 81- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, A. Fard Esfahani and H. Zaidi, "Assessment of the Influence of PET and CT Data Misalignment Errors in Cardiac PET/CT Examination: Patient and Phantom Studies", *The International Congress of Nuclear Medicine*, Mashhad, Iran, Iranian Journal of Nuclear Medicine, Vol. 18, Supp. 1, 2010, pp. 81.
- 82- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, B. Fallahi, A. Rahmim, T. Schindler, O. Ratib and H. Zaidi " Impact of Metal Artifact Reduction on Cardiac FDG-PET/CT Studies in the Presence of Pacemaker and Implantable Cardio Verter Defibrillator leads" International Congress of Nuclear Medicine, Mashhad, 2010, Iranian Journal of Nuclear Medicine, Vol. 18, Supp. 1, 2010, pp. 104.
- 83- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, B. Fallahi, A. Rahmim, T. Schindler, O. Ratib and H. Zaidi , "Coronary Calcium Score Scan-Based Attenuation Correction in Viability PET Examination: A Feasibility Study", 2010, *The 10th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB 2010)*, Cape Town, South Africa, World Journal of Nuclear Medicine, Vol. 9, Supp. 1, 2010, pp. S-16.

Nominated as one of the best submitted abstracts

- 84- M.R. Ay, A. Mehranian, **P. Ghafarian**, M. Abdoli and H. Zaidi, " Quantification and Correction of Metallic Artifact Arising from Implantable cardiac Pacing Devices in PET/CT Studies: A Phantom Study ", 2010, *The 10th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB 2010)*, Cape Town, South Africa, South Africa, World Journal of Nuclear Medicine, Vol. 9, Supp. 1, 2010, pp. S-20.

Nominated as one of the best submitted abstracts

- 85- **P. Ghafarian** and S.M.R. Aghamiri, M.R. Ay, A. Rahmim and H. Zaidi, "Quantification of PET and CT Data Misalignment Errors in Cardiac PET/CT: Clinical and Phantom Studies", The 3rd International Conference on Bioinformatics and Biomedical Engineering (IEEE iCBBE 2009), June 11th to 13th, 2009, 1-4, Beijing, China

- 86- 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, 1-4, Beijing, China.
- 87- **P. Ghafarian**, S.M.R. Aghamiri, M.R. Ay, A. Rahmim and H. Zaidi, " CT Based Attenuation Correction in Cardiac PET/CT Using Calcium Score CT Image: A Feasibility Study ", *International Congress of Nuclear Medicine and Molecular Imaging*, Tabriz, Iran, 23-25 September, 2009, pp. 9.
- 88- M.R. Ay, J.H. Bidgoli, **P. Ghafarian** and H. Zaidi "Reduction of Intravenous Contrast Related Artifacts in CT-based Attenuation Corrected PET Images" *4th European Congress of the International Federation of Medical and Biological Engineering*, Antwerp, Belgium, 23-27 November 2008 *ECIFMBE 2008, IFMBE Proceedings 22*, pp. 513–516.
- 89- **P. Ghafarian**, M.R. Ay, H. Ghadiri, S. Sarkar and H. Zaidi "Impact of x-ray tube voltage, field size and phantom thickness on scattered radiation in diagnostic radiology: A Monte Carlo investigation" *Proceedings of IEEE Nuclear Science Symposium & Medical Imaging Conference*, Honolulu, Hawaii, 28 October – 3 November 2007 , Vol 5; pp. 3542-3547.
- 90- M.R. Ay, **P. Ghafarian** and H. Zaidi "A hybrid approach for fast simulation of x-ray computed tomography" *Proceedings of IEEE Nuclear Science Symposium & Medical Imaging Conference*, Honolulu, Hawaii, 28 October – 3 November 2007 Vol 5; pp. 3155-3160.
- 91- M.R. Ay, H. Ghadiri, **P. Ghafarian**, S. Sarkar and H. Zaidi "The influence of energy indexing algorithm and electron substeps on MCNP4C electron transport: Application to simulation of x-ray spectra in diagnostic radiology and mammography" *Proceedings of IEEE Nuclear Science Symposium & Medical Imaging Conference*, Honolulu, Hawaii, 28 October – 3 November 2007, Vol 5; pp. 4006-4011.

- 92- **P. Ghafarian** , Sharafi AA, Keshvarz K and Zaidi H, "MCNP4C-based Monte Carlo study of grid performance in diagnostic radiology" (2005) *Proceedings of the 14th International Conference of Medical Physics, Nuremberg, Germany, September 14-17, 2005*, Biomedizinische Technik Vol. 50, Suppl, part 1, pp 1098-1099.
- 93- M.R. Ay, S. Sarkar, M. Shahriari, and **P. Ghafarian**. "Estimating of patient dose in abdomen-pelvis CT exam as a function of scan techniques in single and multi-slice speiral CT by Monte Carlo method". In *2th International Conference on Nuclear Science and Technology in Iran*. Shiraz, Iran, 27-30 April 2004, p. 46.
- 94- M.R. Ay, M. Shahriari, S. Sarkar, and **P. Ghafarian**. "Measurement of organ dose in abdomen-pelvis CT exams as a function of mA, KVp and scanner type by Monte Carlo method". In *3th International Conference of The Effect of Low and Very Low Doses of Ionizing Radiation on Human Health*. Tehran, Iran , 21-23 October 2003, p. 53.

Thesis Directed:

- 2019- "Design and modeling a total body PET using Monte Carlo simulation and optimizing it by reducing the detectors using deep learning method" **Advisor, PhD., Thesis**
- 2018- "Quantification and minimization of calibration effect and errors of PET/CT in measurement of standardized uptake value (SUV):A multicenter study" **Advisor, MSc., Thesis**
- 2018- "Quantitative analysis of Radiomics feature in PET-CT for improving diagnosis of benign and malignant in lung cancer" **Advisor, MSc, Thesis**

Pardis Ghafarian, PhD, 2019

- 2018-** "Optimization of influencing parameters in image reconstruction of PET/CT images in colon cancer patients for increasing image quality and quantitative analysis accuracy" *Supervisor, PhD., Thesis*
- 2018-** "Optimization and development of quantitative accuracy in pre-clinical Xtrim-PET imaging system" *Advisor, PhD, Thesis*
- 2017-** "Quantitative evaluation of the effect of random coincidence rates on the quality of PET images in whole body imaging" *Supervisor, MSc., Thesis*
- 2017-** " Design and development of variable time bed position protocol in whole body PET imaging " *Supervisor, MSc., Thesis*
- 2017-** " Comparative study of different image reconstruction methods and their impact on combined correction of partial volume effect and motion artifact for quantification of PET/CT image in lung tumor" *Supervisor, PhD, Thesis*
- 2017-** " Development of molecular PET/CT imaging-based IMRT treatment planning and quantification of the impact of image reconstruction algorithms on local tumor control" *Advisor, PhD, Thesis*
- 2017-** " Investigation of the impact of reconstruction parameters on detection of small lung lesions for minimizing Partial Volume Effect in PET/CT images: simulation, phantom and clinical studies " *Supervisor, MSc., Thesis*
- 2017-** " Implementation and evaluation of attenuation correction protocol for PET data using ultra low dose CT to reduce patient dose " *Supervisor, MSc., Thesis*
- 2017-** " Evaluation of the impact of using time of flight data on reduction of CTAC induced artifacts in PET/CT imaging" *Supervisor, MSc., Thesis*

Pardis Ghafarian, PhD, 2019

- 2017- " Quantification and reduction of respiratory induced errors in attenuation correction of PET data using respiration averaged CT " *Supervisor, MSc., Thesis*
- 2017- " Improvement of Non-Small cell lung carcinoma segmentation in PET/CT images based on DTSVM and DTFuzzyKNN classification" *Advisor, MSc., Thesis*
- 2017- " Evaluation of effective dose and image quality of CT images with regard to X-ray tube current modulation system in PET/CT scan: phantom and clinical study " *Supervisor, MSc., Thesis*
- 2016- "Evaluation of methods of co-segmentation in PET/CT images of lung tumor using GATE simulation" *Advisor, MSc., Thesis*
- 2016- " Investigation of the role of PET/CT images in radiation treatment planning" *Supervisor, MSc., Thesis*
- 2016- "Measurements of absorbed dose to PET/CT technologists and evaluation of gamma radiation dose in all hot spots with thermoluminescent dosimeters" *Supervisor, MSc., Thesis*
- 2016- "Design and optimization of a novel dedicated breast PET scanner based on partial geometry concept using Monte Carlo simulation" *Advisor, PhD, Thesis*
- 2015- " Evaluation of the benefits of time of flight technique in PET imaging using quantitative and qualitative analysis of clinical and phantom images " *Supervisor, MSc., Thesis*
- 2015- " Optimization of whole body oncologic imaging protocol in Discovery 690 PET/CT scanner based on quantitative analysis of clinical and phantom data" *Supervisor, MSc., Thesis*
- 2015- " Design, modeling and performance evaluation of dedicated brain positron emission tomography with high resolution and sensitivity using Monte Carlo simulation" *Advisor, PhD. Thesis*
- 2015- " Estimation of neutron and gamma contamination in cyclotron center using Monte Carlo simulation and digital phantom" *Advisor, PhD. Thesis*

Pardis Ghafarian, PhD, 2019

- 2014-** "A Novel hybrid method (protocol design & image segmentation) for generation of attenuation map at 511 keV from MR images in pelvis region for MR-based Attenuation correction in PET/MRI systems" *Advisor, PhD. Thesis*
- 2013-** " Design and Implementation of Performance Evaluation Protocol for PET/CT scanner based on International Standards " **Supervisor, MSc. Thesis**
- 2013-** "Quantification of CT and PET Images Mismatch Effect due to Respiratory Motion for Lung Tumors Uptake Value in PET/CT Imaging " **Supervisor, MSc. Thesis**
- 2012-** "Quantification and Correction of Metal Artifacts Arising from Pacemaker and ICD Leads in CT-based Attenuation Correction of Cardiac SPECT Imaging" *Advisor, MSc. Thesis*
- 2010-** "Quantification of the influence of accuracy of heart disease in cardiac PET/CT imaging" *Advisor, MSc. Thesis*

Thesis

P. Ghafarian, "Monte Carlo calculation of x-ray scatter distribution and design a grid with optimal performance in diagnostic radiology", MSc. Degree, Iran University of Medical Sciences. Supervisor: Dr. AA Sharafi

P. Ghafarian, "Quantification and Reduction of CT-Based Attenuation Correction Artifacts in Cardiac PET/CT Imaging", PhD Degree, Shahid Beheshti University, Supervisor: Dr. Aghamiri and Dr. Habib Zaidi

Professional Experience

2011 to present Associate Professor, Clinical Physicist, Shahid Beheshti University of Medical Sciences, Masih Daneshvari Hospital, Tehran, Iran
Deputy of Cyclotron and Radiopharmacy Department
Radiation Safety Officer

PET/CT and NM Senior Physicist

2006 to Present *Researcher*

Geneva University Hospital

PET Instrumentation and Neuroscience Lab (<http://pinlab.hcuge.ch/staff.html>)

2006 to present *Assistant Researcher*

Research Center for Science and Technology in Medicine

Medical Imaging Systems Lab.

Research

- Attenuation Correction in PET/CT
- Attenuation Correction in PET/MR
- Attenuation Correction in SPECT/CT
- Tracer production
- Artifact Reduction in hybrid imaging
- Quantitative Analysis in Nuclear Medicine
- Quantitative Analysis in PET/CT
- Image Reconstruction of imaging systems
- Analytical Modeling of imaging systems
- Monte Carlo simulation
- Quality control of hybrid imaging systems
- Shielding design
- Dosimetry

Computer Skills

- Programming with MATLAB
- Programming with C++
- GATE

Pardis Ghafarian, PhD, 2019

- STIR
- XCAT
- Programming with Basic
- Linux
- MCNP
- Monte Carlo Packages in NM/PET

*** References will be submitted on Request**