CURRICULUM VITAE FOR ACADEMIC PROMOTION

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Dr. Ali Reza Karimian
Associate Professor
Nuclear Engineering in the field of Medicine (Medical Radiation)
Department of Biomedical engineering
Faculty of Engineering
University of Isfahan
Isfahan - Iran
E-mail: karimian@eng.ui.ac.ir & karimianalireza2@gmail.com

Education:

University	Years From	to	Field of study	Degrees
Johns Hopkins University (School of Medicine)- Baltimore MD, USA	2016	2017	Cancer treatment (Mathematical Modelling and Simulation)	Research Fellowship
Amir-kabir University of Technology-Tehran Iran	1998	2005	Medical Radiation	Ph.D.
Department of Experimental Medicine and Pathology- University of Rome La-Sapienza	2004	2005	Medical Physics	Fellowship Researcher under grant of training and research in Italian laboratory program of ICTP
Amir-kabir University of Technology-Tehran Iran	1995	1997	Medical Radiation	M. Sc.
Ferdowsi Univ. of Mashhad – Mashhad - Iran	1987	1992	Electronic Eng.	B.Sc.

Professional Experience (in chronological order, earliest first)

Dates		Positions	Institutions
From	To		
1997	2006	Medical Physicist	Department of Cyclotron and Nuclear Medicine Department – AEOI- Karaj - Iran
2004	2005	Fellowship Researcher	Department of Experimental Medicine and Pathology- University of Rome La- Sapienza – Rome - Italy
2006	Now	Member of scientific board, Associate Professor	Department of Biomedical Engineering - University Of Isfahan – Isfahan - Iran
2016	2017	Fellowship Researcher	Dept. of Radiology, School of Medicine, Johns Hopkins University- Baltimore MD, USA

RESEARCH ACTIVITIES

Peer-reviewed original research articles:

1. Jalilian A., Rowshan Farzad P., Kyoumarsi M., Sabet M., Mirzaii M., Shadanpour N., **Karimian A.**, Moradkhani S., " Production and quality control of ^{82m}Rb and primary PET scans using its radiopharmaceutical for heart examinations", "Iranian Journal of Nuclear Medicine; 2003; 11(2): 13-19.

2. Jalilian A., Fateh B., Ghergherehchi M., **Karimian A.**, Matlloobi M., Moradkhani S., Kamalidehghan M., "Preparation, Distribution, Stability and Tumor Imaging properties of [Zn-62] Bleomycin Complex in Normal and Tumour-bearing Mice", Iranian Journal of Radiation Research, 2003; 1 (1): 37-44.

3. Tabeie F., Bolouri B., Jalilian A., Mossaffa N., rajabi H., Neshandar E., Labibi F., **Karimian A.**, Shirazi B. "Dynamic Distribution of Ga(67)-Bleomycine Complex and Carrier Free Ga(67) in Normal Mice", IJPT(Iranian Journal of Pharmacology and Therapeutics), 2003; 1 (2): 24-29.

4. Jalilian A., Mirzaie M., Roshan farzad P., Ensaf M., **Karimian A.**, Aslani G., Motamedi Sedeh F., Pooladi M., Shirazi B., Afarideh H., Daneshvari S., "Production, formulation, quality control and primary biological studies of [^{18}F]KF for skeletal PET scanning", Iranian Journal of Nuclear Medicine, 2004; 12 (1): 49-61.

5. Jalilian A., Mirzaie M., **Karimian A.**, Moafian J., Aslani G., Moradkhani S., Kamali-Dehghan M., Daneshvari S., Tabeie F., Raisali G., "Preparation of [^{111}In]-Bleomycin radiopharmaceutical", Iranian Journal of Nuclear Medicine, 2005; 13 (1): 19-26.

6. Jalilian A., Fateh B., Ghergherehchi M., **Karimian A.**, Moradkhani S., Kamalidehghan M., Tabeie F., "Development of ^{62}Zn bleomycin as a possible PET tracer", Nukleonika Journal (ISI indexed) , 2005; 50 (4): 143 – 148.

7. Karimian A. , Thompson C.J , Sarkar S. , Raisali G. , Pani R. , Davilu H. ,Sardari D. , "CYBPET: A Cylindrical PET System for Breast Imaging" , Nuclear Instruments & Methods In Physics Research – A Journal (Elsevier – ISI indexed), 2005; 545 (1-2): 427 – 435.

8. Jalilian A., Akhlaghi M., Saddadi F., Mirzaei M., **Karimian A.**, Pouladi M., et al," Experimental production and preliminary imaging of [18F] -6-thia-14-fluoro-heptadecanoic acid ([18F] FTHA for myocardium evaluation", Iranian journal of Nuclear Medicine, 2006; 14 (26): 35 -41.

9. Rowshanfarzad P., Jalilian A., Kiyomarsi M., Sabet M., **Karimian A.**, Moradkhani S., Mirzaii M.," Production, quality control and initial imaging studies of ^{82m}Rbcl for PET studies", Nukleonika (ISI indexed), 2006; 51 (4): 209-215.

10. Jalilian A., Akhlaghi M., Mirzaii M., **Karimian A.**," Production and biological evaluation of ^{18}F-6-thia-14-fluoro-heptadecanoic acid", Nuclear Medicine Review, 2006: 9 (2): 108 – 113.

11. Jalilian A., Hosseini A., **Karimian A.**, Saddadi F., Sadeghi M., "Preparation and Biodistribution of [201Tl(III)] Vancomycin Complex in Normal Rats" , Nukleonika (ISI Indexed), 2006; 51 (4): 203 -208.

12. Jalilian A., Aboudzadeh R., Akhlaghi M., Shirazi B., Moradkhani S., Salouti M., **Karimian A.,** Babaii M.H., Raisali Gh., " Production and biological evaluation of ^{201}Tl(III) bleomycin", Journal of Labelled Compound and Radiopharmaceuticals (JLCR), 2007; 50: 556-557.

13. Moradkhani S., Saddadi F., Matloubi M., Jalilian A., **Karimian A**., et al., " Biological evaluation of 131- IPPA in cardiac and other related tissues in laboratory animals by SPECT system", Journal of Nuclear Science and Technology, 2007; 40 (2): 25-34.

14. Jalilian A. , Garosi J., Gholami E., Akhlaghi M., Saddadi F., Bolourinovin F., **Karimian A**., "Evaluation of [67Ga]-insulin for insulin receptor imaging" , Nuclear Medicine Review, 2007; 10 (2): 71-75.

15. **Karimian A.**, Thompson C.J," Assessment of the new scintillation crystal ($LaBr_3$) in PET scanners using Monte Carlo method", Nukleonika journal (ISI Indexed), 2008; 53 (1): 3-6.

16. Baghaie P., Yazdchi M., **Karimian A.,** "EEG Pattern Recognition to Diagnose Epilepsy Using Wavelet and Chaos Transformations", Majlesi Journal of Electrical Engineering, 2009; 2 (1): 51 – 59.

17. Salehian N., Yazdchi M., **Karimian A.**, Nastaaligh handwritten word recognition using neural network", Majlesi Journal of Electrical Engineering, 2009; 2 (4): 1-10.

18. **Karimian A.**, Torabian M., Yazdchi M., "Improvement of Industrial Radiography for defect detection of oil and gas pipelines in weld regions by image processing", Journal of Electrical & Computer, 2009; 1 (1): 51 – 58.

19. Mortazavi N., **Karimian A.,** Mostajab M., "Preliminary design and simulation of a spherical brain PET system (SBPET) with liquid xenon as scintillator", Nukleonika journal (ISI Indexed), 2009; 54 (1): 33 – 38.

20. Sadeghi M., Mirzaee M., Gholamzadeh Z., **Karimian A.**, Bolouri novin F., "Targetry and Radiochemistry for No-Carrier-Added Production of ^{109}Cd", Radiochimica Acta (ISI Indexed), 2009; 97 (2): 113-116.

21. Farhadi M., Mahmoudian S., Saddadi F., **Karimian A.**, Mirzaee M., Ahmadizadeh M., et.al., "Functional Brain Abnormalities Localized in 55 Chronic Tinnitus Patients: fusion of SPECT coincidence imaging and MRI", Journal of Cerebral Blood Flow and Metabolism (ISI Indexed), 2010; 30: 864 – 870.

22. **Karimian A.**, Mohamadrezaee M., Saddadi F., Forouzani G., "A New method for improvement of Attenuation Correction in cardiac imaging by SPECT system", Iranian Journal of Physics Research, 2010; 10 (3): 177-185.

23. **Karimian A.**, Yazdani S., Askari M.A., "Reducing the absorbed dose in analogue radiography of infant chest images by improving the image quality, using image processing techniques", Journal of Radiation Protection Dosimetry (ISI Indexed), 2011; 147 (1): 176 – 179.

24. Sadat-Eshkevar S. M., **Karimian A.**, Mirzaee M., "Assessment of personnel absorbed dose in production of medical radioisotopes by cyclotron", Journal of Radiation Protection Dosimetry (ISI Indexed), 2011; 147 (1): 250-253.

25. Saghamanesh S., **Karimian A.**, Abdi M., "Absorbed dose assessment of cardiac and other tissues around the cardiovascular system in brachytherapy with ^{90}Sr/^{90}Y source by Monte Carlo simulation", Journal of Radiation Protection Dosimetry (ISI Indexed), 2011; 147 (2): 296-299.

26. Mossadegh N., **Karimian A.**, Shahhosseini E., Mohammdzadeh A., Sheibani Sh., "Experimental simulation of personnel dosimetry in production of medical radioisotopes by research reactor", Journal of Radiation Protection Dosimetry (ISI Indexed), 2011; 147 (2): 267-271.

27. Moradmand H., Setayeshi S., **Karimian A.**, Sirous M., Akbari M.E., "Comparing the Performance of Image Enhancement Methods to Detect Microcalcification Clusters in Digital Mammography", Iranian Journal of Cancer Prevention (ISC indexed), 2012; 5 (2): 61-68.

28. Mahmoudian S., Farhadi M., Gholami S., Saddadi F., **Karimian A.**, Mirzaee M., Ghoreyshi E., Fardin S., Ahmadizadeh M., Lenarz T., "Pattern of brain blood perfusion in tinnitus patients using technetium-99m SPECT imaging", Journal of Research in Medical Science (ISI indexed), 2012; 17 (3): 242-247.

29. Sadat-Eshkevar S. M., **Karimian A.**, Mirzaee M., "Assessment of the staff absorbed dose related to cyclotron operation and service in production of ^{18}F radiopharmaceuticals", Nukleonika journal (ISI Indexed), 2012; 57 (3): 407-410.

30. Safdari M., **Karimian A.**, Yazdchi M., "A New Method for Metal Artefact Reduction in CT Scan images", Iranian Journal of Medical Physics, 2013; 10 (2): 139-146.

31. Mahmoudian S., Farhadi M., Gholami S., Saddadi F., Jalesi M., **Karimian A.**, DarBeheshti M., Momtaz S., Fardin S., "Correlation between brain cortex metabolic and perfusion functions in subjective idiopathic tinnitus", The International Tinnitus Journal, 2013; 18 (1): 20-28.

32. **Karimian A.**, Saghamanesh S., "A Dosimetry Evaluation of the ^{90}Y Stent Implantation in Intracoronary Radiation Treatment", Nuclear Technology & Radiation Protection Journal (ISI Indexed), 2013; 28 (3): 278 – 283.

33. Tavakol M., **Karimian A.**, Mostajab S.M., "Dose assessment of eye and its components in proton therapy, by Monte Carlo method", Iranian Journal of Medical Physics, 2014; 11 (1): 195-203.

34. Yazdani S., Yusof R., Riazi A.H., **Karimian A.**, Hematian A.," Evaluation of Pipelines in Industrial Radiography Using Image Processing Techniques", Advanced Science, Engineering and Medicine journal, 2014; 6 (1): 81 – 85.

35. **Karimian A.**, Beheshti A., Abdi M., Jabbari I., "Environmental Dose Rate Assessment of ITER Using the Monte Carlo Method", Nuclear Technology & Radiation Protection Journal (ISI Indexed), 2014; 29 (1): 34 – 39.

36. Moradmand H., Setayeshi S., **Karimian A.**, Sirous M., "Improving Contrast of Mammography Images for Fast Microcalcification Clusters Detection", Iranian Journal of Medical Physics, 2014; 11 (2&3): 260-269.

37. **Karimian A.**, Nikparvar B., Jabbari I., "Assessment of physician and patient (child and adult) equivalent doses during renal angiography by Monte Carlo method", Journal of Radiation Protection Dosimetry (ISI Indexed), 2014; 162 (1-2): 120-124.

38. Ramezani M., **Karimian A.**, Moallem P., "Automatic Detection of Malignant Melanoma using Macroscopic Images", Journal of Medical Signals & Sensors, 2014; 4 (4): 281-290.

39. Yazdani S., Yusof R., Riazi A.M., **Karimian A.**, " Magnetic resonance image tissue classification using an automatic method", Diagnostic Pathology (ISI Indexed), 2014; 9 (1): 207 (1-16).

40. **Karimian A.**, Hajarizadeh A., "Assessment of the absorbed dose to organs from Bone Mineral Density scan by using TLDs and the Monte Carlo method", Nuclear Technology & Radiation Protection Journal (ISI Indexed), 2014; 29 (4): 289-295.

41. Yazdani S., Yusof R., **Karimian A.**, Riazi A.M., "Brain Tissue Classification in Magnetic Resonance Images", Jurnal Teknologi (Sciences and Engineering), 2015; 72 (2): 29-32.

42. Yazdani S**.,** Yusof R., **Karimian A.**, Riazei A.H., Bennamoun M., "A Unified Framework for Brain Segmentation in MR Images", Computational and Mathematical Methods in Medicine journal, 2015; 2015 (1): 1-17.

43. **Karimian A.**, Jafari S., "A new method to segment the multiple sclerosis lesions on brain magnetic resonance images", Journal of Medical Signals & Sensors, 2015; 5 (4): 238-244.

44. Yazdani S., Yusof R., **Karimian A.**, Pashna M., Hematian A. Sh.," Image Segmentation Methods and Applications in MRI Brain Images", IETE Technical Review (ISI Indexed), 2015; 34 (3): 527-530.

45. Yazdani S., Yusof R., **Karimian A.**, Mitsukira Y., Hematian A. Sh.," Automatic Region-Based Brain Classification of MRI-T1 Data", PLOS ONE (ISI Indexed), Vol.11. No.4, Pp. 1-19, 2016, DOI:10.1371/journal.pone.0151326

46. Shokouhian B., **Karimian A.**, Mohammad-zadeh M., Salighe-rad H., " Designing and Fabrication of a New Radiofrequency Planar microcoil for mini-Nuclear Magnetic Resonance", Iranian Journal of Medical Physics, Vol.13, No. 3 , Pp. 193-202, 2016

Proceedings:

1. **Karimian A.**,"Quality control of Gamma camera and DHC system", Iranian congress of nuclear medicine, Tabriz, Iran, Oct 2000

2. Rafii H., **Karimian A.**, Ranjbar A., Saddadi F., Moradkhani S., Pouladi M., "Design and construction of SPECT phantom and Q.C of DHC system" The annual meeting of medical physics in Iran, Tarbiat Modarress University, Tehran, Iran, May 2002

3. Saddadi F., **Karimian A.**, Moradkhani S., Dezhbankhan R., "OSEM in accurate evaluation of CAD using cardiac SPECT", The 6th annual meeting of nuclear medicine in Iran, Mashhad-Iran, Oct. 2002

4. **Karimian A.**, Saddadi F., Moradkhani S., Mossalla B., Pouladi M., Dezhbankhan R., "Quality assessment of brain images in SPECT by Hoffman phantom ",The 6th annual meeting of nuclear medicine in Iran, Mashhad-Iran, Oct. 2002

5. Saddadi F., **Karimian A.**, Moradkhani S., Dezhbankhan R., "OSEM in accurate evaluation of CAD using cardiac SPECT", World Journal of Nuclear Medicine (WJNM), Volume 1, Supplement 1, S12, May 2002

6. Moradkhani S., Saddadi F., Matloobi M., Jalilian A., Shafai K., Daneshvari S., **Karimian A.**, "Evaluation of 131- IPPA cardiac imaging results applied in laboratory animals", The Egyptian Society of Nuclear Medicine Specialists Fifth Annual Meeting (www.esnms.com), March 2004

7. Oghabian M., Mohammadi I., Sarkar S., **Karimian A.**, "Motion Detection and Correction of Motion Defect in SPECT Imaging", Abstract book of the 6th Iranian Congress of Medical Physics (ICMP), Mashhad, Iran, May 2004

8. Moradkhani S., Saddadi F., Matloobi M., Jalilian A., Shafai K., Daneshvari S., **Karimian A.**, "Evaluation of 131- IPPA in mouse and rabbit study", 2th International Conference on Nuclear Science and Technology in Iran, Shiraz, Iran, May 2004

9. Oghabian M., Mohammadi I., Sarkar S., **Karimian A.**, "Motion Correction of SPECT Projection before Reconstruction" Presented at 11th International Conference in Central Europe on Computer graphics, Visualization and Computer vision 2003-Czech republic, 2003

10. **Karimian A.** , Sarkar S. , Raisali G. , Zaidi H. , "A New Dedicated PET System For breast Imaging", European Journal of Nuclear Medicine and Molecular Imaging (EJNM - Springer), Supplement 2, S173, European Annual Congress of Nuclear medicine, Amsterdam, Netherlands, August 2003

11. Moradkhani S., Saddadi F., Matloobi M., Jalilian A., Shafai K., Daneshvari S., **Karimian A.**, "Evaluation of 131- IPPA cardiac imaging results applied in laboratory animals", World Journal of Nuclear Medicine, Vol. 3, No.3, 244 – 245, July 2004

12. Pani R., Bennati P., Cinti MN., Pellegrini R., Betti M., Ridolfi S., Lanconelli N., **Karimian A.**, Garibaldi F., Cusanno F., Marini M., De Notaristefani F., "Imaging characteristics comparison of compact pixellated detectors for Scintimammography", Nuclear Science Symposium Conference Record, 2004 IEEE, Volume: 6, 16-22 Oct. 2004, Page(s): 3748- 3751, Rome, Italy, 2004

13. Pani R., Cinti MN., Pellegrini R., Bennati P., Betti M., Trotta G., **Karimian A.**, Mattioli M., Garibaldi F., Cusanno F. and De Notaristefani F., "Imaging performances of LaCl3:Ce scintillation crystals in SPECT", Nuclear Science Symposium Conference Record, 2004 IEEE, Volume: 4 16-22 Oct. 2004, Page(s): 2283-2287, Rome, Italy, 2004

14. **Karimian A.** , Thompson C.J , Sarkar S. , Raisali G. , Pani R. , Davilu H. ,Sardari D. , "A Dedicated PET System for Breast Imaging (CYBPET)", Nuclear Science Symposium Conference Record, 2004 IEEE, Volume: 4 16-22 Oct. 2004, Page(s): 2339- 2341, Rome, Italy

15. Jalilian A., Rowshanfarzad P., Kiyomarsi M., Sabet M., **Karimian A.**, Moradkhani S., Saddadi F., Raisali G., "Production, quality control and initial imaging studies of [82m Rb] Rb injection for PET studies", IAEA – CN – 130/140p, 260 - 261, ISTR 2005, Viena, Austria

16. Jalilian A., Fateh B., **Karimian A.**, Kamalidehghan M., Moradkhani S., " Preparation, distribution, stability and tumor imaging properties of [62Zn] bleomycin complex in normal and tumor – bearing mice as a molecular PET generator", IAEA – CN – 130/141p, 262 - 263, ISTR 2005, Viena, Austria

17. **Karimian A.**, "Electromagnetic fields and human health", The second workshop of electromagnetic compatibility, Cluj – Napoca, Romania, September 2005

18. **Karimian A.**, Thompson C.J., "Assessment of using new scintillation crystal ($LaBr_3$) in PET system by Monte Carlo method", World Congress on Medical Physics and Biomedical Engineering 2006 (WC2006), IFMBE Pp.1584-6, August 27 – September 1-2006, Seoul, Korea

19. Thompson C.J., Suk J.Y., **Karimian A.**, "Optimization Of the Detectors for Simultaneous PET/MRI Imaging of the Human Brain", World Congress on Medical Physics and Biomedical Engineering 2006 (WC2006), IFMBE Pp.4483, August 27 – September 1-2006, Seoul, Korea

20. Kiyomarsi M., Rowshanfarzad P., Jalilian A., Sabet M., **Karimian A.**, et al., "Production, Quality Control and initial imaging studies of [Rb-82m] RbCl for PET studies", World Congress of Nuclear Medicine and Biology (WCNMB 2006), Seoul, Korea

21. Mortazavi Moghaddam N., **Karimian A.**, Mostajaboldavati M., "Design of a new dedicated brain PET system by Monte Carlo method", World Congress of Nuclear Medicine and Biology (WCNMB 2006), Seoul, Korea

22. Mortazavi Moghaddam N., **Karimian A.**, Mostajaboldavati M., "Design of a new dedicated brain PET system by GATE", EANM 2007, Kopinhag, Denmark

23. **Karimian A.**, Thompson C.J., Raisali G., "Assessment of using new scintillation crystals in PET system by Monte Carlo method", 1st Human, Life and Radiation Conference, 29-31 Oct. 2006, Rafsanjan, Iran

24. **Karimian A.** , Raisali G., Jia B., Rahimi F., "Monte Carlo study of a new Compton Camera and assessment of important parameters affecting image quality", 10th International Conference on Advanced Technology and Particle Physics, Villa Olmo, Como 8-12 October 2007, Italy

25. Jalilian AR, Rowshanfarzad P, Sabet M, Kamali-dehghan MM, Akhlaghi M, Mirzaii, Fateh B, Rajamand AA, Ensaf M, Shadanpour N, Bahrami A, Sattari A, **Karimian A**, Saddadi F., "Production of non-Fluorine –18 PET tracers in Iran", Turku PET Symposium New Targets in Molecular Imaging, 24 – 27 May 2008, Turku, Finland

26. Sadeghi M, Kakavand T, **Karimian A**, Aref M, "Feasibility study of 94mTc production at the cyclotron accelerator for Positron Emission Tomography (PET)", Turku PET Symposium New Targets in Molecular Imaging, 24 – 27 May 2008, Turku, Finland

27. **Karimian A.**, Jia B., Rahimi F., Raisali G., "Simulation of a Compton Camera by Monte Carlo Method", Annual physics conference of Iran, 25 – 27 Aug. 2008, pp. 60 – 63, Kashan university, Kashan, Iran

28. **Karimian A.**, Jia B., Rahimi F., Raisali G., "The effects of Geometrical parameters of detectors on application of Compton camera", Annual physics conference of Iran, 25 – 27 Aug. 2008, pp. 6 – 10, Kashan university, Kashan, Iran

29. Torabian M., **Karimian A.,** Yazdchi M., "Optimization of Interpretation of Industrial Radiographs for Defect Detection of Oil and Gas Pipeline Welds" , The 2nd International Conference on Technical Inspection and NDT (TINDT 2008), 21-22 Oct. 2008, Tehran, Iran

30. **Karimian A.,** Yazdani S., Movafeghi A., "Corrosion detection in pipelines using industrial radiography and image processing", The 2nd International Conference on Technical Inspection and NDT (TINDT 2008), 21-22 Oct. 2008, Tehran, Iran

31. **Karimian A.,** Nikookaran R., "A new method for head motion detection in nuclear medicine studies of brain", World Molecular Imaging Conference 2008 (WMIC2008), 10 – 13 Sep. 2008, Nice, France

32. **Karimian A.,** Khorshidi A., Saddadi F., Sadeghi M., Moradkhani M., Pouladi M., "Assessment and comparison of SPECT brain images using UHRFB and LEHR collimators by Hoffman phantom", World Molecular Imaging Conference 2008 (WMIC2008), 10 – 13 Sep. 2008, Nice, France

33. **Karimian A.,** Yazdani S., Movafeghi A., "Corrosion detection improvement of oil and gas pipelines with industrial radiography method by using image processing", International Conference on Recent Developments and Applications of Nuclear Technologies, 14-17 Sep. 2008, Bialowieza , Poland

34. **Karimian A.**, Torabian M., Yazdchi M., "Optimization of Industrial Radiography Technique for Defect Detection of Oil and Gas Pipeline in Weld Regions by Image processing methods" , International Conference on Recent Developments and Applications of Nuclear Technologies, 14-17 Sep. 2008, Bialowieza , Poland

35. **Karimian A.,** Mohamadrezaee M., Saddadi F., Forozani G., Moradkhani S., Pouladi M., "A new method to improve the attenuation coefficient in cardiac SPECT imaging", Annual physics conference of Iran, 15 – 18 Aug. 2009, pp. 605 – 608, Isfahan University of Technology, Isfahan Iran

36. **Karimian A.**, Mohamadrezaee M., Saddadi F., Forozani G., "A new and simple method for attenuation correction in cardiac imaging by SPECT system", World Congress on Medical Physics and Biomedical Engineering (WC-2009), 7-12 Sep. 2009, Munich, Germany

37. Choopan M.H. , **Karimian A.**, Afarideh H. , Mohammadzadeh A., "FMDIB: a software tool for fusion of MRI and DHC-SPECT images of Brain", World Congress on Medical Physics and Biomedical Engineering (WC-2009), 7-12 Sep. 2009, pp. 741 – 744, Munich, Germany

38. **Karimian A.**, Jia B., Raisali G., Rahimi F., "Design of a new Compton Camera by Monte Carlo method and assessment its important parameters affecting image quality", World Congress on Medical Physics and Biomedical Engineering (WC-2009), 7-12 Sep. 2009, pp. 414 – 416, Munich, Germany

39. Mossadegh N., **Karimian A.**, Shahhosseini E., Mohammdzadeh A., Sheibani Sh., "Assessment of Personnel Absorbed Dose at 5(MW) Research Reactor Using Rando Phantom and Thermoluminescent Dosimeter", Annual physics conference of Iran, 11-14 Sep. 2010, pp. 1785 – 1789, Hamedan university, Hamedan, Iran

40. Saghamanesh S., **Karimian A.**, Abdi M., "Dose Calculation of cardiac and its surrounding tissues in the 90Sr/90Y cardiovascular brachytherapy by MCNPX", Annual physics conference of Iran, 11-14 Sep. 2010, pp. 1492 – 1496, Hamedan university, Hamedan, Iran

41. Sadat Eshkevar S.M., **Karimian A.**, Mirzae M., Aslani G., "Assessment of Cyclotron personnel absorbed dose during emergency repairs by MCNPX ", Annual physics conference of Iran, 11-14 Sep. 2010, pp. 1737 – 1741, Hamedan university, Hamedan, Iran

42. **Karimian A.** , Mohamadrezaee M., Saddadi F., Forozani G., "Effect of Low Pass Filter on Cardiac nuclear medical images before and after Attenuation Correction", Annual physics conference of Iran, 11-14 Sep. 2010, pp. 264 – 268, Hamedan university, Hamedan, Iran

43. **Karimian A.**, Eghbali Z., Farrokhi S., "Evaluation of 153Sm-EDTMP absorbed dose in treatment of bone metastasis by Monte Carlo method", Annual physics conference of Iran, 11-14 Sep. 2010, pp. 1538 - 1542, Hamedan university, Hamedan, Iran

44. Mossadegh N., **Karimian A.**, Shahhosseini E., Mohammdzadeh A., Sheibani Sh., "Evaluation of personnel absorbed dose in production of medical radioisotopes by 5 MW research reactor using Rando phantom and

Thermoluminescent Dosimeter", International Conference on Radiation Protection in Medicine, Roentgenologia Radiologia, Suppl. 10, pp 61, 1-3 September 2010, Varna, Bulgaria

45. **Karimian A.**, Yazdani S., Askari M.A., "Reducing the absorbed dose in analogue radiography of infant chest images by improving the image quality, using image processing techniques", International Conference on Radiation Protection in Medicine, Roentgenologia Radiologia, Suppl. 10, pp 76-77, 1-3 September 2010, Varna, Bulgaria

46. Sadat-Eshkevar S. M., **Karimian A.**, Mirzaei M., "Assessment of personnel absorbed dose in production of medical radioisotopes by cyclotron", International Conference on Radiation Protection in Medicine, Roentgenologia Radiologia, Suppl. 10, pp 30 - 31, 1-3 September 2010, Varna, Bulgaria, **Awarded as the best paper in the conference**

47. Saghamanesh S., **Karimian A.**, Abdi M., "Absorbed dose assessment of cardiac and other tissues around the cardiovascular in brachytherapy with 90Sr/90Y source by Monte Carlo simulation", International Conference on Radiation Protection in Medicine, Roentgenologia Radiologia, Suppl. 10, pp 59, 1-3 September 2010, Varna, Bulgaria

48. **Karimian A.** , Mohamadrezaee M., Saddadi F., Forozani G., "A New Method for Linear Transmission Attenuation Correction in Cardiac SPECT Images", 2010 World Molecular Imaging Congress, 8 -11 Sep. 2010, Kyoto, Japan

49. Hajarizadeh A., **Karimian A.**, Abdi M., "Absorbed Dose Assessment of Radio-sensitive human tissues During BMD Scan by Monte Carlo Method" , 10th Asia-Oceania Congress of Medical Physics Oct. 15-17, 2010, Taipei, Taiwan

50. Yazdani S., **Karimian A.**, Torabian M., "Improvement of Defect Detection in Mammographic Film Images by Image Processing Techniques", 10th Asia-Oceania Congress of Medical Physics Oct. 15-17, 2010, Taipei, Taiwan

51. Abdi M., Hajarizadeh A., **Karimian A.**, Rezaei Kh. , "Absorbed Dose Assessment of Kidney, Ovary and Cervix in BMD Scan by Monte Carlo Method", 2010 IEEE Conference on Open Systems, Kuala Lumpur Malaysia, 2010

52. Hajarizadeh A., **Karimian A.**, Abdi M., "Absorbed Dose Assessment of Under-Radiation Tissues in BMD Scan by Monte Carlo Method", 17th Iranian Conference on Biomedical Engineering (ICBME2010), Isfahan, Iran, Nov. 2010

53. Mohammadi S., Yazdchi M., **Karimian A.** , Mohammadi H., "Automatic Luminal Border Detection in IVUS Images: A Textural Approach", The 6th Iranian Machine Vision & Image processing Conference, pp. 26, University of Isfahan, Iran, Oct. 2010

54. Mohammadi S., Yazdchi M., Karimian A., Mohammadi H., "Automatic Plaque Detection in IVUS Images: A Textural Approach", The 2011 3rd International Conference on Modeling and Simulation (ICCMS 2011), January 7 - 9, 2011, Mumbai, India

55. Moradmand H.; Setayeshi S.; **Karimian A.**; Sirous M.; Khazaei Targhi H., "Detection and Classification of Benign and Malignant Microcalcification Clusters with Cellular Automata in MammographyImages", 18th International Conference on Medical Physics (ICMP), April 2011, Porto Alegre, Brazil

56. Mossadegh N.; **Karimian A.**; Shahhosseini E.; Mohammdzadeh A.; Sheibani Sh., "Calculation of reactor personnel absorbed dose by using TLD-100H and comparison the results with TLDs-700", 18th International Conference on Medical Physics (ICMP), April 2011, Porto Alegre, Brazil

57. Sadat Eshkevar S.M.; **Karimian A.**; Mirzaei M. ; Aslani Gh.; Shahvar, A., "Assessment of personnel absorbed dose in production of FDG radiopharmaceutical by Cyclotron", 18th International Conference on Medical Physics (ICMP), April 2011, Porto Alegre, Brazil

58. Hajarizadeh A.; **Karimian A.**; Abdi M., "Estimation of absorbed dose of human tissues during BMD scan by TLD chips and Monte Carlo method" 18th International Conference on Medical Physics (ICMP), April 2011, Porto Alegre, Brazil

59. **Karimian A.**; Eghbali Z.; Farrokhi S.; Jabbari I. ; Azarnoush A., "^{153}Sm-EDTMP absorbed dose evaluation for under bone metastasis treatment patient by Monte Carlo method", 18th International Conference on Medical Physics (ICMP), April 2011, Porto Alegre, Brazil

60. **Karimian A.**; Yazdani S., "Enhancement Detection of micro-calcifications in Mammographic Film Images by de-noising and image processing techniques", 18th International Conference on Medical Physics (ICMP2011), April 2011, Porto Alegre, Brazil

61. Hajarizadeh A.; **Karimian A.**; Abdi M., "Utilize TLD chips and Monte Carlo method for evaluation of absorbed dose of human tissues in BMD scan", 1st International Conference of Medical Physics (MEFOMP), Nov. 2-4, 2011, Shiraz, Iran
62. Saghamanesh S., **Karimian A.**, Abdi M., "Dosimetry calculations of intravascular brachytherapy for a 90Sr/90Y source by Monte Carlo simulation", 1st International Conference of Medical Physics (MEFOMP), Nov. 2-4, 2011, Shiraz, Iran

63. Tavakol M., **Karimian A.**, Mostajab aldaavati S.M., "Evaluation of absorbed dose in eye proton therapy by Monte Carlo method", 1st International Conference of Medical Physics (MEFOMP), Nov. 2-4, 2011, Shiraz, Iran

64. Safdari M., **Karimian A.**, Yazdchi M., "Metal Artifact Correction in CT images by a new algorithm", 1st International Conference of Medical Physics (MEFOMP), Nov. 2-4, 2011, Shiraz, Iran

65. Safdari M., **Karimian A.**, Yazdchi M., "Metal Artifact Reduction in CT images of Head by Image Processing Techniques", International Conference on Physics Science and Technology, Dec. 12-13, 2011, Hong Kong, China

66. Korang Beheshti A., **Karimian A.**, Abdi M., Jabbari I., "Gamma Dose Evaluation of ITER Based on Neutron Activation Calculation", The First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD2012), Apr. 25-27, 2012, Nis, Serbia

67. **Karimian A.**, Hedyehzadeh M., Hajarizadeh A., "Extra absorbed dose assessment of cardiac and other tissues around the cardiac during transmission attenuation correction of cardiac SPECT imaging", The First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD2012), Apr. 25-27, 2012, Nis, Serbia

68. Basij M., **Karimian A.**, "Absorbed dose assessment of breast, cardiac and other tissue during breast imaging by SPECT", The First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD2012), Apr. 25-27, 2012, Nis, Serbia

69. **Karimian A.**, Eghbali Z., Jabbari I., "Risk assessment of bone metastasis treatment by Monte Carlo method", The First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD2012), Apr. 25-27, 2012, Nis, Serbia

70. Tavakol M., **Karimian A.**, Mostajab Aldaavati S. M., "Assessment of dose distribution in human eye proton therapy by Monte Carlo method", The First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD2012), Apr. 25-27, 2012, Nis, Serbia

71. Yazdani S., Yusof R. , **Karimian A.** , Hematian A., Yousefi M.M., "Enhancement and denoising of mammographic images for breast disease detection", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

72. Korang Beheshti A., **Karimian A.**, Abdi M., Jabbari I., "Dose rate evaluation of body phantom behind interbio – shield wall using Monte Carlo method", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

73. Moghbel Esfahani F., **Karimian A.**, M. H. Alamatsaz, "Calculation of primary dose in proton-therapy of brain tumors using Monte Carlo method", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

74. Maleki M., **Karimian A.**, "Absorbed dose estimation of gonads resulting from fault work of staff during injection of radiopharmaceuticals to the patients", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria,

75. Karimizadeh A., **Karimian A.**, "Computation of lung absorbed dose in brachytherapy by using Ir-192", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

76. Safavi F., **Karimian A.**, H. Pourghasem, M. Niknejadi, "Nonlinear de-speckling and edge preserving filter in wavelet domain for medical ultrasound images", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

77. Nejat S., **Karimian A.**, Binesh A., "Treatment optimization of a brain tumor in BNCT by Monte Carlo", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria, Pp. 45-50

78. Fakhari Y., **Karimian A.**, Mohammadbeigi M., "Detection of masses in mammograms by analysis of gradient vector convergence using sector filter", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

79. Hashemi Karrouei S. O., **Karimian A.**, Edrisi M., Monadi Sh., "Absorbed dose evaluation of cancerous and healthy parts of brain during radiation therapy by LINAC using Monte Carlo method", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

80. Ghajarjazy A., **Karimian A.**, "MRI and SPECT brain image fusion enhancement by image processing methods", European Medical Physics and Engineering Conference (EMPEC2012), Oct. 18-20, 2012, Sofia, Bulgaria

81. Ramezani M., **Karimian A.**, "Validation and estimation of skin cancer risk for urolithiasis patients during ureteroscopic treatment", The Second Iranian Conference on Bio-Electromagnetic, Dec. 18-20, 2013, Tehran, Iran

82. **Karimian A.**, Ramezani M., "Skin cancer assessment in urolithiasis patients during ureteroscopic treatment", The Second International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2014), May 27-30, 2014, Nis, Serbia

83. **Karimian A.**, Nikparvar B., Jabbari I., "Radiation absorbed doses assessment of physician and patient (child and adult) during renal angiography", The Second International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2014), May 27-30, 2014, Nis, Serbia

84. **Karimian A.**, Nomani A., "Radiation absorbed dose assessment of crew members by Monte Carlo method", The Second International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2014), May 27-30, 2014, Nis, Serbia

85. **Karimian A.**, Shokuohian B., Mohammadzadeh M., "Design and fabrication of a new NMR spiral planar microcoil", The Second International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2014), May 27-30, 2014, Nis, Serbia

86. **Karimian A.**, Mousavi N., Alamatsaz M. H., "Absorbed Dose Calculation of First and Secondary Particles in Brain Proton Therapy by Monte Carlo Method", International Conference on Radiation Protection in Medicine (RPM2014), 30 May - 2 June 2014, Varna, Bulgaria

87. **Karimian A.**, Bagheri M., "Absorbed Dose Assessment of Healthy and Glandular Breast Tissue in Mammography", International Conference on Radiation Protection in Medicine (RPM2014), 30 May - 2 June 2014, Varna, Bulgaria

88. **Karimian A.**, Nikparvar B., Jabbari I., "Calculation of Patient and Physician Radiation Absorbed Doses in Coronary Angiography using Monte Carlo Simulation", International Conference on Radiation Protection in Medicine (RPM2014), 30 May - 2 June 2014, Varna, Bulgaria

89. **Karimian A.**, Behtaj S., "Evaluation the Reduction Amount of Absorbed Dose in Whole Body CT Scan by Using Tungsten and Lead Shields", International Conference on Radiation Protection in Medicine (RPM2014), 30 May - 2 June 2014, Varna, Bulgaria

90. Ramezani M., **Karimian A.**, Moallem P., "A new threshold-based method for automatic skin lesions segmentation in macroscopic images", The 5th Iranian Conference on Bioinformatics, 20-220May 2014, Tehran, Iran

91. Moayedian Z., **Karimian A.**, Alamatsaz M.H., Parvazian A., "Absorbed dose assessment of liver and its surrounding tissues during Proton therapy", Annual physics conference of Iran, 8-11 Sep. 2014, University of Sistan and Baluchestan, Zahedan, Iran

92. Tork S., **Karimian A.**, Yazdchi M., "New Speckle Denoising Algorithm in Fetal Ultrasound Images", Annual physics conference of Iran, 8-11 Sep. 2014, University of Sistan and Baluchestan, Zahedan, Iran

93. **Karimian A.**, Mosavi Savad koohi N., Alamatsaz M.H., "Dose calculation of primary and secondary particles during brain proton therapy", Annual physics conference of Iran, 8-11 Sep. 2014, University of Sistan and Baluchestan, Zahedan, Iran

94. **Karimian A.**, Moayedian Z., Alamatsaz M.H., "Assessment of Proton and Neutron Absorbed Doses in Proton Therapy of Deep and Semi-Deep Tumors Inside the Liver Using Monte Carlo Method", Third International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2015), June 8-12, 2015, Budva, Montenegro

95. **Karimian A.**, Momenzadeh M., Askari M., "Efficiency Assessment of a Digital and CR Mammography", Third International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2015), June 8-12, 2015, Budva, Montenegro

96. **Karimian A.**, Jafari S., Pourghasem H., "Design and Execution of a Method to Improve the Diagnosis of Multiple Sclerosis (MS) Disease in Brain MRI Images", Third International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2015), June 8-12, 2015, Budva, Montenegro

97. Kavusi Z., **Karimian A.**, Jabbari I., "Assessment the Effect of X-ray Crosstalk on Spatial Resolution in CT Scanners Due to Lack of High Voltage Calibration", Third International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2015), June 8-12, 2015, Budva, Montenegro

98. **Karimian A.**, Khaksar A., Dehlaghi V., Ghafarian P., "A New Algorithm for Metal Artifact Reduction in PET-CT Images", Third International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2015), June 8-12, 2015, Budva, Montenegro

99. Khandan Z., **Karimian A.**," Design a new algorithm to count white blood cells for classification leukemic blood image using machine vision system", IEEE, the 6th International Conference on Computer and Knowledge Engineering (ICCKE 2016), October 20-21, 2016, Mashhad, Iran

Inventions, Patents, Copyrights (pending, awarded)

Date	Title	Patent No.	Proofed by	Name
2010	Corrosion detection improvement of oil and gas pipelines in industrial radiography films by using image processing techniques	65218	Iran Patent and Trademark Office	Yazdani S., **Karimian A**.

Extramural Funding (current, pending, previous)

Dates	Title	Identification number	Sponsor	Total direct cost (USD)	Principal Investigator	My role	My percent effort	Notes
2016	Optimization of CT images to detect the human brain trauma	1216533	Iranian Legal Medicine Organization	2000	Jamali N. (M.Sc. student)	Supervisor	50	M.Sc. project under support of sponsor
2016	Enhancement of X-ray images for better detection of nasal bone	1216804	Iranian Legal Medicine	2000	Sinaei A. (M.Sc. Student)	Supervisor	50	M.Sc. project under

	fracture		Organization					support of sponsor
2008	Corrosion detection improvement of oil and gas pipelines with industrial radiography method by using image processing		Isfahan oil refining Company	3000	Yazdani S. (M.Sc. Student)	Supervisor	50	M.Sc. project under support of sponsor
2005 - 2008	Establishment of Cyclotron Radiopharmaceutical Production Facility and Implementation of cGMP		IAEA	50000	Cyclotron Dept.	Advisor	20	

Research Program Building / Leadership

Dates	Name of Research	Basic Science Program	My role
2006-2007	Assessment and comparison of SPECT brain images using UHRFB and LEHR collimators by Hoffman phantom	M.Sc. Thesis	Supervisor
2006-2007	Design of a new Compton Camera by Monte Carlo method and assessment its important parameters affecting image quality	M.Sc. Thesis	Supervisor
2007 - 2008	Corrosion detection improvement of oil and gas pipelines with industrial radiography method by using image processing	M.Sc. Thesis	Supervisor
2007 - 2008	Improvement of Industrial Radiography for Defect Detection of Oil and Gas Pipelines in Weld Regions by Image Processing	M.Sc. Thesis	Supervisor
2007 - 2009	Design of a new dedicated brain positron emission tomography by Monte Carlo method	Ph.D. Thesis	Supervisor
2008 - 2009	Design of an algorithm and software to image fusion of brain MRI and DHC-SPECT images	M.Sc. Thesis	Supervisor
2008 - 2009	Design and implementation of a new method to improve attenuation correction in SPECT cardiac images	M.Sc. Thesis	Supervisor
2009 - 2010	Absorbed dose calculation of ^{153}Sm-EDTMP in bone and the Surrounding tissues in treatment of bone metastasis by Monte Carlo method	M.Sc. Thesis	Supervisor
2009 - 2010	Breast cancer diagnosis by detection and classification of micro-calcification clusters in mammography	M.Sc. Thesis	Supervisor
2010 - 2011	Assessment of staffs absorbed dose in cyclotron (30MeV) by Monte Carlo method and comparing with experimental data	M.Sc. Thesis	Supervisor
2010 - 2011	Estimation of absorbed dose of human tissues during BMD scan by TLD chips and Monte Carlo method	M.Sc. Thesis	Supervisor
2010 - 2011	Absorbed dose assessment of cardiac and other tissues around the cardiovascular in brachytherapy by ^{90}Sr/^{90}Y source using Monte Carlo simulation and comparison the results with experimental data	M.Sc. Thesis	Supervisor
2010 - 2011	Evaluation of personnel absorbed dose in production of medical radioisotopes by 5 MW research reactor using Rando phantom and Thermo-luminescent Dosimeter	M.Sc. Thesis	Supervisor
2011 - 2012	Automatic defect detection of Mammographic images by image processing and pattern recognition	M.Sc. Thesis	Supervisor

	methods and comparison the results with experimental data		
2011 - 2012	Metal artifact Correction in CT scan images by image processing methods	M.Sc. Thesis	Supervisor
2011 - 2012	Assessment and calculation of dose distribution in ocular proton therapy by Monte Carlo method and comparison the results with experimental data	M.Sc. Thesis	Supervisor
2011 - 2012	Calculation of primary and secondary dose in proton therapy of brain tumors using Monte Carlo method	M.Sc. Thesis	Supervisor
2011 - 2012	Enhancement and fusion of MRI and SPECT brain images by image processing methods and comparison the results with experimental data	M.Sc. Thesis	Supervisor
2011 - 2012	Absorbed dose assessment of healthy and tumoral tissues of brain in BNCT using Monte Carlo method	M.Sc. Thesis	Supervisor
2012 - 2013	Environmental dose rate assessment of ITER using Monte Carlo method	M.Sc. Thesis	Supervisor
2012 - 2013	Design and implementation of a proper method for attenuation correction in nuclear medicine cardiac images and comparison the results with experimental data	M.Sc. Thesis	Supervisor
2012 - 2013	Assessment of absorbed dose in different depths of tissue, in radio-therapy by LINAC, using Monte Carlo method and comparison the results with experimental data	M.Sc. Thesis	Supervisor
2012 - 2014	Assessment of physician and patient (child and adult) equivalent doses during angiography by Monte Carlo method	M.Sc. Thesis	Supervisor
2012 - 2014	Micro RF coil design and construction for Mini-NMR	M.Sc. Thesis	Supervisor
2012 - 2014	Automatic diagnosis of malignant melanoma skin cancer; by image processing techniques	M.Sc. Thesis	Supervisor
2012 - 2014	Assessment of absorbed dose in tumor and healthy tissue of liver in proton therapy	M.Sc. Thesis	Supervisor
2012 - 2014	Absorbed dose assessment of produced positrons during brain proton therapy	M.Sc. Thesis	Supervisor
2012 - 2014	Enhancement of Fetal Nuchal Translucency in Ultrasound Images and Its Detection	M.Sc. Thesis	Supervisor
2012 - 2014	Assessment the effect of X-Ray crosstalk on spatial resolution in CT scanners by Monte Carlo method	M.Sc. Thesis	Supervisor
2013 - 2015	Design and implement of an appropriate algorithm to reduce the metal artifact in PET / CT images of head	M.Sc. Thesis	Supervisor
2013 - 2015	Assessment of absorbed dose versus image quality in analogue and digital mammography	M.Sc. Thesis	Supervisor
2013 - 2015	Semi-Automatic Segmentation and Extraction of Multiple Sclerosis Lesions in Brain MRI	M.Sc. Thesis	Supervisor
2012- 2016	Automatic tissue classification in magnetic resonance brain images via hybrid methods	Ph.D. Thesis	Supervisor
2015- Now	Estimation of absorbed dose uncertainty during proton therapy of prostate by Monte Carlo method	Ph.D. Thesis	Supervisor
2015- Now	Absorbed dose assessment of fetal in PET/CT imaging of mother abdomen region in 3,6 and 9 months of pregnancy	Ph.D. Thesis	Supervisor
2015- Now	The evaluation of output factor changes in small & very small fields to optimize the dose in IMRT treatment planning	Ph.D. Thesis	Supervisor
2016 - Now	Evaluation of Magnetic Field Effect in MRI-Guided Hadron Therapy Using Proton and Carbon Ion	Ph.D. Thesis	Supervisor
2016 - Now	Optimization of CT images to detect the human brain trauma Optimization of CT images to detect	M.Sc. Thesis	Supervisor

	the human brain trauma		
2016 - Now	Enhancement of X-ray images for better detection of nasal bone fracture	M.Sc. Thesis	Supervisor

EDUCATIONAL ACTIVITIES

Educational Publications

I have prepared slide sets for all the courses that have been presented by me. The names of courses are in the teaching part.

Teaching

I have been lecturer of the following courses in University of Isfahan. Also I have prepared classroom instruction for these courses.

Dates	Course title
2006 - Now	Basics of Radiology and Radiotherapy systems
2006 - Now	Introduction to Medical Physics
2006 - Now	Biophysics
2007 - Now	Introduction to Medical Imaging systems
2007 , 2009	Special Course in Medical Imaging Systems
2010	Radiation Shielding
2010 - Now	Medical Imaging Systems
2011	Detection and Dosimetry of Radiations
2012 - Now	Computer Simulation and its Applications in Biomedical Engineering
2013	Advanced Courses in Medical Radiation
2014	Advanced Courses in Medical Imaging Systems
2015	Research method and ethics in biomedical engineering

Workshops /seminars

Dates	Course Title	My role	Location
2010	Training Workshop on Medical Imaging systems and Radiosurgery	Scientific Chief of the workshop	University of Isfahan, Isfahan, Iran
2011	Physics of Radiation and its Applications in Medicine	Presenter	Feyz Hospital of Isfahan , Isfahan, Iran
2013	Radiation Protection in Medicine (staff and Patient)	Presenter	Ashrafi Hospital of Isfahan, Isfahan, Iran
2015	Nuclear Medicine Imaging systems	Presenter	Chamran Hospital of Isfahan, Isfahan, Iran

Mentoring (pre- and post-doctoral)

Ph.D. Thesis committees

Dates	Name	Title	My Role
2012	Mehdi Abasi (Ph.D. Candidate , University of Isfahan, Isfahan, Iran)	Iterative Sinc− convolution method for solving planar D-bar equation with application to EIT	External Referee (Oral)
2012	Behzad Boghrati (Ph.D. Candidate , Amirkabir University of Technology, Tehran, Iran)	Design and Simulation of a Gamma-Ray Camera for PET with a Continuous Scintillation Crystal	External Referee (Oral)
2013	Javad Rasti (Ph.D. Candidate , University of Isfahan, Isfahan, Iran)	An Image Segmentation Method Based on Intelligent Algorithms for Object Recognition in Outdoor Scenes	External Referee (Oral)
2013	Maryam Atarod (Ph.D. Candidate , Isfahan University of Medical Sciences, Isfahan, Iran)	Comparison of the risk of secondary cancer after conventional radiotherapy, 3D-CRT and IMRT using Monte Carlo models and virtual phantoms	External Referee (Oral)
2014	Ali Jomezadeh (Ph.D. Candidate , Isfahan University of Medical Sciences, Isfahan, Iran)	A 2D-EPID based dosimetry algorithm verification for a homogenous and anthropomorphic phantom to investigate the sensitivity of 3D EPID-Based errors during VMAT	External Referee (Oral)
2015	Marjan Tajik (Ph.D. Candidate , University of Isfahan, Isfahan, Iran)	Calculation of direct effects of X rays on the different DNA structural levels: A simulation study using Monte Carlo method	External Referee (Oral)
2015	Zahra Vahabi (Ph.D. Candidate , Isfahan University of Technology, Isfahan, Iran)	Design and Implementation of a new Reconstruction Algorithms for Electrical Impedance Technique in Medical Body Imaging	External Referee (Oral)

I have been as the external referee for more than 30 M.Sc. thesis too.

Educational Extramural

2004 – 2005, Fellowship researcher of Medical Physics / Department of Experimental Medicine and Pathology- University of Rome La- Sapienza – Rome – Italy, Under Grant of ICTP .

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

2011 - February 2016, Head of Biomedical Engineering Department, University of Isfahan

Journal peer review activities

2011 – Now, Reviewer of Computational Intelligence in Electrical Engineering, Journal of University of Isfahan

2013 – Now, Reviewer of Iranian Journal of Medical Physics

Advisory Committees, Review Groups

2006 – Now, Scientific Advisory Committee of Biomedical Engineering Department

Professional Societies

2006 – Now, Member of Iranian Medical Physicists Society
2011 – Now, Member of Iranian Biomedical Engineering Society
2011 – Now, Member of Iranian Physicists Society

Conference Session Chair

2010, Session chair in the 6th Iranian Machine Vision & Image processing Conference, University of Isfahan, Isfahan, Iran

2014, Session chair in the 11th Iranian Conference of Medical Physics, Tehran University of Medical Sciences, Tehran, Iran

RECOGNITION

Awards, Honors

1995, The Fourth rank among the entrance exam applicants (more than 3000) of M.Sc. in Iran.

1997, Certificate, as the top student among the M.Sc. graduates in Amir kabir University of Technology-Tehran-Iran.

1998, Top student in Amir kabir University of Technology entrance exam for Ph.D. degree.

2004 – 2005, Fellowship research award from ICTP, Italy

2009, Award as best researcher of Biomedical Engineering Department, University of Isfahan, Isfahan, Iran

2010, Best paper winner in International Conference on Radiation Protection in Medicine

2010, Award as best researcher of Biomedical Engineering Department, University of Isfahan, Isfahan, Iran

2011, Award as best researcher of Biomedical Engineering Department, University of Isfahan, Isfahan, Iran

Invited Talks, Panels:

2005, Invited talk in the second workshop of electromagnetic compatibility, title: Electromagnetic fields and human health, Cluj – Napoca, Romania.

OTHER PROFESSIONAL ACCOMPLISHMENTS

Training workshops:

1998, Technical training on SPECT system of SMV America Company (7 weeks, France)