



**Dr Saeed Sarkar**

**Head of Research Center for Science and Technology in Medicine (RCSTIM)  
Professor of Tehran University of Medical sciences**

<b>Personal Details:</b>	<b>Family Name:</b> Sarkar <b>First Name:</b> Saeed <b>Date and Place of Birth:</b> 30 January 1957, Kashan-Iran. <b>Nationality:</b> Iranian,												
<b>Languages:</b>	Persian (native), English (writing, speaking).												
<b>Primary Business Address:</b>	Research Center for Science and Technology in Medicine (RCSTIM), Keshavarz Boulevard, Imam Hospital Tehran, Iran												
	<b>Phone:</b> +98 21- 66907517 <b>Fax:</b> +98 21 66581633 <b>E-mail:</b> Sarkar@Sina.tums.ac.ir												
<b>Education:</b>	<table border="1"><thead><tr><th><b>Dates:</b></th><th><b>School/College:</b></th><th><b>Subject taken:</b></th></tr></thead><tbody><tr><td>1994</td><td>University of Surrey Physics Dept. Guildford, UK, GU2 5XH</td><td>PhD in Medical Physics (Nuclear Medicine)</td></tr><tr><td>1988</td><td>University of Surrey Physics Dept. Guildford, UK, GU2 5XH</td><td>MSc in Medical Physics</td></tr><tr><td>1979-1984</td><td>Kashan University</td><td>BSc Physics</td></tr></tbody></table>	<b>Dates:</b>	<b>School/College:</b>	<b>Subject taken:</b>	1994	University of Surrey Physics Dept. Guildford, UK, GU2 5XH	PhD in Medical Physics (Nuclear Medicine)	1988	University of Surrey Physics Dept. Guildford, UK, GU2 5XH	MSc in Medical Physics	1979-1984	Kashan University	BSc Physics
<b>Dates:</b>	<b>School/College:</b>	<b>Subject taken:</b>											
1994	University of Surrey Physics Dept. Guildford, UK, GU2 5XH	PhD in Medical Physics (Nuclear Medicine)											
1988	University of Surrey Physics Dept. Guildford, UK, GU2 5XH	MSc in Medical Physics											
1979-1984	Kashan University	BSc Physics											

	College of Science, Kashan, Iran		
<b>Work Experience</b>	<b><u>Dates: (from/till)</u></b>	<b><u>Job Title:</u></b>	<b><u>Company or Organozation</u></b>
	1994/now	Academic Member	Tehran Univ. of Medical sciences
	1996/now	Head of Medical Physics Dept.	Tehran Univ. of Medical sciences
	1996/now	Head of Health Physics	Tehran Univ. of Medical sciences
	2002/now	Head of Research Center for Science and Technology In Medicine	RCSTIM
	2005/now	Member of Founder Board	Iranian association of Nanotechnology
	2007/now	Board Member of Nanotechnology	Ministry of Health and Medical Education
	2008/now	Member of High council for Kashan University of Medical Sciences	Kashan University of Medical Sciences
2008/now	President of Iran Nano Initiative Council	Presidency	
<b>Member of Editorial Board</b>	<b><u>Dates (from/till):</u></b>	<b><u>Journal</u></b>	
	2000 /now	ACTA Medica Iranica journal	
	2002/now	Iranian Journal of Medical Physics	
2002/now	Iranian Journal of Radiation Research		

	2002 /now Iranian Journal of Nuclear Medicine
	2002/now Iranian Journal of Radiology
	2007/now Journal of Family and Reproductive Health
<b>National Research Success</b>	<p>Research director and manager of the project:</p> <p>1.S.Sarkar , "treatment of Patient with Spinal Cord Injury "</p> <p>2.S.Sarkar, "Design and construction of Scanning tunneling Microscope (STM)"</p>
<b>Publications</b>	<ol style="list-style-type: none"> <li>1. Farahmand,F., Hamid,R.,Sarkar,S.,Behzadpour,A.,Mirbagheri,A.,“An overview of medical roboticts in Iran”, Realhes industrielles,2012.</li> <li>2. Mirzaei, E., Amani, A., Sarkar, S., Saber, R., Mohammadyani, D., Faridi-Majidi, R. ,” Artificial neural networks modeling of electrospinning of polyethylene oxide from aqueous acid acetic solution”, Journal of Applied Polymer Science 125 (3) , pp. 1910-1921,2012.</li> <li>3. Ghazanfari, N., Sarkar, S., Loudos, G., Ay, M.R, "Quantitative assessment of crystal material and size on the performance of rotating dual head small animal PET scanners using Monte Carlo modeling", Hellenic Journal of Nuclear Medicine 15 (1) , pp. 33-39+80 ,2012.</li> <li>4. Zeraatkar, N., Ay, M.R., Ghafarian, P., Sarkar, S., Geramifar, P., Rahmim, A. , “Monte Carlo-based evaluation of inter-crystal scatter and penetration in the PET subsystem of three GE Discovery PET/CT scanners”, Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 659 (1) , pp. 508-514,2011.</li> <li>5. Saber, R., Sarkar, S., Gill, P., Nazari, B., Faridani, F. ,” High resolution imaging of IgG and IgM molecules by scanning tunneling microscopy in air condition”, Scientia Iranica 18 (6) , pp. 1643-1646,2011.</li> <li>6. 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" <i>Nuclear. Instrumentation Methods in Physics Research A</i>, 2011, Vol. 659, pp. 508-514</li> </ol>

7. E. Saeedzadeh, S. Sarkar, A. Abbaspour Tehrani-Fard, M.R. Ay, H.R. Khosravi, G. Loudos "3D Calculation of Absorbed Dose for 131I Targeted Radiotherapy: A Monte Carlo Study" Radiation Protection Dosimetry, 2011 *in press*
8. P. Geramifar, M.R. Ay, M. Shamsaie Zafarghandi, S. Sarkar, G. Loudos, A. Rahmim, "Investigation of Time-of-Flight Benefits on the LYSO-Based PET/CT Scanner: A Monte Carlo Study Using GATE " *Nuclear. Instrumentation Methods in Physics Research A* , 2011 Vol. 641, pp. 121-127
9. M. R. Ay, M. Shirmohammad, S. Sarkar, A. Rahmim, H. Zaidi, "Comparative assessment of energy-mapping approaches in CT-based attenuation correction for PET" *Molecular Imaging & Biology*, 2011, Vol. 13, pp. 187-198.
10. Elham Saeedzadeh, Ali Abbaspour Tehrani-Fard, Saeed Sarkar, Mohammad Reza Ay, Hamid Reza Khosravi<sup>4</sup> , "Accurate 3D Dosimetry for Internal Radiotherapy By Considering the Effect of Nonuniform Activity Distribution", *Iranian Journal of Nuclear Medicine* , 18(Suppl 1) : 112, 2010
11. Ataie-Fashtami, L., Shirkavand, A., Sarkar, S., Alinaghizadeh, M., Hejazi, M., Fateh, M., Esmaeeli Djavid, G., (...), Mohammadreza, H. , "Simulation of heat distribution and thermal damage patterns of diode hair-removal lasers: An applicable method for optimizing treatment parameters," *Photomedicine and Laser Surgery* 29 (7) , pp. 509-515 ,2011.
12. Akbarzadeh A , Ay MR, Ghadiri H , Sarkar S , Zaidi H, "Measurement of scattered radiation in a volumetric 64-slice CT scanner using three experimental techniques", *Physics in Medicine and Biology*, Vol55, Issue8, PP2269-2280, Published: APR 21 2010
13. M.Ay, M.Shirmohammad,S.Sarkar, A.Rahmim,H.Zaidi , "Comparative assessment of energy mapping approaches in CT-based attenuation correction for PET" , *Molecular Imaging & Biology*, 09-Jul-2009(Available online)
14. Mohebbali M, Rezayat MM, Gilani K, Sarkar S, Akhouni B, Esmaeili J, Satvat T, Elikae S, Charehdar S, Hooshyar H, "Nanosilver in the treatment of localized cutaneous leishmaniasis caused by *Leishmania major* (MRHO/IR/75/ER): an in vitro and in vivo study " , *DARU-JOURNAL OF FACULTY OF PHARMACY* Vol17 , Issue 4, PP 285-289 , Published: FAL 2009
15. Gharehaghaji, N., Oghabian, M.A., Sarkar, S., Darki, F., Beitollahi, A., " How size evaluation of lymph node is protocol dependent in MRI when using ultrasmall superparamagnetic iron oxide nanoparticles " , *Journal of Magnetism and Magnetic Materials* 321 (10), pp. 1563-1565,2009
16. Shahidi, A., Mahboobi, S.H., Pirouzpanah, S., Esteki, H., Sarkar, S., " Trajectory following of a micro motion stage based on closed-loop FEM

simulation “,ASME International Mechanical Engineering Congress and Exposition, Proceedings 11 PART A, pp. 155-158,2008

17. N.GHareaghaji, MA Oghabian, S.Sarkar, S.Amirmohseni, H.Ghanaati, “Optimization of Pulse Sequences in Magnetic Resonance Lymph Nodes Using Magnetic Nanoparticles” , Nanoscience and nano technology, Vol.9, 4448-4452, 2009.
18. N.Mohtari, S.Daneshpajouh, S.Seyedbagher, R.Atashdeheghan, k.Abdi, S.Sarkar, S.Minaian, HR.Shahverdi, Ar.Shahverdi, “Biological Synthesis of Very Small Silver Nanoparticles by culture Supernatant of Klebsiella Pneumonia: The Effect of visible-light irradiation and the liquid mixing process” , Materials Research Bulletin 44,1415-1421, 2009.
19. Sarkar, MD Abolhassani, F Farahmand, AR Ahmadian, R Saber, “Research activities at the research center for science and technology in medicine” , Iranian Journal of Public Health,Vol.38,Suppl.1,2009.
20. S Sarkar, A Beitollahi, “An overview on nanotechnology activities in Iran”, Iranian Journal of Public Health,Vol.38,Suppl.1,2009
21. N. Ghaeaghaji, M. A. Oghabian, S. Sarkar, S. Amirmohseni, H. Ghanaati, "Optimization of Pulse Sequences in Magnetic Resonance Lymphography of Axillary Lymph Nodes Using Magnetic Nanoparticles" , agreement received\*
22. S.M.Rezayat, S.V.S. Boushehri, B. Salmanian, A.O. Omidvari, S.Tarighat, S. Esmaeli, S. Sarkar, N. Amishahi, R.N. Alyautdin, M.A. Orlova, I.V. Trushkov, A.L. Buchachenko, K.C. Liu, D.A. Kuznetsov, "The Prophylin-Fullerene Nanoparticles to Promote the ATP overproduction in Mayocardium:<sup>25</sup>mg<sup>2+</sup> - Magnetic isotope effect" , European Journal of Medicinal Chemistry, (available online) , accepted 17 July 2008\*.
23. Nima Amirshahi1,, Renad N. Alyautdin1, S. Mahdi Rezayat2, Saeed Sarkar, Marina A. Orlova, Alexey P. Orlov3, Andrey A. Poloznikov3, Dmitry A. Kuznetsov, "Fullerene–Interfaced Porphyrin Ligand in Affinity Chromatography of Membrane Proteins", Chromatographia, 68,No. 3/4, 2008.
24. Nima Amirshahi, Renad N. Alyautdin, Seyed M. Rezayat, Saeed Sarkar, Marina A. Orlova, Igor V. Trushkov, Anatoly L. Buchachenko, Dmitry A. Kuznetsov, "New Porphyrin Adduct Of Fullerene – C60:A promising nano-tool for medicinal use in the heart muscle hypoxia cases " , International Journal of Nanoscience, accepted on Mar 27, 2008.
25. Nima Amirshahi,a Renad N. Alyautdin,a Saeed Sarkar,b Seyed M. Rezayat,b Marina A. Orlova, Igor V. Trushkov,c Anatoly L. Buchachenko,d and Dmitry A. Kuznetsov, "Fullerene-based Low Toxic Nanocationite Particles (Porphyrin Adducts of Cyclohexil Fullerene-C60) to Treat Hypoxia-induced Mitochondrial Dysfunction in Mammalian Heart Muscle", Archives of Medical Research , 39, P 549-559, 2008.
26. Ahmadian A, Ay MR, Bidgoli JH, Sarkar S, Zaidi H, "Correction of oral contrast

	<p>artifacts in CT-based attenuation correction of PET images using an automated segmentation algorithm", Eur J Nucl Med Mol Imaging. 2008 Apr 17.</p> <p>27. Changizi V, Oghabian MA, Speller R, Sarkar S, Kheradmand AA., "Application of small angle X-ray scattering (SAXS) for differentiation between normal and cancerous breast tissue", Eur J Nucl Med Mol Imaging. 2008 Apr 17.</p> <p>28. AY MR, Sarkar S, "Computed tomography based attenuation correction in PET/CT: Principles, instrumentation, protocols, artifacts and future trends" , Iranian Journal of Laser in Medicine, 15(2): 1-29, 2007.</p> <p>29. M.R.Ay, H.Ghadiri, P.Ghafarian, S.Sarkar, H,Zaidi, "The Influence of Energy Indexing Algorithm and Electron Sub steps on MCNP4C Electron Transport: Application in Monte Carlo Simulation of X-Ray Spectra in Diagnostic Radiology and Mammography", IEEE Nuclear Science Symposium Conference Record, P 4006-4011, 2007.</p> <p>30. J.H.Bidgoli, M.R.Ay, S.Sarkar, A.Ahmadian, H,Zaidi, "Correction of oral contrast artifacts in CT-based attenuation correction of PET images using an automated segmentation algorithm" , IEEE Nuclear Science Symposium Conference Record, P 3542-3547 , 2007.</p> <p>31. M. R. Ay, J. H. Bidgoli, S. Sarkar, A. R. Ahmadian "Automatic Segmentation of Oral Contrast Enhanced CT Images for Artifact Free Attenuation Correction in Pet/CT" European Journal of Nuclear Medicine &amp; Molecular Imaging, Vol. 34, Oct. 2007.</p> <p>32. H. R. Khosravi, S. Sarkar, A. Takavar, M. Saghari, M. Shahriari "Planar and SPECT Monte Carlo Acceleration Using a Variance Reduction Technique in I131 Imaging" Iranian Journal of Radiation Research, Vol 4, No 4, P. 175-182, 2007.</p> <p>33. A.Shirkavand, S. Sarkar, M. Hejazi, L. Ataie-Fashtami, M. R. Alinaghizadeh "A New Monte Carlo Code Used for Absorption of Skin Tissue Interaction", Chinese Optics Letters, Vol. 5, No. 4,2007.</p> <p>34. A. Shirkavand, S. Sarkar, M. Hejazi, L. Ataie, M. R. Alinaghizadeh "Evaluation of LITCIT Software for Thermal Simulation of Superficial Laser Like Hair Removal Lasers", Indian Journal of Dermatology, 52(3), 2007.</p> <p>35. A. Mehrcay, M.Afsharpad, A.Ghobadi, M.Afsharpad, M.Nahiyedin, Gh.Poormand, B.Ansari, S.Sarkar, B.Nikbeen , "Evaluation of LITCIT Software for Simulation of Laser Heat Propagation in Skin Surplus Hairs" , Iranian Journal of Laser in Medicine, 2007.</p> <p>36. Sarkar, S. Oghabian, M. A. Mohammadi, I. Mohammadpour, A.Rahmim, A. "A Linogram/Sinogram Cross-Correlation Method for Motion Correction in Planar</p>
--	--

	<p><a href="#">and SPECT Imaging</a>" IEEE Transactions on Nuclear Science, Issue 1, Part 1, Pages 71-79, Feb. 2007.</p> <p>37. Leila Moezi, Hamed Shafaroodi, S. Sarkar, Seyed Hasan Emami_Razavi, Mehdi Sanatkar, Naser Mirzai, Ahmad R. Dehpour "<a href="#">Involvement of Nitrergic and Opioidergic Systems in the Hypothermia Induced by Cholestasis in Rats</a>" Pathophysiology. 2006 Dec;13(4):227-32. Epub 2006 Sep 11.</p> <p>38. T.P. Faez, S. Sarkar "<a href="#">Simulation of Gamma Irradiation System for a Ballast Water Treatment</a>" Iranian Journal of Radiation Research, Vol 4, No 2, 2006.</p> <p>39. B. Aghahadi, Z. Zhang, S. Zareh, S. Sarkar, P.S. Tayebi "<a href="#">Impact of Quality Control on Radiation Doses Received by Patient Undergoing Abdomen X-Ray Examination in Ten Hospital</a>" Iranian Journal of Radiation Research, Vol 3, No 4, March 2006.</p> <p>40. alinaghizadeh , S.Sarkar, " <a href="#">low-level laser therapy in management of postmastectomy lymphedema</a>" , <b>laser Med. Sci</b></p> <p>41. A.Shirkavand, S.Sarkar, L. Ataee , M. Hejhazi, M.Alinaghizadeh, " <a href="#">Response of T Cell Cytokines to Low Level He-Ne Laser Irradiation in Vitro: can Low Level Lasers Prevent Chronic Graft Rejection?</a>" , Journal of Laser in Medicine, Vol4, No.4,2006.</p> <p>42. Vahid Changizi, Mohammad A. Oghabian, Robert Speller, Saeed Sarkar, Ali Arab Kheradmand "<a href="#">Application of Small Angle X-Ray Scattering (Saxs) for Differentiation Between Normal and Cancerous Breast Tissue</a>" Int. J. Med. Sci. 2005.</p> <p>43. V. Changizi, M.A. Oghabian, S. Sarkar, R.D. Speller, A. Arab Kheradmand "<a href="#">Application of Small Angle X-Ray Scattering (Saxs) With Synchrotron Facility in Differentiation between Normal and Tumoral Breast Tissues</a>" Iran. J. Radiat. Res.,2 (4): 205-210 2005.</p> <p>44. M. R. Ay, S. Sarkar, M. Shahriari, D. Sardari, H. Zaidi, "<a href="#">Assessment of Different Computational Models for Generation of X-Ray Spectra in Diagnostic Radiology and Mammography</a>" Med. Phy, 32, 2005.</p> <p>45. Karimiyan, C. J. Thomson, S. Sarkar ,Raesali ,"<a href="#">Cybpet : Acylindrical Pet System for Breast Imaging</a>", Nuclear Instruments &amp; Methods in Physics Research , 545 , 2005.</p> <p>46. Kamali, S. Sarkar, M. Shahriari, H. Agha Hosaini "<a href="#">Slit Slat Collimator Optimization with Respect to MTF</a>" Applied Radiation and Isotopes , 62 ,2005.</p> <p>47. M.R. Ay, M. Shahriari, S. Sarkar, H. Zaidi And M. Adib, "<a href="#">Monte Carlo Simulation of X-Ray Spectra in Diagnostic Radiology and Mammography Using MCNP4C</a>", Phys. Med. Biol, 2004.</p> <p>48. Karimian, A., Thompson, C.J., Sarkar, S., Raisali, G., Pani, R., Davilu, H., Sardari, D., "<a href="#">A dedicated PET system for breast imaging (CYBPET)</a>" , IEEE</p>
--	---

	<p>Nuclear Science Symposium Conference Record 4, pp. 2339-2341, 2004</p> <p>49. M.R. Ay , M. Shahriari, S. Sarkar, P. Ghafarian , "Measurement of Organ Dose in Abdomen - Pelvis CT Exam as a Function of mA , kV and Scanner..." , Iranian Journal of Radiation Research , 4/1 , 2004.</p> <p>50. M. R. Ay, S. Sarkar, M. Shahriari, D. Sardari and H. Zaidi , " Comparative Assessment of Different Computational Models for Generation of X-Ray Spectra in Diagnostic Radiology and Mammography " , IEEE, 2004.</p> <p>51. Sarkar, Nasrin Ahmadinedjad, S.Taghizadeh , " A Comparison of Mammography and Thermography Imaging Systems on Diagnosis of Breast Disease" , Iranian Journal of Medical Physics ,4-5, 2004.</p> <p>52. M.R. Ay , M. Shahriari, S. Sarkar, P. Ghafarian, "Measurement of Organ Dose in Abdomen - Pelvis CT Exam as a Function of mA , kV and Scanner " , Iranian Journal of Radiation Research ,4\1, 2004.</p> <p>53. M.Alinaghizadeh, S.Sarkar, MH. Miranbeygi , " Modeling of Nd-YAG Laser Absorption and Heat Distribution in Tissue Using Monte Carlo Technique " , Iranian Journal of Medical Physics, 1, 2003 .</p> <p>54. A. Karimian, S. Sarkar, G. Raisali, H. Zaidei, " A new dedicated PET system for breast imaging " , European Journal of Nuclear Medicine and Molecular Imaging, 30, Supplement 2 , 2003 .</p> <p>55. Oghabian M. A, Kaboli P, Sarkar S, "Surface Reconstruction of Defect Contours for Medical Image Registration Purpose" Iranian Journal of Nuclear Medicine No. 18, 2002.</p> <p>56. Gh,Aziziyan, S.Sarkar, M.Abolhasani, " Three Dimensional Image Construction Using Two Dimensional Ultrasound Systems", Scientific Journal of Hamedan University of Medical Sciences, Vol 9, No2, 2002.</p> <p>57. S.Sarkar, S.Taghizadeh, "Evaluation of Status of Radiography Sections: Radiation Protection and Image's Quality", Hakim Journal, Vol 5, No1, P23-30, 2002.</p> <p>58. S.Sarkar, A,Abehesht, H,Firouzabadi, " Evaluation of source Distance and Scattering Medium on Gamma Camera's Image Contrast and Spatial Resolution", Iranian Journal of Nuclear Medicine, No 16-17, p 51-58, 2001-2002.</p> <p>59. MJ.Abolhasani, A.Yousefi, S.Sarkar, "Designing of Infant's Health Monitoring System", Hakim Journal, Vol 4, No 4, P264-271, 2001.</p> <p>60. S.Sarkar, M.Hedjazi, P.Kaboli," kVp Measurement of X-Ray Tubes by Using Penetrometer in Radiology Quality Assurance Programme", Hakim Journal , Vol 4, No 3, P168-172, 2001.</p> <p>61. F.Farahmand, S.Sarkar, P.Kaboli, MJ.Abolhasani, MH.Sami," Designing and</p>
--	---



	<p><a href="#">Modeling of Modular Hip Joint Prosthesis</a> ", Hakim Journal , Vol 4, No 1, P 59-68, 2001.</p> <p>62. .Sarkar, M.Dehghanpoor, M.Saghari, M.Ghiyasinedjad, "<a href="#">Evaluation of Radiation Absorbed Dose by Family of The Patients Undergoing Iodine Therapy</a>", Iranian Journal of Nuclear Medicine, Vol 14-15, P 45-54, 2000-2001.</p> <p>63. N. M. Spyrou, J. M. Sharaf And S. Sarkar "<a href="#">Elemental Analysis of Biological Matrices Using Tomographic Techniques</a>" Journal of Radio analytical and Nuclear Chemistry, Volume 167, Number 2 / January, , P 425-465, 1993.</p>
<p><b>Congress And Seminars</b></p>	<p>1- Navid Zeraatkar, Mohammad R. Ay, , Saeed Sarkar, Parham Geramifar, and Arman Rahmim ,"<a href="#">Quantitative Investigation of Inter-Crystal Scatter and Penetration in the GE Discovery RX PET/CT Scanner using Monte Carlo Simulations</a>",MIC10_ICS,2011</p> <p>2- P. Geramifar, M.R. Ay, M. Shamsai Zafarghandi, G. Loudos, A. Rahmim" <a href="#">Monte Carlo Based Performance Assessment of Four Commercial GE Discovery PET/CT Scanners Using GATE</a>" IEEE Nuclear Science Symposium &amp; Medical Imaging Conference, Dresden, Germany, 19-25 October 2008, 3995-3999.</p> <p>3- M. Shirmohammad, M.R. Ay, A. Rahmim A, S. Sarkar and H. Zaidi "<a href="#">A novel energy mapping method for attenuation map generation at 511 keV in computed tomography based attenuation correction</a>" (2008) Oral presentation at the European Association of Nuclear Medicine Annual Congress, 11-15 October 2008, Munich, Germany. Eur J Nucl Med Mol Imaging, Vol 35, Suppl. 2, S146.Nominated as one of the best submitted abstracts</p> <p>4- M.R. Ay, M. Shirmohammad, S. Sarkar, A. Rahmim, H. Zaidi, "<a href="#">Implementation and comparison of different energy mapping approaches in CT-based attenuation correction of PET</a>" , International Congress of Nuclear Medicine and Molecular Imaging Proceeding, p 51,2009, Tabriz, Iran.</p> <p>5- A. Akbarzadeh , M.R. Ay, H. Ghadiri, S. Sarkar, H. Zaidi, "<a href="#">A Hybrid Approach for Accurate Estimation of the Scatter Component in X-ray CT Combining Experimental Measurements and Monte Carlo Simulations</a>" , IEEE Nuclear Science Symposium Conference Record, 2008.</p> <p>6- N. Dehestani , S. Sarkar , M.R. Ay , M. Sadeghi and M. Shafaei . "<a href="#">Comparative Assessment of Rotating Slit and Parallel Hole Collimator Performance in GE DST-Xli Gamma Camera: A Monte Carlo Study</a>", ECIFMBE 2008, IFMBE Proceedings 22, p. 1062–1065, 2008</p>

- 7- S. Lashkari, S. Sarkar, M.R. Ay, A. Rahimim, "The influence of Crystal Material on Scattering and the Parallax Effect in PET Block Detectors: A Monte Carlo Study" , European Journal of nuclear medicine&molecular imaging, 35,Suppl2,P510, Annuual congress of the EANM2008, Munich,Germany.
- 8- M. Shirmohammad , M.R. Ay, A. Rahmim S. Sarkar,, "A novel Energy mapping method for attenuation map generation at 511 keV in computed tomography based attenuation correction", European Journal of nuclear medicine&molecular imaging, 2008, 35,Suppl2,124 وAnnuual congress of the EANM2008, Munich,Germany.
- 9- Shirmohammad M., Ay M.R. , Sarkar S. , Rahmim A. and Zaidi H, "Comparative assessment of different energy mapping approaches in CT based attenuation correction: a patient study" , Embec 2008- 4th European congress for medical and biomedical engineering -, 23-27 Nov, 2008.
- 10- M. Shirmohammad , M.R. Ay, S. Sarkar, H. Ghadiri, A. Rahmim, "Comparative assessment of different energy mapping methods for generation of 511-keV attenuation map from CT images in PET/CT systems: a phantom study" , Biomedical Imaging: From Nano to Macro, 5th IEEE International Symposium , Page(s):644 – 647, 14-17 May 2008.
- 11- Dehestani N. , Sarkar S. , Ay M. R. , Sadeghi M. , Shafaei M. , "Comparative assessment of rotating slat and parallel hole collimator performance in GE DST-Xli gamma camera: a Monte Carlo study" , Embec 2008- 4th European congress for medical and biomedical engineering -, 23-27 Nov, 2008.
- 12- S. Lashkari, S. Sarkar, M.R. Ay, A. Rahimim, "The influence of Crystal Material on Scattering and the Parallax Effect in PET Block Detectors: A Monte Carlo Study" , 4<sup>th</sup> International conference on Biomedical Engineering, Kuala Kumpur, Bio Med 2008.

- |  |  |
|--|--|
|  | <p>13- A. Akbarzadeh, M.R. Ay, H. Ghadiri, S. Sarkar, H. zaidi, " <a href="#">A Novel Approach for Experimental Measurement of Scatter Profile and Scatter to Primary Ratio in 64-Slice CT Scanner</a> " , 4<sup>th</sup> International conference on Biomedical Engineering, Kuala Kumpur, Bio Med 2008.</p> <p>14- Mahboobi, S. H., Shahidi A., Pirouzpanah S., Esteki H., Sarkar S., "Optimum Design and Vibration Suppression of a Piezoelectric Amplified Microactuator Using FEM Analysis " , 20th International Microprocesses and Nanotechnology Conference(MNC 2007), Kyoto Japan, November 5-8, 2007.</p> <p>15- Shahidi A., Mahboobi, S. H., Pirouzpanah S., Esteki H., Sarkar S., "Trajectory Following of a Micro Motion Stage Based on Closed-Loop FEM Simulation" ,ASME International Mechanical Engineering Congress and Exposition(IMECE2007), Seattle, Washington, USA, November 11-15, 2007</p> <p>16- M.R.Ay, H.Ghadiri, P.Ghafarian, S.Sarkar, H,Zaidi, "<a href="#">The Influence of Energy Indexing Algorithm and Electron Sub steps on MCNP4C Electron Transport: Application in Monte Carlo Simulation of X-Ray Spectra in Diagnostic Radiology and Mammography</a>", IEEE Nuclear Science Symposium Conference Record, P 4006-4011, 2007.</p> <p>17- J.H.Bidgoli, M.R.Ay, S.Sarkar, A.Ahmadian, H,Zaidi, "<a href="#">Correction of Oral Contrast Artifacts in CT-Based Attenuation of PET Images Using an Automated Segmentation Algorithm</a>", IEEE Nuclear Science Symposium Conference Record, P 3542-3547 , 2007.</p> <p>18- Ali Ghasemzadeh, Saeed.Sarkar ,Bagher Larijani , Afsaneh Bajoor , Ahmad Salimzadeh, "<a href="#">The reproducibility of DXA machines in low bone mass</a>", poster presentation, ISCD Annual Confrence, Feb 4,2006</p> <p>19- M A. Oghabian,M.Bakhtiari, M.Malekpour, S.Amanpour, A.Arab Kharadmand, M.A.Mohagheghi, H.Ghana-Ati, S.Sarkar, S.Yarandi "<a href="#">MR</a></p> |
|--|--|

Relaxivity Measurement in Rat Tissues after Administration of Some Different Iron Oxide Based Nano Particles", International Conference on Bio-Nanotechnology, UAE, 18-21 Nov. 2006

20- H. Saberi, P. Moshayedi, H. Aghayan, B. Arjmand, K. Hosseini, M. Firoozi, S.Sarkar "Preliminary Results of Schwann Cell Transplantation for the Treatment of Chronic Spinal Cord Injuries" 2nd International Congress Emirates Neuroscience Society, 28th-30th October 2006

21- Alam, N.R. Bakhtiary, M. Oghabian, M.A. Sarkar, S. Ghasemzadeh, A.Ghanaati, H. Larijani, B. Hamidy, Z. Shakery, N. "Optimization of MR Relaxometry for BMD-Measurements and its Correlation with DEXA" 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society ,Shanghai, China, September 1-4, 2005

22- Karimiyan, C. J. Thomson, S. Sarkar , Raesali "A Dedicated PET System for Breast Imaging (CYBPET)" ROME 2004 IEEE Conference.

23- S. Sarkar , Abehesht "Evaluation and Comparison of Quantitative and Qualitative Effects of Scattering in Air and ...." 8th Asia Oceania Congress of Nuclear Medicine and Biology 2004.

24- S. Sarkar , Kamali A. Shahryari "Advantages of Slit Slat Collimators in Gamma Camera & SPECT Imaging" 8th Asia Oceania congress of Nuclear Medicine and Biology 2004.

25- M. A. Oghabian, F. I. Mohammadi, S. Sarkar, "Automatic Motion Detection and Correction for SPECT Studies" 8th Asia & Oceania Congress of Nuclear Medicine and Biology, Beijing, China, October 9-13, 2004.

26- S. Sarkar , A. Muhammadpur "Detection and Correction of Motion Artifact in Nuclear Medicine Static Planar Imaging", EANM'04 – Annual Congress of the European Association of Nuclear Medicine, Sept. 2004, Helsinki-Finland.

- 27- I. Mohammadi, M. A. Oghabian, S. Sarkar, A. R. Karimian, "Motion Detection and Correction of Motion Defect in SPECT Imaging", second International Conference on Nuclear Science and Technology in Iran. April 27-30, 2004. Shiraz, Iran.
- 28- M. R. AY, S. Sarkar, M. Shahriari, P. Ghafarian, "[Estimating of Patient Dose in Abdomen-Pelvis CT Exam as a Function of Scan Techniques in Single and Multi Slice Spiral CT by Monte Carlo Method](#)", second International Conference on Nuclear Science and Technology in Iran. April 27-30, 2004. Shiraz, Iran.
- 29- M. A. Oghabian, I. Mohammadi, S. Sarkar, A. R. Karimian, "[Motion Correction of SPECT Projection before Reconstruction](#)", WSCG'2004- the 12th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision' 2004.
- 30- M. R. Alinaghizadeh, S. Sarkar, M. H. Miranbeigi, "[Experimental Investigation and Modeling of Nd-YAG laser Absorption in Sheep Liver](#)", The 2nd Scientific Conference for Medical Students in the GCC Countries 25-28 January 2004.
- 31- M. R. Ay, M. Shahriari, S. Sarkar, D. Sardari and H. Zaidi, "[Comparative Assessment of Different Computational Models for Generation of X-Ray Spectra in Diagnostic Radiology and Mammography](#)", Medical Imaging Conference, Rome, Italy, 2004.
- 32- MR. Alinaghi Zadeh, S. Sarkar, MH. Miranbeigi "[Experimental Investigation and Modeling of Nd-YAG Laser Absorption in Sheep Liver](#)". WC 2003, World Congress on Medical Physics and Biomedical Engineering, 24-29 August 2003, Sydney, Australia.
- 33- A. Kamali, Shahryari, S. Sarkar "[The Effect of Slit Slat Collimators on Reduction of Human Dose during SPECT Imaging](#)", third International

WONUC Conference, 2003.

- 34- A. Kamali, S. Sarkar, M. Shahriari, H. Aghai Hosaini ,"[Physical Parameters of a Propose Slit Slat Collimator for 511 KeV Imaging](#)", WC 2003, World Congress on Medical Physics and Biomedical Engineering, 24-29 August 2003, Sydney, Australia.
- 35- MR. Alinaghi Zadeh, S. Sarkar, MH. Miranbeigi, "[Experimental Investigation and Modeling of Nd-YAG Laser Absorption in Sheep Liver](#)", WC 2003, World Congress on Medical Physics and Biomedical Engineering, 24-29 August 2003, Sydney, Australia.
- 36- Karimiyan, S. Sarkar, Raesali, H. Zaidi, "[A New Dedicated PET System for Breast Imaging](#) ", European Association of Nuclear Medicine Congress 2003
- 37- Ghsemzade, S. Sarkar, Akhlaghpour, "[Possibility of Performing BMD Using Conventional CT Scanners](#)", IBMS-ISBMR, 2003.
- 38- S. Sarkar . M. DJ. Abolhassani, A. Saberi ,"[A New Contact Thermography System Using Thermoelectric Sensors](#)". Biomed, 2002, Malaysia 5 – 8 June.2002.
- 39- S. Sarkar, Abhesht, Firouzabadi ,"[Investigation of the Effect of Source Distance and Scattering Medium on Spatial Resolution and Contrast of Gamma Camera Images](#)", European Association of Nuclear Medicine Congress, 2002.
- 40- S. Sarkar, Dehghanpour, Saghari, Gh.Hyasinejad, "[Evaluation of the Effect of Various Parameters on the Amount of Radiation Dose Received By Home mates of I-135 Therapy Patients](#)", European Association of Nuclear Medicine Congress, 2001.
- 41- S. Sarkar, N. M. Spyrou, "[Position Dependency of Energy Spectra in Ring PET System and Methods of Correction](#)", Symposium on nuclear Reactors

(Surrey University),1990.

- 42- I.Mohamadi, M.A.Oghabiyani, S.Sarkar, Mohamadpour, "[Detection and Correction of Motion Artifact in Nuclear Medicine Imaging](#)", 8th Iranian Annual Congress of Nuclear Medicine, 2004.
- 43- Alinaghizadeh, S.Sarkar, Miranbeygi, "[An Experimental Evaluation of Nd-YAG Laser Absorption in Sheep Tissue](#)", sixth Iranian Medical Physics Congress, 2004.
- 44- I.Mohamadi, M.A.Oghabiyani, S.Sarkar, "[Importance of Motion Correction in SPECT Images](#)", sixth Iranian Medical Physics Congress,2004.
- 45- Kamali, S.Sarkar, Sahriyari, Aghahosseyni, "[Elimination of Artifacts Due to  \$\gamma\$ -Ray Penetration from Collimator Septa in Nuclear Medicine images for High Energy Photons \(511 keV\)](#)", tenth National Meeting of Physicists and Nuclear Specialists, 2003 .
- 46- S.Sarkar, "[Nano Medicine and its Perspective Future](#)",16th Physiology and Pharmacology Congress, 2003.
- 47- Kamali Asl, S.Sarkar, Shahriyari, Aghahiseyni, "[Monte Carlo Simulation of SPECT Imaging System Using MCNP Code and Comparing with Experimental Results](#)", ninth National Meeting of Physicists and Nuclear Specialists, 2002.
- 48- Aghaee, S.Sarkar, Firouzabadi, Bitarafan, "[Importance of Quality Control and Measuring Physical Parameters in SPECT Systems](#)", sixth Iranian Annual Congress of Nuclear Medicine, 2002.
- 49- S.Sarkar, Roholahi, Hedjazi,"[Evaluating the Ability of CCD Camera for Radiology Film Densitometry](#)", fifth Iranian Medical Physics Congress' 2002.

	<p>50- S.Sarkar, N.Ahmadinedjad, S.Taghizadeh, P.Kaboli, "<a href="#">A Comparison of Mammography and Thermography Imaging Systems on Diagnosis of Breast Disease</a>", fifth Iranian Medical Physics Congress, 2002.</p> <p>51- S.Sarkar, Jam zad, Mohamad pour, "<a href="#">Determination of Patient Motion in Static Planar Imaging Using Dynamic imaging and its Artifacts Corrections</a>", fifth Iranian Medical Physics Congress, 2002.</p> <p>52- S.Sarkar, Miranbeygi, Alinaghizadeh, "<a href="#">Nd-YAG Absorption and Heat Distribution Modeling in Tissue Using Monte Carlo Technique</a>", fifth Iranian Medical Physics Congress, 2002.</p> <p>53- S.Srakar, "<a href="#">Application of PET in Medicine</a>", fifth Iranian Annual Congress of Nuclear Medicine, 2001.</p> <p>54- P.Kaboli, S.Sarkar, "<a href="#">PET and its Ability on Medical Diagnosis</a>", 17th Iranian Congress of Radiology, 2000.</p> <p>55- Ghsemzade, S. Sarkar, Akhlaghpour, "<a href="#">Measurement of Bone Density with PQCT Technique Using General CT-Scan Systems</a>", first International Conference of Radiation and the Role of It at Diagnosis and Treatment ,2000 .</p> <p>56- Ghsemzade, S. Sarkar, Akhlaghpour , "<a href="#">Measurement of Bone Density</a>", first International Conference of Radiation and the Role of It at Diagnosis and Treatment, 2000.</p> <p>57- S.Sarkar, S.Taghizadeh, "<a href="#">Evaluation of Status of Radiography Sections: Radiation Protection and Image's Quality</a>", fourth Iranian Medical Physics Congress, 2000.</p> <p>58- S.Sarkar, M.Hedjazi, "<a href="#">Design and Construction a Penetrometer for kVp Calibration</a>" , fourth Iranian Medical Physics Congress , 2000.</p>
--	---



	<p>59- S.Sarkar, S.Zare, "Measuring and Optimizing of Physical Parameters in Thermography System with Thermoelectric Sensors", fourth Iranian Medical Physics Congress, 2000.</p> <p>60- S.Sarkar, M.J.Abolhasani, "Design and Construction of a New Contact Thermography Imaging System Using Thermoelectric Sensors", fourth Iranian Medical Physics Congress, 2000.</p> <p>61- S.Sarkar, A.Abehesht, Firouz abadi, "Evaluation and Measurement of Scattering Effect on Energy Spectrum and Line Spread Function in SPECT", fourth Iranian Medical Physics Congress, 2000.</p>
<b>Grants</b>	20
<b>Book Publication</b>	2
<b>Students</b>	PhD Students 10 MSc Students 30
<b>Patents</b>	<p>National: 1</p> <p>International: 8 (European, USA, China ,India)</p> <p>in the field of nanotechnology : Drug delivery</p> <ul style="list-style-type: none"> <li>- New water soluble porphylleren compounds</li> <li>- Use of magnesium isotope for treating hypoxia and medicament comprising the same</li> </ul>