



Dr. Saeed Sarkar

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

Phone: +98 21- 6643981 Fax: +98 21 66438630

E-mail: sarkar@sina.tums.ac.ir

Personal Details:

Family Name: Sarkar

First Name: Saeed

Date and Place of Birth: 30 Janvery 1957, Kashan-Iran.

Nationality: Iranian

Education:

- PhD in Medical Physics(Nuclear Medicine),University of Surrey Physics Dept. Guildford, UK, GU2 5XH, 1994

- MSc in Medical Physics,University of Surrey Physics Dept. Guildford, UK, GU2 5XH , 1988

- BSc Physics, Kashan University, College of Science, Kashan, Iran, 1979-1984

Work Experience:

- Academic Member, Tehran University of Medical sciences (TUMS), from 1994

- Head of Medical Physics Department, Tehran University of Medical sciences (TUMS), from 1996

- Head of Health Physics, Tehran University of Medical sciences (TUMS), from 1996

- Head of Research Center for Science and Technology in Medicine (RCSTIM), from 2002

- Member of High council for Promotion, Presidency of Nanotechnology in Iran, from 2005

- Member of Founder Board, Iranian association of Nanotechnology, from 2005

Member of Editorial Board:

- [ACTA MEDICA IRANICA Journal](#), 2000
- [Iranian Journal of Medical Physics](#), 2002
- [Iranian Journal of Radiation Research](#), 2002
- [Iranian Journal of Nuclear Medicine](#), 2002
- [Iranian Journal of Radiology](#), 2002
- [Journal of Family and Reproductive Health](#), 2007

Researches And Publications:

1. M. R. Ay, J. Hassani 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 & Molecular Imaging*, Vol. 34, Oct. 2007.
2. 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
3. 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*, 2007, Vol. 5, No. 4
4. 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*, 2007, 52(3)
5. Sarkar, S. Oghabian, M. A. Mohammadi, I. Mohammadpour, A. Rahmim, A. "A Linogram/Sinogram Cross-Correlation Method for Motion Correction in Planar and SPECT Imaging" *IEEE Transactions on Nuclear Science*, Issue 1, Part 1, Pages 71-79, Feb. 2007.
6. Leila Moezi, Hamed Shafaroodi, S. Sarkar, Seyed Hasan Emami_Razavi, Mehdi Sanatkar, Naser Mirzai, Ahmad R. Dehpour "Involvement of Nitroergic and Opioidergic Systems in the Hypothermia Induced by Cholestasis in Rats" *Pathophysiology*. 2006 Dec;13(4):227-32. Epub 2006 Sep 11
7. T.P. Faez, S. Sarkar "Simulation of Gamma Irradiation System for a Ballast Water Treatment" *Iranian Journal of Radiation Research*, Vol 4, No 2, 2006

8. B. Aghahadi, Z. Zhang, S. Zareh, S. Sarkar, P.S. Tayebi "Impact of Quality Control on Radiation Doses Received by Patient Undergoing Abdomen X-Ray Examination in Ten Hospital" Iranian Journal of Radiation Research, Vol 3, No 4, March 2006
9. Vahid Changizi, Mohammad A. Oghabian, Robert Speller, Saeed Sarkar, Ali Arab Kheradmand "Application of Small Angle X-Ray Scattering (Saxs) for Differentiation Between Normal and Cancerous Breast Tissue" Int. J. Med. Sci. 2005 2
10. V. Changizi, M.A. Oghabian, S. Sarkar, R.D. Speller, A. Arab Kheradmand "Application of Small Angle X-Ray Scattering (Saxs) With Synchrotron Facility in Differentiation between Normal and Tumoral Breast Tissues" Iran. J. Radiat. Res.,2 (4): 205-210 2005
11. M. R. Ay, S. Sarkar, M. Shahriari, D. Sardari, H. Zaidi, "Assessment of Different Computational Models for Generation of X-Ray Spectra in Diagnostic Radiology and Mammography" Med. Phy, 32, 2005
12. Karimiyan, C. J. Thomson, S. Sarkar ,Raesali , "Cybpet : Acylindrical Pet System for Breast Imaging", Nuclear Instruments & Methods in Physics Research , 545 , 2005
13. Kamali, S. Sarkar, M. Shahriari, H. Agha Hosaini "Slit Slat Collimator Optimization with Respect to MTF" Applied Radiation and Isotopes , 62 ,2005
14. M.R. Ay, M. Shahriari, S. Sarkar, H. Zaidi And M. Adib, "Monte Carlo Simulation of X-Ray Spectra in Diagnostic Radiology and Mammography Using MCNP4C", Phys. Med. Biol, 2004.
15. "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
16. 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.
17. N. M. Spyrou, J. M. Sharaf And S. Sarkar "Elemental Analysis of Biological Matrices Using Tomographic Techniques" Journal of Radio analytical and Nuclear Chemistry, Volume 167, Number 2 / January,
18. A. Mehrcsay, 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

19. A.Shirkavand, S.Sarkar, L. Ataaee , M. Hejhazi, M.Alinaghizadeh, " Response of T Cell Cytokines to Low Level He-Ne Laser Irradiation in Invitro: can Low Level Lasers Prevent Chronic Graft Rejection?" , Journal of Laser in Medicine, Vol4, No.4,2006
20. S.Sarkar, Nasrin Ahmadinedjad, S.Taghizadeh, "A Comparison of Mammography and Thermography Imaging Systems on Diagnosis of Breast Disease", Iranian Journal of Medical Physics, No 4-5, 2004.
21. 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, Vol 1, No 1, 2003.
22. Gh,Azizian, 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.
23. S.Sarkar, S.Taghizadeh, "Evaluation of Status of Radiography Sections: Radiation Protection and Image's Quality", Hakim Journal, Vol 5, No1, P23-30, 2002.
24. 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.
25. MJ.Abolhasani, A.Yousefi, S.Sarkar, "Designing of Infant's Health Monitoring System", Hakim Journal, Vol 4, No 4, P264-271, 2001.
26. 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.
27. F. Farahmand, S.Sarkar, P.Kaboli, MJ.Abolhasani, MH.Sami," Designing and Modeling of Modular Hip Joint Prothesis ", Hakim Journal , Vol 4, No 1, P 59-68, 2001.
28. S.Sarkar, M.Dehghanpoor, M.Saghari, M.Ghiyasinedjad, "Evaluation of Radiation Absorbed Dose by Family of The Patients Undergoing Iodine Therapy", Iranian Journal of Nuclear Medicine, Vol 14-15, P 45-54, 2000-2001.

Congress And Seminars:

- 1- M. A. Oghabian, M. Bakhtiari, M. Malekpour, S. Amanpour, A. Arab Kharadmand, M. A. Mohagheghi, H. Ghana-Ati, S. Sarkar, S. Yarandi "MR 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
- 2- 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
- 3- 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
- 4- Karimiyan, C. J. Thomson, S. Sarkar, Raesali "A Dedicated PET System for Breast Imaging (CYBPET)" ROME 2004 IEEE Conference
- 5- 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
- 6- 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
- 7- 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
- 8- 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.
- 9- 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.
- 10- 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.

- 11- 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.
- 12- 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.
- 13- 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
- 14- 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.
- 15- A. Kamali, Shahryari, S. Sarkar "The Effect of Slit Slat Collimators on Reduction of Human Dose during SPECT Imaging", third International WONUC Conference, 2003.
- 16- 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.
- 17- 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.
- 18- Karimiyan, S. Sarkar, Raesali, H. Zaidi, "A New Dedicated PET System for Breast Imaging ", European Association of Nuclear Medicine Congress 2003
- 19- Ghsemzade, S. Sarkar, Akhlaghpour, "Possibility of Performing BMD Using Conventional CT Scanners", IBMS-ISBMR, 2003.
- 20- S. Sarkar . M. DJ. Abolhassani, A. Saberi , "A New Contact Thermography System Using Thermoelectric Sensors". Biomed,2002 , Malaysia 5 ? 8 June.2002.
- 21- 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.

- 22- 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.
- 23- 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.
- 24- 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 .
- 25- Alinaghizadeh, S.Sarkar, Miranbeygi, "An Experimental Evaluation of Nd-YAG Laser Absorption in Sheep Tissue", sixth Iranian Medical Physics Congress, 2004.
- 26- I.Mohamadi,M.A.Oghabiyani, S.Sarkar,"Importance of Motion Correction in SPECT Images", sixth Iranian Medical Physics Congress,2004.
- 27- Kamali, S.Sarkar, Sahriyari, Aghahosseyni, " Elimination of Artifacts Due to γ -Ray Penetration from Collimator Septa in Nuclear Medicine images for High Energy Photons (511 keV)", tenth National Meeting of Physicists and Nuclear Specialists, 2003 .
- 28- S.Sarkar, "Nano Medicine and its Perspective Future",16th Physiology and Pharmacology Congress, 2003.
- 29- 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.
- 30- Aghaee, S.Sarkar, Firouzabadi, Bitarafan, "Importance of Quality Control and Measuring Physical Parameters in SPECT Systems", sixth Iranian Annual Congress of Nuclear Medicine,2002 .
- 31- S.Sarkar, Roholahi, Hedjazi,"Evaluating the Ability of CCD Camera for Radiology Film Densitometry", fifth Iranian Medical Physics Congress' 2002.
- 32- S.Sarkar, N.Ahmadinedjad, S.Taghizadeh, P.Kaboli, "A Comparison of Mammography and Thermography Imaging Systems on Diagnosis of Breast Disease", fifth Iranian Medical Physics Congress, 2002.

- 33- S.Sarkar, Jam zad, Mohamad pour, "Determination of Patient Motion in Static Planar Imaging Using Dynamic imaging and its Artifacts Corrections", fifth Iranian Medical Physics Congress, 2002.
- 34- S.Sarkar, Miranbeygi, Alinaghizadeh, "Nd-YAG Absorption and Heat Distribution Modeling in Tissue Using Monte Carlo Technique", fifth Iranian Medical Physics Congress, 2002.
- 35- S.Srakar, "Application of PET in Medicine", fifth Iranian Annual Congress of Nuclear Medicine, 2001.
- 36- P.Kaboli, S.Sarkar, "PET and its Ability on Medical Diagnosis", 17th Iranian Congress of Radiology, 2000.
- 37- Ghsemzade, S. Sarkar, Akhlaghpour, "Measurement of Bone Density with PQCT Technique Using General CT-Scan Systems", first International Conference of Radiation and the Role of It at Diagnosis and Treatment ,2000 .
- 38- Ghsemzade, S. Sarkar, Akhlaghpour , "Measurement of Bone Density", first International Conference of Radiation and the Role of It at Diagnosis and Treatment, 2000.
- 39- S.Sarkar, S.Taghizadeh, "Evaluation of Status of Radiography Sections: Radiation Protection and Image?s Quality", fourth Iranian Medical Physics Congress, 2000.
- 40- S.Sarkar, M.Hedjazi, "Design and Construction a Penetrometer for kVp Calibration" , fourth Iranian Medical Physics Congress , 2000.
- 41- S.Sarkar, S.Zare, "Measuring and Optimizing of Physical Parameters in Thermography System with Thermoelectric Sensors", fourth Iranian Medical Physics Congress,2000.
- 42- S.Sarkar, M.J.Abolhasani, "Design and Construction of a New Contact Thermography Imaging System Using Thermoelectric Sensors", fourth Iranian Medical Physics Congress, 2000.
- 43- 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.

Grants: 20

Book Publication: 2

Students:

PhD Students: 6

MSc Students: 27

Patents:

National: 1

International: 2 (European)