

CURRICULUMVITAE



I. Personal Information

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II. Educational Records

2002-2009:

PhD in Medical Physics in TarbiatModares university of Iran

Correction of respiratory motion in myocardial gated SPECT imaging, correlation with angiography,A Thesis Presented for the PhD Degree in Medical Physics.

1998-2001:

M.S. in Medical Physics at TarbiatModares University of Iran

Selection of optimum filters for myocardial perfusion SPECT imaging in comparison with angiography. A Thesis Presented for the Master of Sciences Degree In Medical Physics.

1994-1996:

B.S. in Technology of Radiology at Tehran University, Iran

1991-1993:

B.S. in Technology of Radiology at Iran University, Iran

Research Publications:

A. Publication Journals:

- 1) H.Rajabi, G.S. Pant and **A.Bitarafan-Rajabi**; Back-projection SPECT and filtration. Statistical and mathematical techniques in nuclear medicine: Delhi; 72-83, 2001.
- 2) **A.Bitarafan-Rajabi**, H. Rajabi, N. Yagoobi, H. Firouzabadi F. Rastgou ; Filter selection for 99mTc-sestamibi myocardial perfusion SPECT imaging; Iranian journal of nuclear medicine;19: 41-50-2003.

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- 5) **A. Bitarafan-Rajabi**, H. Rajabi, H. Firouzabadi F. Rastgou, N. Yagoobi, M Amoui and G Raziee; Comparison of acceptance tests for SPECT system in Tehran; Iranian journal of nuclear medicine; 13(24): 31-37-2005.
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- 9) S. Rasaneh, H. Rajabi, **A. Bitarafan-Rajabi**, M R Farsinejad, The Effects of Earth Magnetic Field in SPECT System. Yafte; 8(1): 37-42, 2006.
- 10) H. Firouzabady, **A. Bitarafan-Rajabi**, H. Rajabi, F. Rustgou, F. Noohi, A. Mohebi , A.R. Tilekoo, N. Yaghoobi, H. Malek. Measurement of LVEF using ECG-Gated SPECT and Angiography: A correlation study. Iranian Heart journal. 8(3); 6-15: 2007.
- 11) A. Takavar, H.R Ghiasi, N. Alibabaei, N. Riyahi-Alam, A. Fard-Esfahani, M. Sohrabi, **A. Bitarafan-Rajabi**, Platelet-based MPLE Algorithm for Denoising of SPECT Images: Phantom and Patient Study. Iranian journal of nuclear medicine; 15 (27): 8-13-2007.
- 12) E. Raeisi, H. Rajabi, M.R. Aghamiri, E. Hajizadeh, S. Seifollahi-Asl, N. Yaghobi, H. Firouzabadi, **A. Bitarafan-Rajabi**. Qualitative Evaluation of Filter Function in Brain SPECT. Iranian journal of nuclear medicine; 15(27): 1-8-2007.
- 13) K. Ebrahimnezhad Gorji, H. Rajabi, H. Zaidi, E. Hajizadeh, **A. Bitarafan-Rajabi**, H.R. Ghiasi. Comparison of 6 PET Scanners, A Simulation Study. Iranian journal of nuclear medicine; 15(27): 24-35-2007.

- 14) F. Kalantari, H. Rajabi, N. Yaghoobi, **A. Bitarafan**, K. EbrahimnejadGorji, F. Rastgoo, H. Malek, H. Firuzabadi. Energy Window Setting for Optimum Tl-201 Cardiac Imaging. Iranian journal of nuclear medicine; 15(28): 15- 24-2007.
- 15) **A. Bitarafan-Rajabi**, H. Rajabi, B. Gruy, F. Rustgou, A. A. Sharafi, H. Firoozabady, N. Yaghoobi, H. Malek, C. Pirich, W. Langesteger, M. Beheshti, Respiratory Motion Detection and Correction in ECG-Gated SPECT: a New Approach. Korean Journal of Radiology; 9(6): 490-497; 2008.
- 16) **A. Bitarafan-Rajabi**, H. Rajabi, The effect of filtrating and reconstruction method on the left ventricular ejection fraction derived from GSPET: a statistical comparison of angiography and echocardiography. Annual Nuclear Medicine; 22:707–713; 2008.
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- 23) H. Malek, T. Ghaedian, N. Yaghoobi, F. Rastgou, **A. Bitarafan-Rajabi**, and H. Firoozabadi, Focal breast uptake of 99mTc-sestamibi in a man with spindle cell lipoma, J. Nucl. Cardiol. 2012;19:618-20.

- 24) Feridoon Rastgou, **Ahmad Bitarafan-Rajabi**, Ahmad Farahzadi, Nahid Yaghoobi, Hadi Malek, Hasan Firoozabady, Hossein Ali Basiri, Hassan Moladoust, Diagnostic Accuracy Assessment of ST Segment Displacements, Chest Pain and Stress Myocardial Perfusion Exercise Test in Coronary Stenosis compare with Angiography Finding, Iranian Heart journal, 12(4); 30-36: 2012.
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- 30) Mahsa Noori Asl, Alireza Sadremomtaz, **Ahmad Bitarafan-Rajabi**. Evaluation of six scatter correction methods based on spectral analysis in 99mTc SPECT imaging using SIMIND Monte Carlo simulation. Journal of Medical Physics, Vol. 38, No. 4, 2013.
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- 32) **Ahmad Bitarafan-Rajabi**, Kazem Babazadeh, Hosein Poorbaygi, Shahab Sheibani, Mona Heidarali, Asghar Zare, Reza kiani, Hossien Barati, Amir Darbandi Azad. Hepatic radioembolisation of yttrium-90 Microspheres in animal model, Journal of Nuclear Medicine & Radiation Therapy, Submission.

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- 35) **Ahmad Bitarafan-Rajabi**, Hadi Hasanzadeh, Mahdi Jahangiri, ZohrehHoseinpour, HamidehNazemi, AtefehBaghian, MoghadesehMahdinejad,MajidSadeghi, Hassan Moladoust, A New Sonographic Phantom for Quality Control and Training Purposes.Arch Cardiovasc Imaging. May; 2(2);2014.
- 36) **Ahmad Bitarafan-Rajabi**, FereydonNoohi, Hassan hashemi, Mohammad Miraftab, Nahid Yaghoobi, Fereydon Rastgou, Hadi Malek, Hoshang Faghihi, Hassan Firouzabadi, Soheila Asgari, Farhad rezvan, Hamidreza Khosravi, Mehdi Khabazkhoob, Ionizing radiation- induced cataract in cardiology interventional staff during coronary Res Cardiovasc Med. 2015 February; 4(1): e25148.
- 37) Mahsa NooriAsl, Alireza Sadremomtaz, **Ahmad Bitarafan-Rajabi**. Evaluation of Three Scatter Correction Methods Based on Estimation of Photopeak Scatter Spectrum in SPECT Imaging: A Simulation Study, Phys Med. 2014 Dec; 30(8):947-53.
- 38) Zohreh Shahpouri, Alireza Kamali-Asl, **Ahmad Bitarafan-Rajabi**, Jakir Hossain, Seyed Mohammad Entezarmahdi, Samane Mohseni, Nahid Yaghoobi, Arman Rahmim. A Comparative Assessment of Dynamic and Conventional Thallium-201 SPECT Myocardial Perfusion Imaging: Monte Carlo Simulations and Case Studies. **Vol 1, No 2;91-102; 2014.**
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novel Gd[ⁱⁱⁱ]-DO3A-butrol nano-formulation (2014) RSC Advances, 4 (86), pp. 45984-45994.

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- 44) Hassan Yousefnia, **Ahmad Bitarafan-Rajabi**, Mir Sepehr Pedram, samaneh zolghadri, Ali Bahrami-Samani, Amir Reza Jalilian, Mohammad Mazidi, Amir Darbandi Azad, Mohammad Ghannadi-Maragheh, Preclinical studies of ¹⁶⁶Ho-chitosan for treatment of hepatocellular carcinoma, Iranian Journal of Pharmaceutical Research, 2015, submission.
- 45) Reza Mirfallah, Masoud Mehrazin, Fereydoun Rastgou, **Ahmad Bitarafan-Rajabi**, Abdoul Reza Shojaei, H Firoozabadi, N Yaghoobi, H Malek, Mahsa Karga. Preoperative assessment of meningioma aggressiveness by Thallium-201 brain SPECT. **Iranian journal of nuclear medicine**, 2015;23(2):82-88.
- 46) Jafari, Atefeh; Salouti, Mojtaba; Farjami Shayesteh, Saber; Heidari, Zahra; **Bitarafan-Rajabi, Ahmad**; Boustani, Komail, Synthesis and characterization of Bombesin-superparamagnetic iron oxide nanoparticles as a targeted contrast agent for imaging of breast cancer using MRI. **Nanotechnology**. 2015 Feb 20;26(7):075101.
- 47) F. Shahmardan, A. Bitarafan-Rajabi, S.M.R. Aghamiri, Hasan Moladost, Mehravar Rafati, Comparison of Reconstruction Methods in Brain SPECT Imaging Using Statistical Parametric Mapping. **Journal of Medical Imaging and Health Informatics**, 2015, in press.
- 48) **Ahmad Bitarafan-Rajabi**, Kazem Babazadeh, Hosein Poorbaygi, Shahab Sheibani, Hossein Porbiegi, Mona Heidarali, Asghar Zare, Reza kiani, Hossien Barati and Amir Darbandi Azad, Hepatic Radioembolisation of Yttrium-90 Microspheres in Animal Model. **J Nucl Med Radiat Ther**, 6:5; 2015.
- 49) Z Shahpouri, **A Bitarafan-Rajabi**, AK Asl, H Hasanzadeh, Evaluation of 4D-NCAT phantom to simulate dynamic behavior of radiopharmaceutical in myocardium. **Koomesh** 17 (1), Pe250-Pe254, En27, 2015.

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B. National and International Congress:

- 1- H. Rajabi, **A. Bitarafan-Rajabi**, N. Yagoobi, H. Firouzabadi F. Rastgou; Filter selection for 99mTc-sestamibi myocardial perfusion SPECT imaging; P71; EANM -August 2002.
- 2- **A. Bitarafan-Rajabi**, H. Rajabi, F. Rastgou, N. Yagoobi, S. Hekmat, H. Firouzabadi; Measurement of LVEF using ECG-Gated SPECT echocardiography and angiography, a correlation study; P574: EANM 2004.
- 3- S. Rasaneh, H. Rajabi, **A. Bitarafan-Rajabi**, F. Rastgou; The Effects of Earth Magnetic Field to Shift Photo Peak in SPECT System ;P546: EANM 2004.
- 4- F. Rastgou, S. Seifollahi.asl, S. Hatami, N. Yagoobi, M. Noroozian, H. Firouzabadi, M.

Bigdeli, **A. Bitarafan-Rajabi**, M. Malek; The Measurement of Regional Cerebral Blood Flow (r-CBF) after Listening to Komail Prayers (Rhythmic Shiite Prayers) in Three Groups of Subjects with Different Degrees of Religiosity;P330-EANM-2005.

5- H. Rajabi, E Raeisi, **A. Bitarafan-Rajabi**; A phantom for software evaluation in SPECT imaging, P708-EANM-2005

6- H. Rajabi, **A. Bitarafan-Rajabi**, N. Yaghoobi, H. Firouzabady,F. Rustgou; Filter selection for ^{99m}Tc -sestamibi myocardial perfusion SPECT imaging, The fifth Iranian congress of medical physics 19-20 may 2002

7-H. Rajabi, **A. Bitarafan-Rajabi**, N. Yaghoobi, H. Firouzabad,F. Rustgou;Evaluation of MTF in SPECT imaging, The sixth Iranian congress of nuclear medicine 2002

8- N Aghaie , S Sarcar, H. Firouzabady, **A. Bitarafan-Rajabi**, Evaluation of quality control and measurements of physical parameters for SPECT systems;The sixth Iranian congress of nuclear medicine 2002

9- N Jabbari, H. Rajabi , H. Firouzabadi, F. Rastgou, N. Yagoobi, **A. Bitarafan-Rajabi**; New method for energy spectrum in gamma camera. The sixth Iranian congress of nuclear medicine 2002

10- **A. Bitarafan-Rajabi** ,F. Rastgou, H. Rajabi, N. Yagoobi, G Omrani, H. Firouzabady, S. Hatami, R Baghaie , A Mohebi, H Bassiri;Measurement of LVEF using ECG-Gated SPECT echocardiography and angiography, a correlation study;The 14th congress of Iranian heart Association Nov.23-26. 2004

11-H Zargari-Asl, M Mokhtari-Dizaji, N. Yagoobi, **A. Bitarafan-Rajabi**; Automatic calculation of left ventricle mid-wall strain in cardiac phases myocardial gated perfusion SPECT. The 14th congress of Iranian heart Association Nov.23-26, 2004
Zargari Asl H, Mokhtari-Dizaji M, Yaghoobi N, Bitarafan A. Automatic calculation of ϵ_{LV} left ventricle mid-wall strain in cardiac phases from myocardial gated perfusion SPECT. 14th congress of Iranian heart association in collaboration with British cardiac society. 2004, .supplement 4: p266

12- N. Yagoobi, F. Rastgou, S. Seifollahi.asl,H. Firouzabady,M. Malek, **A. Bitarafan-Rajabi**, Comparison of Regional Cerebral Blood Flow (r-CBF) after Listening to Komail Prayers (Rhythmic Shiite Prayers) in Three Groups of Subjects with Different Degrees of Religiosity; Ninth Iranian congress of nuclear medicine 10-12 Dec 2005

13- N. Yagoobi, F. Rastgou, S. Seifollahi.asl,H. Firouzabady,M. Malek, **A. Bitarafan-Rajabi**, Savadkohi and Shahmohammadi; Quantitative pulmonary scintigraphy for evaluation of congenital anomalies of the heart and great vessels; Ninth Iranian congress of nuclear medicine 10-12 Dec 2005

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15- F Kalantari, H. Rajabi, K Ebrahimnejad-Gorji, **A. Bitarafan-Rajabi**; Using from NCAT phantom for simulation in nuclear medicine; Ninth Iranian congress of nuclear medicine 10-12 Dec 2005

16- E Raeisi, H. Rajabi, S. Seifollahi, E Hajizadeh, M R Aghamiri, M Amoui, **A. Bitarafan-Rajabi**, S Olomi; Optimum filter selection in brain SPECT imaging; Ninth Iranian congress of nuclear medicine 10-12 Dec 2005

17- **A. Bitarafan-Rajabi**, H. Rajabi, F. Rustgou, M. Mokhtari, S. Hekmat, N. Yaghoobi, H. Firouzabadi; Effective of reconstruction methods and filtration on LVEF in the ECG- Gated SPECT in the comparison with echocardiography and angiography; The sixth Iranian congress of medical physics 11-13 may 2004

18- **A. Bitarafan-Rajabi**, H. Rajabi, H. Firouzabadi, F. Rastgou, N. Yaghoobi, M Amoui and G Raziee; Comparison of acceptance tests for SPECT system in Iran; The sixth Iranian congress of medical physics 11-13 may 2004

19- S Rasaneh, H. Rajabi, **A. Bitarafan-Rajabi**, F. Rastgou; The Effects of Earth Magnetic Field to Shift Photo Peak in SPECT System; The sixth Iranian congress of medical physics 11-13 may 2004

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22- **مجتبی صلوتی**، حسین رجبی، حسین بابایی، محمد جواد رسایی، محمد مزیدی، محمد شفیعی، زهیر محمد حسن، **احمد بیطرفان رجبی**، جواد محمد نژاد، ارزیابی میزان جذب آنتی بادی های نشاندار شده در تومور به سایر ارگانها با استفاده از تصاویر سینتی گرافی به منظور جلوگیری از کشتن حیوانات، اولین سمینار و کارگاه حفاظت در برابر اشعه در بخش های پزشکی هسته ای، 24-26 مهر ماه 1386، تهران

23- H Moladoust, M Mokhtari-Dizaji, Z Ojaghi-Haghighi, F Noohi, R Jalalian, A Khaledif, H Grailu, **A. Bitarafan-Rajabi**. Regional Myocardium Radial Strain Assessment of the Interventricular Septum by use of new proposed algorithm. The seventh Congress on Internal Disease, 2006, University of Arthesh Medical Science Tehran, Iran

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- 25- F. Abbaspour, **A. Bitarafan-Rajabi**, H. Rajabi, F. Rastgou. Coincidence gamma camera imaging; a comparison between the two modes of imaging, Iranian Journal of Nuclear Medicine; 14(Suppl 1): 61-62; 2006.
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Books

1- Statistical and Mathematical Techniques in Nuclear Medicine, 2001.

Participant

1- IAEA Regional Meeting to Create a Network of Medical Professionals on Radiation Protection of Children (RAS9055) 15-17 December 2010 Venue: Anandhamahidol Building Faculty of Medicine, Chulalongkorn University (King Chulalongkorn Memorial Hospital), Bangkok, Thailand.

2- The SAFety in RADiological procedures reporting system (SAFRAD), RAS9055, 14-16 December 2011, Vienna, Austria.

مجلات علمی

1- **احمد بیطرفان رجیبی**، مجتبی صلوتی، فرانک سقطچی، PET، تشخیص تومور، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 70- بهمن 1385

2- مجتبی صلوتی، **احمد بیطرفان رجیبی**، سارا جباری، جواد احمدی، کاربرد لیزر در پزشکی و دندانپزشکی، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 71- اسفند 1385

3- **احمد بیطرفان رجبی**، مجتبی صلوتی، فرانک سقطچی، کنترل کیفی و کالیبراسیون تجهیزات پزشکی هسته ای، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 66- مهر 1385

4- احمد بیطرفان، مجتبی صلوتی، فرانک سقطچی، آزمون های پذیرش در سیستم های پزشکی هسته ای، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 60- فروردین 1385

5- **احمد بیطرفان رجبی**، مجتبی صلوتی، فرانک سقطچی، سارا جباری، سیکلوترون ها و سینکروترون ها، انواع و کاربرد آنها در پزشکی، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 84- فروردین 1387

6- **احمد بیطرفان رجبی**، مجتبی صلوتی، فرانک سقطچی، سارا جباری، سیکلوترون های IBA و ویژگی آنها، ماهنامه مهندسی پزشکی و تجهیزات آزمایشگاهی، شماره 85- اردیبهشت 1387

Research Interest:

- 1- Nuclear Medicine (Hot Lab instrumentation, Gamma Camera, SPECT, PET, SPECT/CT and PET/CT)**
- 2- Image processing and reconstruction**
- 3- Simulation with SimSET and Simind**
- 4- Quality control and acceptance test in the nuclear medicine system (dose calibrator, gamma camera, SPECT, PET, CT, MRI, Radiology, Echo and Angiography)**
- 5- Nuclear medicine techniques and correction methods (scatter, motion and attenuation)**
- 6- Personal Dosimetry (with TLD, G&M, Chamber ionization and Monte Carlo method)**
- 7- Planning for SPECT, PET, SPECT/CT, PET/CT, CT, MRI, Radiology and Angiography centers**
- 8- Radiation protection in nuclear medicine and angiography**

ACADEMIC EXPERIENCES

1. Staff Member: Department of Medical Physics, Iran Medical Sciences University, Tehran, Iran

(1991-1993).

2. Staff Member: Department of Medical Engineering, Azad University, Tehran, Iran (1993-1999).

3. Professor: Department of Medical Physics, Tarbiat Modares University, Tehran, Iran (since 1999)

MEMBERSHIP OF SCIENTIFIC SOCIETIES

- 1. Medical Physics Society of I.R. Iran, Since1998.**
- 2. Medical Engineering Society of I. R. Iran, Since 2002**
- 3. Iranian Society of Cardiac Surgeons of I. R. Iran, since 2004**
- 4. IEEE, MBC, since 2007**
- 5. Biomechanical Society, since 2008**

REFEREE FOR JOURNAL ARTICLES SUBMITTED TO

- 1) Iranian J. Medical Physics, Iranian Association of Medical Physics.**
- 2) Modares, J. Medical Science, TMU.**
- 3) Iranian J. Radiation Research, TMU.**
- 4) Kerman, J. Medical Science, Kerman University.**
- 5) Kosar, J. Medical Science, Baghiat-allah Medical Science University.**
- 6) Koomesh, J. Medical Science, Semnan University.**
- 7) Iranian Medical Sciences University, Iran Medical Sciences University**
- 8) Medical Engineering J, Iranian Association of Medical Engineering**
- 9) Iranian J. Radiology, Iranian Association of Radiology**
- 10) Daneshvar, Shahed University**
- 11) Mashhad J. Medical Sciences, Mashhad University**
- 12) Medical Basic Sciences, Mash-had University**
- 13) Physiological measurements, IOP**
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RESEARCH INTERESTS

- 1. Ultrasonic Tissue Characterization**
- 2. Bone Densitometry**
- 3. Laser, Interaction with tissue, repair**
- 4. Mechanical parameters in Cardiovascular system**
- 5. Mechanical Parameters in ophthalmology**
- 6. Mechanical Parameters in Breast and lesions**
- 7. Sonodynamic Therapy and Photodynamic Therapy**
- 8. Low Level Laser Therapy, Prostate and Liver**
- 9. Targeted Therapy with nanoparticles**