

Mahdi Ghorbani

Ph D, Biomedical Engineering and Medical Physics Department, Faculty of Medicine,
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Academic education

1999, B. Sc., Applied Physics, Atomic Physics, Yazd University, Yazd, Iran

2003, M. Sc., Medical Physics, Radiotherapy, Ahwaz Jondishapour University of Medical
Sciences, Ahwaz, Iran

2004, Ph. D., Medical Physics, Radiotherapy (Brachytherapy), Mashhad University of
Medical Sciences, Mashhad, Iran

Books

2007, The Basics of Ionizing Radiation Dosimetry and Detection, Translation (In Farsi),
Publisher: Sokhangostar, Publication Place: Mashhad , Iran, Ghorbani Mahdi

2015, The physics and technology of thin film layers. Edition (In Farsi), Publisher: Khate
sefide danesh, Publication place: Tehran, Iran, Hosseinabadi S, Alae MS, Ghorbani M.

2016, The basics of statistics, Translation (In Farsi), Publisher: Khate sefide danesh,
Publication place: Tehran, Iran, Farhood B, Ahmadi Moghaddas T, Ghorbani M.

Journal Articles

- 1-Tahmasebi Birgani M. J.; Ghorbani M, New Formula For Calculation of Cobalt, 60 Percent Depth Dose. , Iranian Journal of Medical Physics (2006).
- 2-Tahmasebi Birgani M. J.; Ghorbani M.; Ansari M., Calculation of Percent Depth Doses at Different Points Under a Step, filter Using Clarkson Method., Iranian Journal of Medical Physics (2006).
- 3-Bahreyni Toossi M. T.; Ghorbani M.; Mowlavi A. A.; Taheri M.; Layegh M.; Makhdoumi I.; Meigooni A. S., Air Kerma Strength Characterization of a GZP6 Cobalt, 60 Brachytherapy Source. Reports of Practical Oncology and Radiotherapy (2010).
- 4-Bahreyni Toossi M. T., Abdollahi M., Ghorbani M., Monte Carlo Dose Calculation of GZP6 ⁶⁰Co Stepping Source Based on a Matrix Shift Technique. Reports of Practical Oncology and Radiotherapy (2011, 16, 10, 13)
- 5-Ghorbani M.; Bahreyni Toossi M. T.; Mowlavi A. A.; Bayani Roodi Sh.; Meigooni A. S., Application of a Color Scanner for ⁶⁰Co High Dose Rate Brachytherapy Dosimetry with EBT Radiochromic Film. Iranian Journal of Radiation Research (2010),
- 6-Bahreyni Toossi M. T., Abdollahi M., Ghorbani M., A Monte Carlo study on dose distribution validation of GZP6 stepping source. Australasian Physical and Engineering in Science and Medicine, 2011.
- 7-Bahreyni Toossi M. T.; Fardid R.; Mehrpouyan M.; Ghorbani, M., Evaluation of Occupational Radiation Exposure of Cardiologists in Interventional Radiographies in Mashhad CATLABs. International Journal of Low Dose Radiation, 2011.
- 8-Pakravan D., Ghorbani M., Momennezhad M., Tumor dose enhancement by gold nanoparticles in a 6 MV photon beam: a Monte Carlo study on the size effect of nanoparticles. Accepted for Publication in Nukleonika, 2013.
- 9-Bahreyni Toossi M. T., Ghorbani M., Mehrpouyan M., Akbari F, Sobhkhiz Sabet L. and Soleimani Meigooni A., A Monte Carlo study on tissue dose enhancement in high dose rate brachytherapy: a comparison between gadolinium and gold nanoparticles. Australasian Physical & Engineering Sciences in Medicine 2012.

- 10-Bahreyni Toossi M. T., Ghorbani M., Makhdoumi Y., Taheri M., Homae Shandiz F., Zahed Anaraki S., Soleimani Meigooni A. In vivo thermoluminescence dosimetry to assess rectum and bladder dose for gynecological brachytherapy by a GZP6 high dose rate afterloading unit. *Reports of Practical Oncology and Radiotherapy* 2012; 17:352-357.
- 11- Bahreyni Toossi M. T., Abdollahi M., Ghorbani M., A Monte Carlo study on dose distribution validation of GZP6 stepping source. *Reports of Practical Oncology and Radiotherapy* 2013; 18:112-116.
- 12-Pakravan D., Ghorbani M., Momennezhad M., Tumor dose enhancement by gold nanoparticles in a 6 MV photon beam: a Monte Carlo study on the size effect of nanoparticles. *Nukleonika*, 2013; 58(2):275-280.
- 13- Akram Yahya Abadi, Ali Asghar Mowlavi, Reza Izadi Najaf Abadi, Mahdi Ghorbani. Calculation and comparison of MD-55-2 and HS radiochromic films' responses to the ^{60}Co Gamma rays, *Archive of Oncology*, 20 (3-4), 2012.
- 14-Mahdi Bakhshabadi, Mahdi Ghorbani, Ali Soleimani Meigooni. Photon activation therapy: a Monte Carlo study on dose enhancement by various sources and activation media. *Australasian Physical and Engineering Sciences in Medicine* 2013; 36(3):301-311.
- 15-Fardid R., Bahreyni Toossi M. T., Mehrpouyan M., Ghorbani, M., Evaluation of Occupational Radiation Exposure of Cardiologists in Interventional Radiographies in Mashhad CATLABs. *International Journal of Low Dose Radiation*, 2013; 9(2): 160:168.
- 16-Mohammad Taghi Bahreyni Toossi, Marziyeh Behmadi, Mahdi Ghorbani, Hamid Gholamhosseinian. A Monte Carlo study on electron and neutron contamination caused by the presence of hip prosthesis in photon mode of a 15 MV Siemens PRIMUS linac. *J Appl Clin Med Phys* 2013;14(5):52-67.
- 17-Ghorbani M., Bahreyni Toossi MT, Evaluation of dosimetric parameters of GZP6 HDR brachytherapy unit by Monte Carlo simulation, treatment planning system, radiochromic film and thermoluminescence dosimetry. *Medical Physics International* 2013;1(2):161-162.

18-Mohammad Taghi Bahreyni Toossi, Mahdi Ghorbani, Fateme Akbari, Leila Sobhkhiz Sabet, Mohammad Mehrpouyan. Monte Carlo simulation of electron modes of a Siemens Primus linac (8, 12 and 14 MeV). *Journal of Radiotherapy in Practice* 2013;12:352–359.

19-Mahdi Ghorbani, Mahdi Bakhshabadi, Alireza Golshan, Courtney Knaup. Dose enhancement by various nanoparticles in prostate brachytherapy. *Australasian Physical and Engineering Sciences in Medicine*. (2013) 36:431–440.

20-Mahdi Ghorbani, Fateme Salahshour, Abbas Haghparast, Toktam Ahmadi Moghaddas, Courtney Knaup, Effect of tissue composition on dose distribution in brachytherapy with various photon emitting sources. *Journal of Contemporary Brachytherapy* 2014, 6(1): 54-64.

21-Akram Yahya Abadi, Ali Asghar Mowlavi, Mahdi Ghorbani, Courtney Knaup. A Monte Carlo evaluation of dose enhancement by cisplatin and titanocene dichloride chemotherapy drugs in brachytherapy with photon emitting sources. *Australas Phys Eng Sci Med* (2014) 37:327–336

22-Hajizadeh-Safar M, Ghorbani M, Khoshkharam S, Ashrafi Z. Study of a new design of P-N semiconductor detector array for nuclear medicine imaging by Monte Carlo simulation codes. *J Med Signals Sens* 2014; 4(3): 231-235.

23-Ahmadi Moghaddas T, Ghorbani M, Haghparast A, Flynn RT, Eivazi MT. A Monte Carlo Study on Dose Enhancement Effect of Various Paramagnetic Nanoshells in Brachytherapy. *J. Med. Biol. Eng., Journal of Medical and Biological Engineering*, 34(6): 559-567

24-Mohsen Khosroabadi, Mahdi Ghorbani, Faezeh Rahmani, Courtney Knaup, Neutron capture therapy: a comparison between dose enhancement of various agents, nanoparticles and chemotherapy drugs. *Australas Phys Eng Sci Med* 2014. 37:541–549

25-Bagher Farhood, Mahdi Ghorbani, Effect of diameter of nanoparticles and capture cross-section library on macroscopic dose enhancement in boron neutron capture therapy, *Journal of Contemporary Brachytherapy*, 2014; 6(4): 377-385.

- 26-Ghorbani M., Tabatabaei Z. S., Vejdani Noghreiyani A., Vosoughi H., Knaup C., Effect of Tissue Composition on Dose Distribution in Electron Beam Radiotherapy, *J Biomed Phys Eng* 2015; 5(1): 15-24.
- 27-Majid Alizadeh, Mahdi Ghorbani, Abbas Haghparast,, Naser Zare, Toktam Ahmadi Moghaddas, A Monte Carlo study on dose distribution evaluation of Flexisource ^{192}Ir brachytherapy source, *Rep Pract Oncol Radiother*, 2015, 20:204-215.
- 28-Delaram Pakravan, Mahdi Ghorbani, Ali Soleimani Meigooni, Evaluation of ^{101}Rh as a brachytherapy source, *J Contemp Brachytherapy* 2015; 7, 2: 1-10.
- 29-Mohsen Khosroabadi, Bagher Farhood, Nima Hamzian, Mahdi Ghorbani, Homa Rezaei Moghaddam, David Davenport. Tissue composition effect on dose distribution in neutron brachytherapy /neutron capture therapy. *Rep Pract Oncol Radiother*, 2016;21:8-16.
- 30-Mahdi Ghorbani, Marziyeh Behmadi Evaluation of hypothetical ^{153}Gd source for use in brachytherapy. *Rep Pract Oncol Radiother*, 2016; 21:17-24.
- 31-Mohammad Taghi Bahreyni Toossi, Mahdi Ghorbani, Leila Sobhkhiz Sabet, Fateme Akbari, Mohammad Mehrpouyan. A Monte Carlo study on dose enhancement and photon contamination production by various nanoparticles in electron mode of a medical linac. *Nukleonika* 2015;60(3): 489-496.
- 32-Bakhshabadi M, Ghorbani M, Khosroabadi M, Knaup C, Meigooni AS. A comparison study on various low energy sources in interstitial prostate brachytherapy. 2016; 8(1):74-81.
- 33-Bahreyni Toossi MT , Khorshidi F, Ghorbani M, Mohamadian N., Davenport D. Comparison of EBT and EBT3 RadioChromic Film Usage in Parotid Cancer Radiotherapy. *J Biomed Phys Eng* 2016; 6(1): 1-12.
- 34-Soleymanifard Sh, Aledavood SA, Vejdani Nogheiyani A, Ghorbani M, Jamali F, Davenport D. In vivo skin dose measurement in breast conformal badiotherapy. *Contemp Oncol* 2016; 20:137-40.

- 35-Momennezhad M, Nasser Sh, Zakavi SR, Parach AA, Ghorbani M, Ghahraman Asl R, A 3D Monte Carlo method for estimation of patient-specific internal organs absorbed dose for ^{99m}Tc -Hynic-Tyr3-Octroide imaging. *World Journal of Nuclear Medicine* 2016; 15:114-123.
- 36-Bahreyni Toossi MT, Ghorbani M, Akbari F, Mehrpouyan M. Sobhkhiz Sabet L. Evaluation of the effect of tooth and dental restoration material on electron dose distribution and production of photon contamination in electron beam radiotherapy. *Australas Phys Eng Sci Med* 2016;39:113-122.
- 37-Firoozabadi MM, Izadi Vasafi G, Karimi K, Ghorbani M. A Monte Carlo Study on the Effect of Various Neutron Capturers on Dose Distribution in Brachytherapy with ^{252}Cf Source. *J Biomed Phys Eng* 2016; Accepted for publication
- 38-Ghorbani M, Mehrpouyan M, Davenport D, Ahmadi Moghaddas T. Effect of photon energy spectrum on dosimetric parameters of brachytherapy sources. *Radiol Oncol* 2016; Published online.
- 39-Ghorbani M, Hashempour M, Azizi M, Meigooni AS. Evaluating the effect of various intracavitary applicators on dosimetric parameters of ^{192}Ir , ^{137}Cs , and ^{60}Co sources. *Australas Phys Eng Sci Med* 2015; Published online.
- 40-Bahreyni Toossi MT, Ghorbani M, Rostami A, Khosroabadi M, Khademi S, Knaup C. Comparison of the hypothetical ^{57}Co brachytherapy source with the ^{192}Ir source. *Contemp Oncol* 2016; Accepted for publication.
- 41-Farhood B, Bahreyni Toossi MT, Ghorbani M, Salari E, Knaup C. Assessment the accuracy of dose calculation in build-up region for two radiotherapy treatment planning systems. *J Cancer Res Therapeut* 2016; Published online.
- 42-Ghorbani M, Jia SB, Khosroabadi M, Sadoughi HR, Knaup C. Evaluation of the effect of soft tissue composition on the characteristics of spread-out Bragg peak in proton therapy; *J Cancer Res Therapeut* 2016; Published online.

43-Bahreyni Toosi MT, Mohamadian N, Ghorbani M, Khorshidi F, Akbari F, Knaup C. Skin Dosimetry in Radiotherapy of Breast Cancer: a Comparison between EBT and EBT3 Radiochromic Films. J Biomed Phys Eng 2016; Published online.

Presentations

1-Ghorbani M., Tahmasebi Birgani M. J., Mehdizadeh Tezangi A. R., New Formula For Calculation of Cobalt 60 Percent Depth Dose. Oral Presentation 2005/09/14, 17, 14th International Congress On Medical Physics, Nuremberg, Germany.

2-Ghorbani M., Introduction to Nanotechnology. Lecture, Review Article 2005/07/21, First Workshop of Nanotechnology in Medicine, Mashhad, Iran.

3-Bahreyni Toossi M. T., Ghorbani M., Hashemian A., Rahighi J., Mansouri R., Dilmanian F. A., Zhong Z. Basic Design and Cost Estimate for a Medical Beamline for SESAME. Lecture , Review Article, 2005/12/7, 9, 4th SESAME Users' Meeting, Dead Sea, Jordan.

4-Ghorbani M.; Bahreyni Toossi M. T.; Mowlavi A. A.; Meigooni A. S. Dosimetric Characterization of GZP6 Number Three Co, 60 Brachytherapy Source. Poster Presentation. Research Article, 2010/05/19, 20, 9th Iranian Congress of Medical Physics, Tehran, Iran.

5-Bahreyni Toossi M. T., Ghorbani M., Mowlavi A. A.; Bayani Roodi Sh.; Haghparast A.; Meigooni A. S., High Dose Rate Brachytherapy Dose Distribution Measurements Using EBT Radiochromic Film and a Color Scanner.Oral Presentation , Research Article, 2010/08/18, 22, Great Wall 2010 International Congress on Medical Physics , Nanjing, China.

6-Bahreyni Toossi M. T., Abdollahi M., Ghorbani M., Monte Carlo Simulation of Stepping Source (Channel 6) of GZP6 Afterloading Intracavitary Brachytherapy Unit. Oral Presentation , Research Article , 2010/08/18, 22. Great Wall 2010 International Congress on Medical Physics, Nanjing, China.

7-Ghorbani M.; Bahreyni Toossi M. T., A Synchrotron Medical Beamline: Introduction and Applications. Lecture , Review Article, 2010/05/05, First Users Meeting of Iranian

National Accelerator Project, Tehran (IPM), Iran.

8-Ghorbani M.; Bahreyni Toossi M. T., The Medical Beamlines of the World: Applications and Characteristics., Lecture, Review Article , 2010/08/09, Second Users Meeting of Iranian National Accelerator Project, Tehran (IPM), Iran.

9-Bahreyni Toossi M. T., Ghorbani M., Mowlavi A. A.; Bayani Roodi Sh.; Meigooni A. S., Monte Carlo and experimental verification of dose distribution around the HDR brachytherapy GZP6 source number two. Oral Presentation Research Article, 2010/12/5, 9. Engineering and Physical Sciences in Medicine and The Australian Biomedical Engineering Conference, Melbourne, Australia.

10-Bahreyni Toossi M. T., Abdollahi M., Ghorbani M., Monte Carlo simulation of stepping source in afterloading intracavitary brachytherapy for GZP6 unit,

Poster Presentation , Research Article, 2010/12/5, 9. Engineering and Physical Sciences in Medicine and The Australian Biomedical Engineering Conference, Melbourne, Australia.

11-Ghorbani M., Medical Applications of Synchrotron Radiation, Lecture Research Article, 2011/09/17, 21. Summer School on Synchrotron Radiation and its Applications, Congress Place: IPM, Tehran, Iran.

12-Bahreyni Toossi M. T., Ghorbani M., Mehrpouyan M., Akbari F, Sobhkhiz Sabet L. and Soleimani Meigooni A., A Monte Carlo study on tissue dose enhancement in high dose rate brachytherapy: a comparison between gadolinium and gold nanoparticles, Accepted as oral presentation 16, 19 November 2011. Oral Presentation Research Article, 2011/11/16, 19, 32nd Annual Conference of the Association of Medical Physicists of India; Vellore, India.

13-Bahreyni Toossi M. T., Ghorbani M., Mehrpouyan M., Akbari F, Sobhkhiz Sabet L. and Soleimani Meigooni A., A Monte Carlo study on tissue dose enhancement in high dose rate brachytherapy: a comparison between gadolinium and gold nanoparticles, Accepted as oral presentation in World Congress on Medical Physics and Biomedical Engineering, IFMBE Proceedings 39, pp. 1656–1659, 2012.

14-Behmadi M, Bahreyni Toossi M, Ghorbani M. A Monte Carlo study on electron and neutron contamination caused by the presence of hip prosthesis in photon mode of a

Siemens Primus linac. International Multidisciplinary Cancer Congress, 4-6 September 2012, Mashhad, Iran.

15-Investigation About Source of Errors in Treatment Planning of HDR Brachytherapy by Using a New Phantom Design Combined with Gafchromic Films and TG-43 Calculation, Gholami S, Mirzaei H, Meigooni A, Jabariarfaei A, Mahdavi S, Blookat E, Ghorbani M, 2013 AAPM Annual Meeting Program, Indiannapolis, IN.

16-Toktam Ahmadi Moghaddas, Mahdi Ghorbani, Abbas Haghparast, Mohammad Taghi Eivazi. A Monte Carlo Study on Dose Enhancement Effect of Various Paramagnetic Nanoshells in Brachytherapy, Nanomaterials: Application & Properties, Nanomaterials: Application & Properties '2013, Turkey.

17-Yahyaabadi A, Mowlavi AA, Izadi Najafabadi R, Ghorbani M. Calculation and comparison of MD-55-2 radiochromic film to ^{60}Co source, 19th Iranian Nuclear Congress, 20-21 Feb 2013, Mashhad, Iran.

18-Ahmadi Moghaddas T, Ghorbani M, Mehrpouyan M. Effect of photon energy spectrum on dosimetric parameters of brachytherapy sources. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

19-Alizadeh M, Ghorbani M, Haghparast A, Zare N. Evaluation of dose distribution around Flexisource 192Ir source by Monte Carlo method. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

20-Bahreyni Toossi MT, Ghorbani M, Akbari F, Mehrpouyan M, Sobhkhiz Sabet L. Evaluation of the effect of tooth and dental restoration material on electron dose distribution and production of photon contamination in electron beam radiotherapy. Oral presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

21-Bakhshabadi M, Khosroabadi M, Ghorbani M. A comparison study on various low energy sources in interstitial prostate brachytherapy. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

22-Mahdi Ghorbani, Marziyeh Behmadi Evaluation of hypothetical ^{153}Gd source for use in brachytherapy. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

23-Ghorbani M, Alizadeh M, Haghparast A, Zareh N. Evaluation of dose enhancement effect of gold nanoparticles in prostate brachytherapy with ^{192}Ir source. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

24-Ghorbani M., Tabatabaei Z. S., Vejdani Noghreiyani A., Vosoughi H., Effect of Tissue Composition on Dose Distribution in Electron Beam Radiotherapy. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

25-Ghorbani M, Hashempour M, Azizi M. Evaluating the effect of various intracavitary applicators on dosimetric parameters of ^{192}Ir , ^{137}Cs , and ^{60}Co sources. Oral presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

26-Khosroabadi M, Ghorbani M, Bakhshabadi M. Evaluation of dose enhancement effect of gold nanoparticles in prostate brachytherapy with various sources. Oral presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

27-Pakravan D, Ghorbani M. Evaluation of ^{101}Rh as a brachytherapy source. Poster presentation. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

28-Shafaei Dook H, Aghamiri MR, Bakhshandeh M, Ghorbani M, Hemmati HR, Jabari Arfaei A. Validation of Monte Carlo simulation of Siemens Primus linac using MCNPX code. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

29-Shafaei Dook H, Aghamiri MR, Bakhshandeh M, Ghorbani M, Hemmati HR, Jabari Arfaei A. Determination of electron virtual source position for different field sizes and electron energies for Siemens Primus linac. 11th Iranian Medical Physics Conference, 6-7 Nov 2014, Tehran, Iran.

30-Mahdi Ghorbani, Mohammad Mehrpouyan, Mohammad Taghi Bahreyni Toossi, Hossein Nademi. Preliminary results of an attempt to predict over apron occupational exposure of cardiologists from cardiac fluoroscopy procedures based on dose area product. 31th Iranian Congress of Radiology, 5-8 May 2015, Tehran, Iran

31-Mohammad Taghi Bahreyni Toossi, Farideh Khorshidi Mianaei, Mahdi Ghorbani, Nastaran Mohammadian Khabbaz Kazemi, Mohammad Mohammadi, Ali Soleimani Meigooni. Comparison of EBT and EBT3 RadioChromic films in radiation field of parotid cancer radiotherapy. 57th AAPM Annual Meeting and Exhibition, 12-14 July 2015. Anaheim, CA, USA.

32-Mahdi Ghorbani¹, Zahra Sadat Tabatabaei¹, Atefeh Vejdani Noghreiyani¹, Ali Soleimani Meigooni. Evaluation of tissue composition effect on dose distribution in radiotherapy with 6 MV photon beam of a medical linac. 57th AAPM Annual Meeting and Exhibition, 12-14 July 2015. Anaheim, CA, USA.

Research Projects

2003 , Calculation of Percent Depth Doses at Different Points Under a Step, filter Using Clarkson Method.

Role: Scientific Cooperation Research type: Basic

Ahvaz Jondishapur University of Medical Sciences

Co, workers: Tahmasebi Birgani M. J.; Ghorbani M.; Ansari M.

2008 , Evaluation of Dosimetric Parameters of the GZP6 Afterloading Intracavitary Brachytherapy Unit by Monte Carlo Simulation and Measurement by TLD and Treatment Planning.

Role: Scientific Cooperation Research type: Applied

Mashhad University of Medical Sciences

Co, workers: Bahreyni Toossi M. T., Ghorbani M., Mowlavi A. A.; Makhdoumi I.

2009 , Monte Carlo Simulation of Stepping Source Channel of GZP6 Afterloading Intracavitary Brachytherapy Unit.

Role: Scientific Cooperation Research type: Applied

Mashhad University of Medical Sciences

Co, workers: Bahreyni Toossi M. T., Abdollahi M.; Ghorbani M.

2010 , Monte Carlo Simulation of the Siemens Primus Medical Linac for Use in Radiotherapy.

Role: Scientific Cooperation Research type: Applied

Islamic Azad University (Ahvaz Branch)

Co, workers: Pakravan D.; Ghorbani M.; Momennezhad M.

2011, Monte Carlo Modeling of Electron Mode in Siemens Primus Medical Linear Accelerator

Role: Scientific Cooperation Research type: Applied

Mashhad University of Medical Sciences

Co, workers: Bahreyni Toossi M. T., Ghorbani M., Akbari F, Sobhkhiz Sabet L., Mehrpouyan M.

2011, A Monte Carlo study on tissue dose enhancement in high dose rate brachytherapy: a comparison between gadolinium and gold nanoparticles.

Role: Scientific Cooperation Research type: Applied

Mashhad University of Medical Sciences

Co, workers: Bahreyni Toossi M. T., Ghorbani M., Mehrpouyan M., Akbari F, Sobhkhiz Sabet L.

2011, A Monte Carlo study on electron and neutron contamination from hip prosthesis in radiotherapy with a 15 MV Siemens Primus linac

Role: Scientific Cooperation Research type: Applied

Mashhad University of Medical Sciences

Co, workers: Bahreyni Toossi M. T., Behmadi M., Ghorbani M.,

Teaching Experiences

2005, 2009 , Mashhad University of Medical Sciences, Temporary Teacher of “Medical Physics for the Operation Room Students”, “Radiation Protection”, “Atomic and Nuclear Physics”, “Anesthesia Physics” and “Basics Physics”, Mashhad, Iran

2005, Azad Islamic University of Mashhad, Temporary Teacher of “Medical Physics for the Operation Room Students” and “Anesthesia Physics” , Mashhad, Iran

2004, Iran University of Medical sciences, Temporary Teacher of “Physics Lab for Students of Medicine” , Tehran, Iran

2003, Azad Islamic University of Shushtar, Temporary Teacher of “General Physics” and “Mathematics” , Shushtar, Iran

2001, 2003 , Ahwaz Jondishapour University of Medical Sciences, Teaching Assistant of “Physics Lab” and “Medical Physics Lab” , Ahwaz, Iran

Committee Membership

2005 , Member of Iranian Association of Medical Physics.

Place: Tehran , Iran

Start Date: 2001

2005 , Member of Iranian Association of Radiology

Place: Tehran , Iran

Start Date: 2004 Finish Date: To be continued

2010 , Member of The Users of Iranian National Accelerator Project

Place: Tehran , Iran

Start Date: 2010

Research Interests:

Brachytherapy, Monte Carlo Simulation, external beam radiotherapy, dose enhancement by nanoparticles, neutron contamination estimation, boron neutron capture therapy.