Curriculum Vitae

Personal Information

Name: Mehrdad Gholami

Affiliation: Medical Physics Department, School of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

Language: Persian (native), English (Professional working proficiency)

Office address 1: School of Medicine, Lorestan University of Medical Sciences (LUMS), Khorramabad, Iran. P.O. Box: 1996713883

Office address 2: Deputy of Education, Kamalvand Campus Complex, Lorestan University of Medical Sciences, Khorramabad- Boroujerd road, Km 4, Iran. P.O. Box: 81351698

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Education

July 2014; PhD in Medical Physics, Faculty of Medicine, Isfahan University of Medical Sciences (MUI), Isfahan, Iran. Title of Thesis: Accuracy evaluation of 3D dose distribution using the lung equivalent polymer gel dosimeter.

Nov 2000; M.Sc. in Medical Physics, Faculty of Medical Sciences, Tarbiat Modarres University (TMU), Tehran, Iran. Title of thesis: Effect of laser irradiation on motor evoked potential on injured spinal cord of rat.

Jan 1994; BSc in Radiology Technology, Faculty of Allied Medical Sciences, Tabriz University of Medical Sciences (TUOMS), Tabriz, Iran

Membership

Iranian Association of Medical Physicists (IAMP), 2000- present

Teaching Experiences

Medical Physics, Radiation Physics, Computed Tomography Physics, Radiation Protection, Physics of Diagnostic Radiology, Ultrasound Physics, Quality Control & Assurance in Medical Imaging devices. Ionizing Radiation Dosimetery, Laser in Medicine

Research Interests

Polymer gel dosimeters Radiation Dosimetry Radiation Protection Radiobiology Medical Imaging

Medical Physics Attendance

Attendance in 1st international Iranian Radiology Students Congress (RSA) as **Scientific Committee Member** on 21st -23rd August 2021, Iran

Regional workshop on patient dose assessment and dose management in diagnostic and Interventional, radiology. Doha, Qatar, 18th – 21th December 2011 Invited by IAEA

National training course on Computed Digital Radiography (principles of operation, quality control and patient safety). Tehran, Iran, 20th -23th November 2011 Invited by IAEA

International workshop on Advances in Radiotherapy Physics & Technology. Shiraz, Iran, 1th November 2011, Invited by Middle East Federation of Organizations of Medical Physics (MEFOMP)

Participation in the 1th MEFOMP international conference of Medical Physics. Shiraz, Iran, 2th -4th November

Regional workshop on Monte- Carlo MCNPX4 and its application on Radiation therapy. Tehran, Iran, 16th – 21th Oct (50 hrs) 2011

Service course in the Storz Lithotripter Modulith SLK including the X ray system Philips BV family. Kreuzlingen, Switzerland, Sep/ Oct (15 days) 2007

Scientific-Executive Records

Director of educational and post graduate affairs, LUMS, Khorramabad, Iran, 2018-present

Director of education at Allied Medical Sciences Faculty, LUMS, Khorramabad, Iran, 2014-2018

Director of Student Research Committee at Health & Allied Medical Sciences Faculties, LUMS, Khorramabad, Iran, 2013- 2015

Head of Medical Physics Department, Faculty of Medicine, LUMS, Khorramabad, Iran, 2006- 2008

Head of Radiology Sciences Department, Faculty of Allied Medical Sciences, LUMS, Khorramabad, Iran, 2013- 2016

Regional Radiation Safety Officer, LUMS, Khorramabad, Iran, 1999-2009

Director of Medical & Laboratory devices division, LUMS, Khorramabad, Iran, 2003-2009

Council member of Education at LUMS, Khorramabad, Iran, 2015-present

Council member of research at faculty of Allied Medical Sciences, LUMS, Khorramabad, Iran, 2015- present

Council member of the University publications, LUMS, Khorramabad, Iran, 2016-2019

Council member of Talent Student Support Committee, LUMS, Khorramabad, Iran, 2015-present

Council member of Health Technology Development Center, LUMS, Khorramabad, Iran, 2016-2019

Paper Publications

1. Maryam Saran, Morteza Arab-ZozaniI, Meysam Behzadifar, **Mehrdad Gholami**, Samad Azari, Nicola Luigi Bragazzi, Masoud Behzadifar. Overuse of computed tomography for mild head injury: A systematic review and meta-analysis. PloS ONE January 11, 2024, 19(1) https://doi.org/10.1371/journal.pone.0293558

2. Vahid Karami, Mohsen Albosof, **Mehrdad Gholami**, Mohammad Adeli, Ali Hekmatnia,Mehdi Fallah Bagher Sheidaei, Ali Taghizadeh Behbahani, HodaSadat Sharif, Somayeh Jafrasteh. Tradeoffs between Radiation Exposure to the Lens of the Eyes and Diagnostic Image Quality in Pediatric Brain Computed Tomography. Journal of Medical Signals & Sensor. 2023; 13 (3): 208-216

3. Javad Ghasemian Yadegari, Ezatollah Fazeli Moghadam, Hazhir Golmohammadi, Setareh Dastyarhaghighi, **Mehrdad Ghoulami**, Hossein Mahmoudvand. Effect of Oral Administration of Astragalus ecbatanus Chloroform Extract on Acute and Chronic Pain in Balb/C Mice. Research Journal of Pharmacognosy (RJP) 10(2), 2023: 39–45

4. Mojtaba Cheraghian, Tayyeb Pourfallah, Amir Abbas Sabouri-Dodaran, **Mehrdad Gholam**i. Calculation of photoneutron contamination of Varian linac with new target in tissue equivalent phantom using Monte Carlo simulation. Journal of Basic Research in Medical Sciences. 2022; 9(3):31-41

5. Masoumeh Veiskarami, **Mehrdad Gholami**, Atefeh Aboutorabi, Monireh Ahmadi Bani, Ebrahim Khamesi. Motor Control Changes in Trunk Muscles after Using Anatomical Posture Control Orthosis in the Elderly Hyperkyphotic Subjects .Journal of Modern Rehabilitation. 2022; 16(4):347-354.

6. Masoumeh Veiskarami, Gholamreza Aminian, Mahmood Bahramizadeh, **Mehrdad Gholami**, Farzad Ebrahimzadeh, Mokhtar Arazpour. The Efficacy of "Anatomical Posture Control Orthosis" on the Activity of Erector spinae Muscle, Risk of Falling, Balance Confidence, and Walking Speed in Osteoporotic Hyperkyphotic Subjects. Arch Bone Jt Surg. 2022; 10(9): 798-805.

7. F.Panahi, M.Mohammadi, F.Naserpour, N.Hassanpour**, M.Gholami**. Entrance dose determination and effective dose calculation in chest and skull radiographies: an experimental and computational study. Int. J. Radiat. Res; October 2021; 19(4): 899-906

8. Mojtaba Cheraghian,Tayyeb Pourfallah, Amir Abbas Sabouri-Dodaran **Mehrdad Gholam**i. Calculation of photoneutron contamination of varian linac in ICRU soft-tissue phantom using MCNPX code. Journal of Medical Physics. 2021; 46(2):116

9. N. Hassanpour, V. Changizi, **M. Gholami.** Measuring track density of alpha particles emitted from human teeth and assess of the resulting cancer risk. Int. J. Radiat. Res., July 2021; 19(3): 607-613

10. V Karami, M Albosof, M Najarian, **M Gholami.** Assessment of Commercially Available In-plane Bismuth Breast Shields for Clinical Use in Patients Undergoing Thoracic Computed Tomography. Hong Kong J Radiol. 2021; 24:108-15

11. Nemati F, Mohammadi M, **Gholami M**. A Survey on Exposure Parameters Variation due to Aging in Radiology Devices. J Biomed Phys Eng 2021; 11(3): 407-412

12. Fatemeh Amani, Mehdi Allahbakhshian Farsani, **Mehrdad Gholami**, Seyed Mahmoud Reza Aghamiri, Mohsen Bakhshandeh , Mohamad Hosein Mohamadi. The protective effect of oleuropein against radiation-induced cytotoxicity, apoptosis and genetic damage in cultured human lymphocytes. International Journal of Radiation Biology. 2021; 97(2); 179-193

13. Fatemeh Naserpour, Nahid Hassanpour, Fatemeh Panahi, VahidKarami, **Mehrdad Gholami.** An Estimate of Radiation Dose to the Lens of the Eyes, Parotid Gland, and Thyroid Gland in Dental Panoramic Radiography. Iran J Med Phys 2019; 16: 425-429

14. Nahid Hassanpour, Fatemeh Panahi, Fatemeh Naserpour, Vahid Karami, Jafar Fatahi Asl, **Mehrdad Gholami**. A Study on Radiation Dose Received by Patients during Extracorporeal Shock Wave Lithotripsy**.** Arch Iran Med 2018; 21(12):585-588

15. Vahid Karami1**, Mehrdad Gholami,** Sajjad Lorestani. Addressing as Low as Reasonably Achievable (ALARA) in Pediatric Computed tomography (CT) Procedures. Journal of research in Medical and Dental 2018; 6(5): 104-114

16. Mehrdad Gholami. Evaluating the Curriculum for B.S. of Radiologic Technology in Iran: An International Comparative Study**.** Entomology and Applied Sciences Letters 2018; 5(3): 48-59

17. Haniyeh Mobarak salary, Mryam Beyranvand, **Mehrdad Gholami**. Investigation frequency of urinary stones and prediction success rate of extracorporeal lithotripsy instruments in public hospitals in Western Iran. Entomology and Applied Sciences Letters .2018; 5(1): 47-50

18. Mehrdad Gholami, D. Shahbazi-Gahrouei. The effect of gel homogeneity on dose response in a low density polymer gel dosimeter for radiation therapy.Journal of Cancer Research and Therapeutics 2018;14(3): 663-566

19. Vahid Karami, Mansour Zabihzadeh, Nasim Shams, **Mehrdad Gholami**. Radioprotection to the Gonads in Pediatric Pelvic Radiography:Effectiveness of Developed Bismuth Shield. Int J Pediatrn2017; 5(6): 5153-5166

20. Somayeh Gharloghi, **Mehrdad Gholami**, Abbas Haghparast, Vahab Dehlaghi. Numerical Study for Optimizing Parameters of High-Intensity Focused Ultrasound-Induced Thermal Field during Liver Tumor Ablation: HIFU Simulator. Iran J Med Phys 2017; 14(1):15 -22

21. Mehrdad Gholami, Somayeh Gharloghi, Soodabeh Zare, Arezoo Saki, Zahra Piri, Majid Mousavi. Assessment of patient radiation dose in interventional procedures at Shahid Madani Heart Center in Khorramanad, Iran.Iran J Med Phys 2017; 14:128-134

22. Fateme Panahi**, Mehrdad Gholami,** Sara Mayahi**.** A survey of knowledge and attitude of staff and hospital administrations in the implementation of archiving and transmission of medical images (PACS) in hospitals in Ahwaz. Iran J Radiol 2017; Special issue (5):e48318

23. Mojtaba Ghorbanipour, Azam alsadat HosseiniAlhashemi, Somayeh Gharloghi, Mahin Adeli, **Mehrdad Gholami**. Health Risk Assessment of Natural Background Radiation in Residents of Khorramabad, Iran. Iran J Med Phys 2017; 14(1): 23-28

24. Vahid Karami, Mansour Zabihzadeh, and **Mehrdad Gholami**. Gonad Shielding for Patients Undergoing Conventional Radiological Examinations: Is There Cause for Concern?.Jentashapir J Health Res 2016; 7(2):e31170

25. Vahid Karami, Mansour Zabihzadeh, **Mehrdad Gholami**, Nasim Shams, Zahra FazeliNezhad. Dose reduction to the Thyroid Gland in pediatric chest radiography.Int J Pediatr 2016, 4(7), 2183-2191

26. M. Gholami, D. Shahbazi-Gahrouei, T. Allahverdi Pourfallah.Dose response evaluation of a low density anoxic polymer gel dosimeter using MRI.Int J Radiat Res 2015; 13 (3):243- 249

27. Mehrdad Gholami, FatanehNemati, VahidKarami.Theevaluation of conventional X-ray exposure parameters including tube voltage and exposure time in private and governmental hospitals of Lorestan province, Iran. Iran J Med Phys2015, 12(1): 85-92

28. M. Gholami, H. R. Khosravi, F. Ebrahimzadeh, S. Mayahi. Diagnostic Reference Levels (DRLs) for routine X - ray examinations in Lorestan province, Iran. Int J Radiat Res2015; 13 (1): 85- 90

29. D. Shahbazi-Gahrouei, **M. Gholami**, T. Allahverdi Pourfallah, M. Keshtkar. Does nitrogen gas bubbles through the low density polymer gel dosimeter solution affects polymerization process?.Advanced Biomedical Research 2015; 4(88):1-5

30. M. Keshtkar, A. Takavar, M.H. Zahmatkesh, A. Vaezzadeh, **M.Gholami**, Z. Ghasemian. Application of polymer gel dosimetry in dose verification of IMRT.Journal of Frontiers in Biomedical Technologies (FBT) 2014, 1(4): 279-283

31. D. Shahbazi-Gahrouei**, M. Gholami**, S. Setayandeh. A review on natural background radiation.Advanced Biomedical Research Journal 2013, 2(3):1-6

32. ShahbaziGahrouei D, Setayandeh S, **Gholami M**. A review on comparison of natural ragiation in Iran with other countries.Int J Low Radiation 2013; 9(1): 1-11

33. M. Gholami, S Mirzaei, Jomehzadeh A. Gamma background radiation measurement in Lorestan Province, Iran.Iran J Radiat Res 2011; 9(2):89-93

34. M. Gholami, L Yousefi. Solar Ultraviolet B radiation monitoring in KhorramabadCity, Iran. Iran J Radiat Res 2009; 7(3): 171-175

35. M. Gholami, M R. Abedini, H R. Khosravi, S Akbari.Risk from ionizing radiation during pregnancy.Yafteh (LUMS Journal) 2007; 9(31): 63-71

36. M. Gholami. What you need to know about electroshock. Iran's monthly magazine on Med. & Lab. Equipment 2005; 49: 23- 25

37. M. Gholami. Tips about sterilization. Iran's monthly magazine on Med. & Lab.

Equipment 2005; 50: 65- 67

38. M. Gholami. Ultraviolet lamps and its disinfectant properties. Iran's monthly magazine on Med. & Lab. Equipment 2003; 26: 33-35

39. M. Gholami. Microwave- induced thermoacoustic tomography using multi sector imaging. Iran's monthly magazine on Med. & Lab. Equipment 2002; 21:24- 26

40. M. Gholami, S M. Firouzbadi, H A. Kazemzadeh, H K. Moghadam. Effect of laser on motor evoked potential on injured spinal cord of rats. Yafte (LUMS Journal) 2002; 4(12): 9-15

41. M. Gholami, S M. Firouzabadi, H K. Moghadam. Effect of GaAlAs laser irradiation on histologic repair of compression spinal cord injuries of rats. Yafte (LUMS Journal) 2001; 3(1): 37-41

Books translated into Persian

1- Wayen R. Hedrick, David L. Hykes, Dale E. Starchman. **Ultrasound Physics and Instrumentation**, Mosby 4th Edition (December 17, 2014), **ISBN**-10 : 0323032125

2- World Health Organization. **Communicating Radiation Risks in Pediatrics Imaging**. Information to support healthcare discussions about benefit and risk. 22 June 2016. **ISBN:** 978 92 4 151034

Papers presented in National & Int. conferences

1. H. Khosravi, V. Karami , M. Albosof , M. Najarian, **M. Gholami**–. Do Commercially Available In- Plane Bismuth Breast Shields Are Consistent with Patients Care? AAPM ePoster Library. Jul 17, 2019; 269410; WE-C1030-GePD-F9-1, San Antonio, USA

2. Mehrdad Gholami, Fatemeh Panahi, Nahid Hasanpour, Fatemeh Naserpour. Evaluation the entrance skin dose regarding common radiology studies which can have some risks on patient's health (poster). 1-4 May 2018, 34rdIraninan congress of Radiology, Tehran, Iran

3. Mehrdad Gholami, Fatemeh Naserpour Fatemeh Panahi, Nahid Hasanpour. Radiation dose to the lens of the eyes, parotids and thyroid glands in dental panoramic radiography in general hospitals (poster). 1-4 May, 2018 34rdIraninan congress of Radiology, Tehran, Iran

4. Mehrdad Gholami, Nahid Hasanpour, Fatemeh Panahi, Fatemeh Naserpour. Radiation dose received by the patients during Extracoporeal shock wave lithotripsy. 1-4 May 2018, 34rdIraninan congress of Radiology, Tehran, Iran

5. Fatemeh Panahi**, Mehrdad Gholami,** Sara Mayahi. A survey of knowledge and attitude of staff and hospital administrations in the implementation of archiving and transmission of medical images (PACS) in hospitals in Ahwaz (poster). 9-12 May 2017, 33rdIraninan congress of Radiology, Tehran, Iran

6. Vahid Karami, Mansour Zabihzadeh, Nasim shams, **Mehrdad Gholami**.Determination of the anode heel effect to decrease the Testes radiation dose in pelvic radiography (poster). The first Congress of Novel Sciences and Diseases. Ahvaz University of Medical Sciences. February 28, 2017, Ahvaz, Iran

7. Vahid Karami, Mehrdad Gholami. A systematic review on the prevalence of shielding in patients undergoing diagnostic x ray procedures in Iran (poster). The 7th congress of students researches, Ahvaz University of Medical Sciences,Mars.1.2015, Ahvaz, Iran

8. Gholami M, Mirzaei S, Jomehzadeh A. Gamma background radiation measurement in the Lorestan Province, Iran. The 8th international conference on high levels of natural radiation and radon areas (oral). 2014; 1th -5th September, Prague, Czech Republic

9. Gholami M. 3D Polymer gel Dosimetry (Accepted for Oral Presentation but didn't presented)**,** 4th Asia Pacific Symposium on radiation Chemistry (APSRC-2012), Oct. 30-Nov. 3, 2012, Huangshan, anhui, China

10. Gholami M. Comparison of $ESAK_s$ in film-screen, computed radiography and direct digital radiography"(Oral)" 28th Iranian Congress of radiology, May 15th – 18th, 2012, Tehran, Iran

11. Gholami M, Mirzaei S, Jomehzadeh A. Gamma background radiation measurement in the Lorestan Province in Iran. (Poster)9th Iranian congress of Medical Physics, May 19th -20th 2010, Tehran, Iran

12. Jomehzadeh Z, Jomehzadeh A, **Gholami M**. Gamma dose rate and dose rate calculation for sensitive organs in the vicinity of hot spring in Kerman province. (Poster) 9th Iranian congress of Medical Physics, May 19th -20th 2010, Tehran, Iran

13. Gholami M. Radiographic assessment of urinary stones in patients treated by ESWL in general Shohada-y- Ashayer hospital in Khorramabad city. (Oral) the 1th Research festival of the Radiological Sciences students, November 7th -8th 2010, Shiraz, Iran

14. Jomehzadeh A, Jomehzadeh Z, **Gholami M**. Gamma dose rate measurement in BiBi Hayat region in Rafsanjan. (Poster) 9th Iranian congress of Medical physics, 19th -20th 2010, Tehran, Iran

15. Jomehzadeh A, **Gholami M**. Survey of Sodium Iodide^{131} contamination at nuclear medicine department in Shafa Kerman hospital. (Poster) the 1th research festival of the Radiological sciences students, November 7th -8th 2010, Shiraz, Iran

16. Gholami M, Jomehzadeh A. Frequency determination and assessment of diagnostic exposure in Lorestan Province. (Oral) the 1th global student scientific research congress of regional cooperative committees –west division, March 11th -13th 2009, Khorramabad, Iran

17. Gholami M. Evaluation of theoretic knowledge of Medical Imaging staffs in Lorestan Province: Specification and Medical Imaging methods. (Oral) the 1th global student scientific research congress of regional cooperative committees –west division, March 11th -13th 2009, Khorramabad, Iran

18. Gholami M, Yousefi L. Solar ultraviolet B radiation monitoring in Khorramabad city in Iran. (Oral) South Asian Conference on Radiology (SACOR), March 28th -30th 2008, Katmandu, Nepal

Journal Reviewer

1. Reviewer for Iranian Journal of Medical Physics; the scientific journal of the Iranian Association of Medical Physicists (IAMP), 2014-present

2. Reviewer for International Journal of Radiation Research (IJRR), 2009-present

Patent & inventions

1. Gholami M, Zabihzadeh M, Karami V.

Title: The process of design and dosimetry of radioprotective gonadal shield using bismuth and lead materials

The use and effectiveness of traditional lead gonad shields in pediatric pelvic radiography has been challenged by several literatures over the past two decades. The aim of this study was to develop a new radioprotective gonad shields to be use in pediatric pelvic radiography. Without increasing the dose to the breast, thyroid and the lens of the eyes, the use of bismuth shield has reduced the ESD of the pelvis and radiation dose to the ovaries by 62.2% and 61.7% respectively. Image quality remained diagnostically acceptable in all shielded and non shielded images, without non diagnostic or poor quality image. This project carried out in Ahvaz Jundishahpur University of Medical Sciences (AJUMS), Iran.

Honors

Education Award, LUMS,2018, (University Level)

Research Award, LUMS, 2017, (University Level)

Research Award, LUMS, 2015, (University Level)

Research Award, LUMS, 2010, (University Level)

Outstanding Health Physicist Award, LUMS, 2008 & 2009

Establishment of Nuclear Medicine Simulation Lab, LUMS, 2008

Establishment of Respiratory Lab, LUMS, 2007

Outstanding Health Ministry Award, Vice Versa President,2005

Outstanding Staff Award, LUMS,2000