

Ali Jomehzadeh

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Personal information

First Name: Ali

Last Name: Jomehzadeh Mahani

Birth Date: 6/9/1977

Marital status: Married

Contact Information

□ Department of Medical Physics, Medical School, Kerman University of Medical Sciences, Kerman, Iran.

□ Radiation Therapy Dept., Shafa Kerman Hospital, Kerman, Iran.

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Educational History

2009–2014

PhD: Medical Physics Dept., Isfahan University of Medical Sciences, Isfahan, Iran.

□ **Major:** Medical Physics

□ **Title of Thesis:** Evaluation of a 2D EPID-based Dosimetry Algorithm to determine Midplane Dose and Assessment of Sensitivity of 3D EPID-based dosimetry for Detecting Errors in VMAT Technique

□ **Research Advisors:**

1- Dr. Parvaneh Shokrani,

Professor, Medical Physics Department, Isfahan University of Medical Sciences, Isfahan, Iran.

Email: shokrani@med.mui.ac.ir , Shokrani14@yahoo.com

2- Dr. Mohammad Mohammadi

Associated professor, School of Chemistry and Physics, Department of Physics, Division of Medical Physics, Adelaide, Australia,

E-Mail: mohammad.mohammadi@adelaide.edu.au , mmmohammadi@yahoo.com

3- Dr. Ben Mijnheer

Professor, The Netherlands Cancer Institute, department of radiation oncology, Plasmanlaan 121, 1066 CX, Amsterdam, The Netherlands.

E-Mail: b.mijnheer@nki.nl

2001– 2004

□ **M. Sc:** Medical Physics. Dept, Mashhad University of Medical Sciences, Mashhad, Iran.

□ **Major:** Medical Physics

□ **Title of Thesis:** Study of Indoors and Outdoors Background Radiation in Kerman Province Towns and Comparison of Indoors Gamma Dose Rates Using TLD and RDS-110

□ **Research Advisors:**

Dr. Seyyed MohammadTaghi Bahreyni Toosi
Professor, Medical Physics Department, Mashhad University of Medical Sciences, Mashhad,
Iran, Email: BahreyniMT@mums.ac.ir, Score (20 of 20)

1995–1999

☐ **B. Sc:** Physics. Dept, Shahid Bahonar University of Kerman, Kerman, Iran.

☐ **Major:** Applied Physics

Academic Appointments

<u>Year</u>	<u>Academic Rank</u>	<u>Institute</u>
2004-2007	Instructor of Medical Physics	Hormozgan Uni Med Sci
2007-2014	Instructor of Medical Physics	Rafsanjan Uni Med Sci
2014- Present	Assistant Professor in Medical Physics	Kerman Uni Med Sci

Research Interests

• Radiation Therapy

- ☐ EPID Dosimetry
- ☐ QA in Radiation Therapy
- ☐ Dose Verifications in Advanced Radiation Therapy Techniques (IMRT & VMAT)

• Medical Dosimetry

- ☐ IAEA Protocols in Radiotherapy
- ☐ AAPM Protocols in Radiotherapy

• Radiation Protection

- ☐ Radiation Protection in Medical Radiation
- ☐ Environmental Radiation Protection

Publications

- 1- Jomehzadeh Z, **Jomehzadeh A.** Comparison of Megavoltage Electron Dosimetry Beams in Radiation Therapy Using Different Protocols. *KMU Journal*, 2023 (Scientific Acceptance).
- 2- Saadat I, Shakibaie M, **Jomehzadeh A**, Salimi A, Rahimi HR, Torabizadeh SA. Radioprotective Effect of Zinc Nanoparticles on Ionizing Radiationinduced Nephrotoxicity in Mice. *Pharmacology Journal*; 2023 (Scientific Acceptance).
- 3- Yahyapour R, Khoei S, Kordestani Z, Larizadeh MH, **Jomehzadeh A**, Amirinejad M, Ahmadi-Zeidabadi M. Comparative Study of Extremely Low-Frequency Electromagnetic Field, Radiation, and Temozolomide Administration in Spheroid and Monolayer Forms of the Glioblastoma Cell Line (T98). *Curr. Radiopharm J*, 2023; 16(2): 123-132.
- 4- Moshafi MH, Torabizadeh SA, Mohamadnezhad F, **Jomehzadeh A**, Khodaei M, Samareh Fekri H. *Ferulago angulata* as a Good Radioprotector Against Genotoxicity. *Current Radiopharmaceutical* 2022; 15(2): 110-116.
- 5- Mehnati P, **Jomehzadeh A**, Doostmohammadi V. Measurement of ^{226}Rn , ^{232}Th , ^{40}K and ^{137}Cs Concentrations in Sediment and Determination of Annual Effective Dose due to These Radionuclides in Vicinity of Hot Springs in Kerman province. *Int J Rdiat Res*, 2022; 20(1): 223-228.

- 6- Mehnati P, Doostmohammadi V, **Jomehzadeh A. Determination of Rn-222 Concentration and Annual Effective Dose of Annihilation in the Vicinity of Hot Springs in Kerman Province, Southeastern Iran.** *Int J Rdiat Res*, ; 20(1): 211-216.
- 7- Jahanbani, SSA, Rezaeian A, Babae A, Haddadi GH, Moeni MM, **Jomehzadeh A, Moatamedi S, Efteghar Vaghefi SH. Investigation of the Effect of Arbutin in Preventing Pulmonary Damage Induced by X-irradiation in Rats: A Histopathological Study.** *Int J Rdiat Res*, 2020; 18(3): 413-420.
- 8- Torabizadeh SA, Rezaeifar M, **Jomehzadeh A, Nabizadeh Haghighi F, Ansari Mehdi. Radioprotective Potetial of Sulindac Sulfide to Prevent DNA Damage Due to Ionization Radiation.** *Drug Des Devel Ther*, 2019; 13: 4127-4134.
- 9- Mehnati P, Biglari F, **Jomehzadeh A. Interpretation of In-air Output Ratio of Wedged Fields in Different Measurement Conditions.** *J Med Signals & Sensors*, 2019; 9(2): 117-122.
- 10- **Jomehzadeh A, Larizadeh MH, Jomehzadeh Z. Dose-volume Analysis of Heart and Lung During 3-D Tangential Breast Cancer Irradiation.** *KMU Journal*, 2018; 255-264.
- 11- **Jomehzadeh A, Spreeuw H, Olaciregui- Ruiz I, Rozendaal R, Shokrani P, Tielenburg R, Mans A, Mijnheer B. Error Detection During VMAT Delivery Using EPID-based Transit Dosimetry.** *Physica Medica*, 2018; 54: 137-145.
- 12- **Jomehzadeh A, Shahbazi-Gahrouei D, Jahanbakhsh V. Effect of Material and Wall Thickness Build-up Caps on the Head Scatter Factor Measurements in Irregular Fields Shielded by Cerrobend.** *J Med Signals & Sensors*. 2017; 7: 247-51.
- 13- Shahbazi-Gahrouei D, Changizi B, **Jomehzadeh A, Larizadeh MH. The Effect of Contrast Media on Treatment Planning and Dose Calculation in Radiation Therapy of Pelvis Cancers.** *J Med. Isfahan School*. 2017; 34(408): 1389-94.
- 14- **Jomehzadeh A, Shokrani P, Mohammadi M, Amouheidari A, Mans A, Mijnheer B. Erratum: Assessment of a 2D EPID-based dosimetry algorithm for pretreatment and in-vivo midplane dose verification.** *Adv Biomed Res*. 2016; 5: 6-57.
- 15- Jomehzadeh Z, **Jomehzadeh A, Tavakoli MB. Quality control assessment of radiology devices in Kerman province, Iran.** *Iran J Med Phys*, 2016; 13(1): 25-35.
- 16- **Jomehzadeh A, Shokrani, P, Mohammad M, Amouheidari A. A quality assurance program for an amorphous silicon electronic portal imaging device using in-house developed phantoms: a method development for dosimetry purposes.** *Int J Rdiat Res*, 2014; 12(3): 267-274.
- 17- Gholami M, Mirzaei S, **Jomehzadeh A. Gamma background radiation measurement in Lorestan Province in Iran.** *Int J Rdiat Res*, 2011; 9(2):89-93.
- 18- Bahreyni Toossi M.T, Bayani SH, Yarahmadi M, Aghamir A, **Jomehzadeh A, Hagh Parast M, Tamjidi M. Gonad, bone marrow and effective dose to the population of more than 90 towns and cities of Iran, arising from environmental gamma radiation.** *Int J Rdiat Res*, 2009; 7 (1): 41-47
- 19- **Jomehzadeh A, Jomehzadeh Z. Gamma Dose Rate Measurement and Dose Rate Calculation for Sensitive Organs in the Vicinity of Hot Springs in Kerman Province.** *IFMBE Proceeding*; 25(3):393-395, 2009.

- 20- Abedini S, Abedini S, Aghamolaei A, **Jomehzadeh A**, Kamjo A. **Clinical Education Problems: The Viewpoints of Nursing and Midwifery Students in Hormozgan University of Medical Sciences.** *Hormozgan Med J*, 4(3):249-253, 2008.
- 21- Bahreyni Toosi, MT, **Jomehzadeh A**. **Comparison of Environmental Gamma Radiation of Kerman Province and Indoor Gamma Dose Rate in Kerman City Using Thermoluminescent Dosimeter (TLD) and RDS-110.** *Hormozgan Med J*, 9(3):173-180, 2005.

Scientific Grant

450,000 Pound from Elekta Corporation

Conference Presentations

- 1- **Jomehzadeh A**, Jomehzadeh Z, Tavakoli MB. **Quality Control Assessment of Radiology Devices in Kerman Province, Iran.** *ICMP Congress, Athens, Greece, 2016.*
- 2- **Jomehzadeh A**, Shokrani P, Mohammadi M, Amouheidari A. **A quality assurance program for an amorphous silicon electronic portal imaging device using in-house developed phantoms: a method development for dosimetry purposes.** *ICHLNRRRA2014 Conference, Prague, Czech Republic, 2014.*
- 3- **Jomehzadeh A**, Spreeuw H, Rozendaal R, Olaciregui-Ruiz I, Tielenburg R, van Herk M, Mijnheer B, Mans A. **Sensitivity of EPID-based In Vivo Dosimetry to Detect Errors during VMAT Delivery.** *ESTRO 2013 Congress, Geneva, Switzerland, 2013.*
- 4- **Jomehzadeh A**, Tavakoli MB, Jomehzadeh Z. **Assessment of Radioactive Waste per Patient in a Nuclear Medicine Center.** *10th International Congress of the Asia Oceania Federation of Nuclear Medicine and Biology, Tehran, Iran, 2012.*
- 5- Jomehzadeh Z, **Jomehzadeh A**, Gholami M. **Gamma Dose Rate Measurement and Dose Rate Calculation for Sensitive Organs in the Vicinity of Hot Springs in Kerman Province.** *The 9th Iranian Congress of Medical Physics, Tehran, Iran, 2010.*
- 6- Gholami M, Mirzaei S, **Jomehzadeh A**. **Gamma background radiation measurement in the Lorestan Province in Iran.** *The 9th Iranian Congress of Medical Physics, Tehran, Iran, 2010.*
- 7- **Jomehzadeh A**, Jomehzadeh Z, Gholami M. **Gamma Dose Rate Measurement in Bibihayat Region of Rafsanjan.** *The 9th Iranian Congress of Medical Physics, Tehran, Iran, 2010.*
- 8- Gholami M, **Jomehzadeh A**. **Frequency Determination and Assessment of Medical Exposure in Lorestan Province.** *1st Research Festival of the Radiological Students, Siraz, Iran, 2010.*
- 9- **Jomehzadeh A**, Jomehzadeh Z, Gholami M. **Survey of Sodium Iodide-131 Contamination at Nuclear Medicine Department in Shafa Kerman Hospital.** *1st Research Festival of the Radiological Students, Shiraz, Iran, 2010.*
- 10 - Jomehzadeh Z, **Jomehzadeh A**. **Indoor Radiation Leakage from Treatment Room of Nepton-10PC in Sahfa Hospital of Kerman.** *Radiation Protection Congress, Tehran, Iran, 2009.*
- 11- **Jomehzadeh A**, Jomehzadeh Z. **Comparison of Background Radiation Before and After the Bam Earthquake.** *The 6th Congress of the Iranian Radiological Sciences Association, Shiraz, Iran, 2008.*

- 12- **Jomehzadeh A, Jomehzadeh Z. Natural Radiation Evaluation in Vicinity of Bardsir, Zarand and Jiroft Hot Springs in Kerman Province.** *The 8th Iranian Congress of Medical Physics*, Tehran, Iran, 2008.
- 13- **Jomehzadeh A, Bahreyni Toosi MT. Gamma Dose Rate Changes in Buildings in the Region of Southeastern Iran Using Thermoluminescence Dosimetry.** *World Congress on Medical Physics and Biomedical Engineering*, Seoul, South Korea, 2006.
- 14- Orougi MH, Sadeghzadeh A, Aghamir A, **Jomehzadeh A, Zare H. Annual absorbed dose rate at the surface of 38 hot and mineral springs in Iran.** *IRPA Congress*, Paris, France, 2006.
- 15- **Jomehzadeh A, Bahreyni Toosi MT. Influence of Ultraviolet (UV) Radiation on LiF: Mg, Cu, P dosimeter during Natural Radiation Monitoring.** *The 7th Iranian Congress of Medical Physics*, Ahvaz, Iran, 2006.
- 16- **Jomehzadeh A, Bahreyni Toosi MT. Environmental Gamma Radiation Indoors at Kerman Province, Southeastern Iran and Sensitive Organs Dose Estimation.** *Engineering & the Physical Sciences in Medicine 29th Annual Conference*, Adelaide, Australia, 2005.
- 17- **Jomehzadeh A, Bahreyni Toosi MT. A study of Background Gamma Radiation in Kerman Province and Comparison of Gamma Dose Rate Measured in Kerman Town (Inside Dwellings) by TLD and RDS-110.** *The 6th Iranian Congress of Medical Physics*, Masshad, Iran, 2004.

Experience

Teaching:

- 2015- Now, "**Radiotherapy Physics**" to Radiotherapy & Oncology Residents, Kerman University of Medical Sciences
- 2016- 2017, "**Radiobiology**" to Radiotherapy & Oncology Residents, Kerman University of Medical Sciences
- 2014- Now "**Medical Physics**" to students of Medicine, Kerman University of Medical Sciences.
- 2005-2007, "**Medical Physics**" to students of Medicine, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Pre University Physics**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Applied Physics**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.
- 2004-2007, "**Applied Physics**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.
- 2004-2007, "**Anesthesia Physics**" to students of Anesthesia, Hormozgan University of Medical Sciences.
- 2004-2007, "**Medical Physics**" to students of Operation Room, Hormozgan University of Medical Sciences.
- 2004-2007, "**Radiation Physics**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Radiobiology and Radiation Protection**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Radiation Diagnostics Physics**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Applied Physics**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.
- 2004-2007, "**Applied Physics**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.

- 2004-2007, "**Radiology, Sonology and Electrolgy in Midwifery**" to students of Midwifery, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics**" to students of General Health, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics**" to students of Environmental Health, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics**" to students of General Health, Hormozgan University of Medical Sciences.
- 2004-2007, "**General Physics Lab**" to students of Radiology, Hormozgan University of Medical Sciences.
- 2004-2007, "**Applied Physics Lab**" to students of Laboratory Sciences, Hormozgan University of Medical Sciences.
- 2007-Now, "**Medical Physics**" to students of Medicine, Rafsanjan University of Medical Sciences.
- 2007-Now, "**Medical Physics**" to students of Dental, Rafsanjan University of Medical Sciences.
- 2007-2008, "**General Physics**" to students of Radiology, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Applied Physics**" to students of Laboratory Sciences, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Medical Physics**" to students of Operation Room, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Radiation Physics**" to students of Radiology, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Radiobiology and Radiation Protection**" to students of Radiology, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Radiation Diagnostics Physics**" to students of Radiology, Rafsanjan University of Medical Sciences.
- 2007-2008, "**General Physics Lab**" to students of Radiology, Rafsanjan University of Medical Sciences.
- 2007-2008, "**Applied Physics Lab**" to students of Laboratory Sciences, Rafsanjan University of Medical Sciences.

Workshops:

- 2014, 1 Day "**Small Field Dosimetry**" Isfahan Milad Hospital & PTW, Isfahan, Iran.
- 2014, 2 Days "**Dosimetry for Photon Beams in Radiotherapy**" Babolsar Shahid Rajaei Hospital, Babolsar, Iran.
- 2013, 7 Days "**Quality Control Procedures in Diagnostic Radiology**" Parsian Radiation Dosimetry Services Co., Tehran, Iran.
- 2013, 1 Day "**Challenges of Dose Verification for New Techniques and Technologies in External X-Ray Beam Therapy**" ESTRO, Geneva, Switzerland.
- 2010, 2 Days "**Quality Assurance in Radiotherapy with Emphasis on Preventing Unintended Exposure**" IAEA, Tehran, Iran.
- 2007, 1 Day "**Course Plan**" Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
- 2007, 2 Days "**Primary of Quality Research Methodology**" Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
- 2007, 2 Days "**Physics of Medical Accelerators**" Shahidbeheshti University of Medical Sciences, Tehran, Iran.
- 2006, 3 Days "**Teaching Method, Evaluation Method and Question Planning**" Kerman University of Medical Sciences, Kerman, Iran.
- 2006, 1 Day "**Educational Objectives & Educational Curriculum**" Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
- 2006, 2 Days "**Scientific and Educational Advisory**" Yazd University of Medical Sciences, Yazd, Iran.
- 2006, 1 Day "**Medical Ethics**" TUMS, Tehran, Iran.
- 2006, 2 Days "**Revolution an Medical Education**" Shahidbeheshti University of Medical Sciences, Tehran, Iran.
- 2006, 2 Days "**Scientific Writing**" Iran University of Medical Sciences, Tehran, Iran.
- 2006, 1 Day "**Primary Statistics & Research Methodology**" Mazandaran University of Medical Sciences, Sari, Iran.

2006, 1 Day " **Advanced Statistics & Research Methodology**" Mazandaran University of Medical Sciences, Sari, Iran.
 2006, 1 Day " **Electronic Resources**" Mashhad University of Medical Sciences, Mashhad, Iran.
 2005, 2 Days " **Article Writing in English**" HUMS, Bandaabbas, Iran.
 2005, 2 Days " **Analyzing & Standardization of Questions**" HUMS, Bandaabbas, Iran.
 2005, 3 Days " **Advanced Article Writing in English**" HUMS, Bandaabbas, Iran.
 2005, 2 Days " **Quality Control of Imaging Systems**" Shahidbeheshti University of Medical Sciences, Tehran, Iran.
 2004, 2 Days "**Power Point Education Course**" HUMS, Bandaabbas, Iran.
 2004, 1 Day " **Printer & Scanner Education Course**" HUMS, Bandaabbas, Iran.
 2004, 1 Day " **Course Plan & Course Scheduling**" HUMS, Bandaabbas, Iran.

Clinical:

- Medical Physicist, Shafa Kerman Hospital, Kerman, Iran, 2015-Present. (Head of Medical Physics Dept.)
- Visiting Scholar (Medical Physicist), EPID Dosimetry Group, Radiation Oncology Dept, The Netherlands Cancer Institute- Antoni van Leeuwenhoek Hospital (NKI-AVL), Amsterdam, The Netherlands, 2012-2013.
- Medical Physicist, Milad Hospital, Isfahan, Iran, 2009-2012.
- Medical Physicist, Seyedolshohada Hospital, Isfahan, Iran, 2009-2010.

Academic Activities

- American Association of Physicist in Medicine (AAPM), Member, 2012-Present.
- European Society for Radiotherapy and Oncology (ESTRO), Member, 2013-Present.
- Iranian Association of Medical Physics, Member, 2003 - Present.
- Iranian Nuclear society, Member, 2006 - Present.
- Reviewer of Hormozgan Medical Journal.
- Reviewer of Rafsanjan University of Medical Sciences Journal.
- Reviewer of Iranian Journal of Medical Physics (IJMP).
- Reviewer of International Journal of Radiation Research (IJRR).
- Reviewer of Journal of Reports in Pharmaceutical Sciences (JRPS).
- Reviewer of Iranian Journal of Cancer Prevention (IJCP).

Scientific-Executive Records

- 2004-2007, Educational Advisor of Radiology Students, Hormozgan University of Medical Sciences.
- 2004-2007, Management of General Physics Lab, Hormozgan University of Medical Sciences.
- 2004- 2007, Management of Applied Physics Lab, Hormozgan University of Medical Sciences.
- 2006- 2007, EDO management of Nursing & Midwifery School, Hormozgan University of Medical Sciences.
- 2006-2007, Responsible of Faculty Member Employment at Nursing & Midwifery School, Hormozgan University of Medical Sciences.
- 2007- 2008, Educational Advisor of Radiology Students, Rafsanjan University of Medical Sciences.
- 2007-2008, Health Physics Management at Dental School, Rafsanjan University of Medical Sciences.
- 2007-2009, President of Health Physics Center, Rafsanjan University of Medical Sciences.
- 2007-2009, President of Elite Center, Rafsanjan University of Medical Sciences.
- 2007-2009, Vice President of EDC, Rafsanjan University of Medical Sciences.

Honors

- ☐ Ranked 1st among the PhD students of Medical Physics, Isfahan University of Medical Sciences, 2011
- ☐ Research Award, Rafsanjan University of Medical Sciences, 2010, (University Level)
- ☐ Outstanding Faculty Member Award, Hormozgan University of Medical Sciences, 2005.
- ☐ Outstanding Faculty Member Award, Hormozgan University of Medical Sciences, 2006.
- ☐ Establishment of General & Applied Physics Lab, Hormozgan University of Medical Sciences, 2005.

Languages

- ☐ **Persian** (*Native*)
- ☐ **English** (*fluent in reading and writing and audible understanding*)

Extracurricular Activities

- ☐ **Sport**
Walking
Football