

Curriculum Vitae
of
Daryoush Shahbazi-Gahrouei BSc, MSc, PhD
Professor of Medical Physics



Date of Birth: 26th March 1964

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Education:

- **High School, Mathematics and Physics** (1980-1983), Shahid Beheshti High School, Shahrekord, Iran, 1983.
- **BSc Physics**, Isfahan University, Faculty of Science, Isfahan, Iran, 1988.
- **MSc Medical Physics**, University of Tarbiat Modares, Faculty of Medical Sciences, Tehran, Iran, 1991.
- **PhD Medical Physics**, Faculty of Engineering and Science, The University of Western Sydney, Sydney, NSW, Australia, 2001.
- **PhD thesis:** “Development and Application of New Cancer-Specific Contrast Agents for Tumour Detection by Magnetic Resonance Imaging”.

Experiences & Activities:

- **Faculty member and Instructor (1991-1996):** Dept. of Medical Physics, School of Medicine, Shahrekord University of Medical Sciences, Shahrekord, Iran,
- **PhD student of Medical Physics (1997-2001):** School of Science and Engineering, The University of Western Sydney, Sydney, NSW, Australia
- **Assistant Professor of Medical Physics (2001-2005):** Dept. of Medical Physics and Medical Engineering, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran
- **Associate Professor of Medical Physics (2005-2010):** Dept. of Medical Physics and Medical Engineering, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran
- **Professor of Medical Physics (2010-to date):** Dept. of Medical Physics, School of Medicine, Isfahan University of Medical Sciences. Isfahan, Iran
- **Medical Physicist (2002-to date):** Radiotherapy center, Seyed Al-shohada Hospital, Isfahan University of Medical Sciences, Isfahan, Iran
- **Medical Physicist (2013-to date):** Medical imaging center, Alzahra Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Honors & Awards:

- **Travel Award,** The Ministry of Health and Medical Education, Tehran, Iran, 2000. The Award was presented to a PhD graduate who has an outstanding career and has made a significant contribution to the field of study abroad.
- **Award for Teaching Excellence,** Shahrekord University of Medical Sciences, Shahrekord, Iran, 2004.
- **Award for Excellence in University Research,** Shahrekord University of Medical Sciences, Shahrekord, Iran, 2001.
- **Award for Excellence in University Research,** Shahrekord University of Medical Sciences, Shahrekord, Iran, 2002.
- **Travel Grant,** 1st MEFOMP International Conference of Medical Physics. Shiraz. Iran, 2011.
- **Travel Grant,** Second Non-Ionizing Radiation Safety Conference. Shiraz. Iran, 2012.

- **Award for Excellence in University Research**, Isfahan University of Medical Sciences, Isfahan, Iran, 2013.
- **Award of Research chair**, Isfahan University of Medical Sciences, Isfahan, Iran, 2006.

Patent:

4-D Lung phantom for radiotherapy purposes (27/11/2014-90527),
International code: A61B

Work Experience:

- **Instructor for all Medical Physics Courses**, School of Medicine, Shahrekord University of Medical Sciences, Iran (1992-1995).
- **Instructor in Physics Lab**, University of Western Sydney, NSW, Australia (1998-2000).
- **Professor of Medical Physics**, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran (2001-present), where he teaches all Medical Physics courses for MD, MSc and PhD students including; Medical Physics, Radiation Physics, Radiation protection, Radiation dosimetry, Radiation therapy, Ultrasound, Biophysics, Principle of Medical imaging (Radiology, CT, MRI, Fluoroscopy, Mammography, and Multimodality imaging), Novel MR imaging modalities, Medical instrumentation, Nuclear Medicine (PET, SPECT), and Molecular imaging,
- **Medical Physicist at Radiotherapy Department**, Seyed-Alshohada Hospital, Isfahan, Iran (2002-present).
- **Medical Physicist at Medical Imaging Department**, Al-Zahra Hospital, Isfahan, Iran (2010-present).
- **Supervision of more than 70 (Iranian and International) PhD and MSc students**, Dept. of Medical Physics, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

Teaching Experiences:

Undergraduate courses:

- Medical imaging systems,
- Basics Physics of Medical imaging,
- Medical Physics,
- Radiation dosimetry and detection,
- Health Physics, Nuclear Medicine,
- Medical and Clinical instrumentations,
- Radiobiology,
- Optics and its application in Medicine,
- Bioelectricity,
- Radiation protection,
- High frequency currents,
- Radiation protection,
- Physics of MR imaging.

Postgraduate courses (MSc, PhD):

- Medical Physics
- Medical imaging systems (Ultra-sonography, Radiography, Digital radiography, CT, PET, SPECT, Fluoroscopy, Angiography), Multi-modality imaging
- Radiation therapy (3-D conformal, IMRT, IGRT, GammaKnife, CyberKnife, Hardon therapy), Advanced radiation therapy systems
- Magnetic resonance imaging (Functional magnetic resonance imaging, Diffusion-weighted imaging, Diffusion tensor imaging, Magnetic resonance elastography, Magnetic resonance angiography)
- Molecular imaging
- Radiation dosimetry, Radiation protection, Health Physics, Radiation biology

- Nuclear medicine (Radionuclide, Radiopharmaceutical, SPECT, PET)
- Medical and Clinical instrumentations
- Quality control in medical imaging and radiation therapy
- Electromagnetic fields, Bioelectricity, and Biomagnetics
- Radiation Management
- High-frequency currents

Postgraduate research students supervised:

MSc students supervised:

1. Parisa Hosseinpour (thesis title: Investigation and measurements of Natural background radiation in Chaharmahal and Bakhtiari province, Iran). 2000-2001, Project No: 481, Shahrekord University of Medical Sciences.
2. Ahmad Raeisi (thesis title: Investigation of cancers relevant to radiation in Chaharmahal and Bakhtiari province during five years (1998-2002). 2002-2003, Shahrekord University of Medical Sciences.
3. Vahideh Nazari (thesis title: Gadolinium-hematoporphyrin as specific MR imaging contrast agent for detection of breast cancer cell line (MCF-7)). 2007-2011, Project No: 385343
4. Mehri Hosseinpour-Esfahani (thesis title: Determination of dose distribution of Cs-137 sources configuration used in intracavitary Brachytherapy by Monte Carlo simulation). 2004, Project No: 82201
5. Maryam Roufeh (thesis title: Investigation of new MRI contrast agent Gd-DTPA-C595 for breast cancer detection (MCF-7). 2005, Project No: 384131
6. Mohammad Hossein Zare (thesis title: Assessment of absorbed dose in Computed Tomography Scanning (CT) examinations). 2005-2011, Project No: 384016
7. Leila Ghaedi (thesis title: Investigation and comparison of recording time of steady state evoked potentials using three methods of Kalman, Ziarani and adaptive). 2006,
8. Abolfazl Arabpour (thesis title: Assessment of heart wall motion by using electrocardiographic-gated SPECT method in comparison with quantitative coronary angiography). 2006-2011, Project No: 385009
9. Mohammad Abdolahi (thesis title: Comparison of absorbed dose of targets and critical organs (rectum, bladder and femoral head) with different techniques and energies in treating prostate cancer, employing pelvis phantom). 2007-2009, Project No: 386147
10. Ali Ebrahimi (thesis title: Investigation of relationship between exposure with trace element (Cu, Zn) concentrations of radiation workers in Isfahan). 2006-2011, Project No: 385079

11. Maryam Montazerolghaem (thesis title: Design and fabrication of electrometer for Ionization Chamber Detectors). 2006-2007, Project No: 384258
12. Ehsan Khodamoradi (thesis title: Study of Gd-porphyrin as new cancer specific magnetic resonance imaging contrast agent for detection of colon cancer (HT29/219) in mice). 2007-2011, Project No: 385343
13. Parvin Boniadi (thesis title: Investigation of Liothyronine effects on accumulated dose of thyroid cancer patients in radioiodine (I-131) therapy in Seyed Alshohada Hospital, Esfahan). 2008-2009, Project No: 387141
14. Farideh Koochian Afzal (thesis title: The effect MRI (0.35 T) fields on level of insulin hormones, cortisol, testosterone, LH, and FSH in rats). 2009-2011, Project No: 388206
15. Sareh Karbasi (thesis title: Calibration and characterization of an in vivo diode dosimetry system for clinical use in radiotherapy by measurement and Monte Carlo simulation). 2008-2009, Project No: 386398
16. Safoora Nikzad (thesis title: Investigation of organ' dose (Thyroid, sternum, neck vertebra) in thyroid cancer patients under radioiodine therapy in two methods of TLD and MIRD by use of phantom). 2009-2010, Project No: 387256
17. Kouros Ziaei (thesis title: Investigation of Salivary glands absorbed dose in radioiodine therapy). 2006-2011, Project No: 385008
18. Mohammad Saleh Jaafarpisheh and Mohammad Reza Sharbafchizadeh (thesis title: Evaluation of the average of cumulative radiation exposure, in neonates in the neonatal surgery ward, Alzahra Hospital, due to diagnostic and therapeutic radiologic procedures during the admission period) MD students, 2009-2010, Project No: 387349
19. Mostafa Khosravi (thesis title: Calculation and dosimetry of photoneutron contaminations of linear accelerator using Monte Carlo simulation in treatment room). 2010-2013, Project No: 389179
20. Mahboubeh Sohrabi (thesis title: Investigation of correction factors of absorbed dose in electron therapy of chest). 2011.
21. Fariba Nadealian Dastjerdi (thesis title: Designing shield for reduction of photoneutron contamination in medical accelerator SATURNE 20). 2014. Isfahan University of Technology.
22. Mohsen Cheki (thesis title: Determination of absorbed doses (Liver, Spleen, Bladder, Kidneys) in bone ^{99m}Tc -MDP scintigraphy using MIRD and its comparison with the data of dose report no. 13). 2011-2013, Project No: 390390
23. Marzieh Salimi (thesis title: Effect of extremely low-frequency field on proliferation rate of human adipose-derived mesenchymal stem cells). 2012-2015, Project No: 391231
24. Mehri Damoori (thesis title: The measurement of absorbed dose of bone and target organs (bladder and kidneys) in patients with bone scan with ^{99m}Tc -MDP

- using MIRD method). 2013-2015, Project No: 3394035
25. Zeinab Ghasemian (thesis title: Evaluation of Ferrite-Cobalt-Zinc ($\text{Co}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$) as an MRI new contrast agent). 2013, Project No: 391378
 26. Leila Shiri (thesis title: The effect of continuous ELF-MFs on the level of serotonin in the raphe nucleus of adult rats). 2011-2013, Project No: 390367
 27. Zahra Akmal (thesis title: Design and fabrication of a four-dimensional respiratory phantom for studying tumor movement in radiotherapy with magnetic resonance imaging). 2014-2015, Project No: 392587
 28. Zeinab-alsadat Ahmadi (thesis title: An in vitro study of the effects of electromagnetic radiation exposure from GSM mobile phones on growth and proliferation of adipose-derived stem cells). 2014-2015, Project No: 393050
 29. Alireza Zahiri (thesis title: Design and fabrication of a polymer based shield to reduce indoor radon and attenuation of beta particles and bremsstrahlung x-ray in high background radiation in Ramsar). 2015-2016, Project No: 394323
 30. Behzad Changizi (thesis title: The effect of contrast media on treatment planning and dose calculation in radiation therapy of pelvis cancers). 2016-2017, Project No: 395264
 31. Aghdas Paknejad (thesis title: Damage survey of body organs at radiology routine examinations in Yasuj). 2015, University of Isfahan
 32. Mohammad Hossein Asgarian (thesis title: Study of low-frequency (50 to 500 kHz) electromagnetic field's effects on MCF-7 cancer's tissue). 2013-2017, Project No: 392551
 33. Farzaneh Raesi (thesis title: In-vitro study of combined bromelain and radiation therapy in breast cancer cell line (4T1)). 2016-2017, Project No: 395174
 34. Alireza Moradi (thesis title: Effects of exposure to 900 MHz mobile telephony radiation on the viability and the proliferation rate of human-Adipose-derived stem cells and MCF-7 cells). 2016-2017, Project No: 395082
 35. Vida Rezaei (thesis title: Evaluation of error doses of treatment planning software using solid Anthropomorphic phantom). 2016-2017, Project No: 394905
 36. Fahimeh Aminolroayaei (thesis title: Assessment of absolute risk from radiography in neonates in neonatal intensive care unit (NICU) in hospitals under control of Isfahan and Kashan Universities of Medical Sciences). 2016.
 37. Soheila Sharifian (thesis title: The evaluation of the radiation dose 64-MDCT in PMMA phantom using AAPM Task Group Report No.111). 2016-2017, Project No: 395212
 38. Vahid Jahanbakhsh (thesis title: Effect of material and wall thickness build-up caps on the head scatter factor measurements in irregular fields shielded by Cerrobend for photon 6 MV). 2016-2017, Project No: 395266
 39. Shahabeddin Vakili (thesis title: Investigation of fetal dose in nuclear medicine test lung V/P scan (ventilation/perfusion) in pulmonary embolism using Monte

- Carlo simulation). 2018-2019, Project No: 397555
40. Tayebbeh Sobhani (thesis title: Evaluation of manganese zinc ferrite nanoparticles as contrast agent in magnetic resonance imaging under in vitro conditions). 2017-2019, Project No: 396146
 41. Negar Abdi (thesis title: In vivo study of anti-epidermal growth factor receptor antibody-based iron oxide nanoparticles (anti-EGFRSPIONs) as a novel MR imaging contrast agent for lung cancer (LLC1) cells detection). 2019-2021, Project No: 398414
 42. Shabnam Banisharif (thesis title: Comparison of radiobiological models based on change in quantity and quality MRI parameters before and after radiotherapy in patients with glioblastoma multi form). 2020-2021, Project No: 398936
 43. Zahra Pourparvar (thesis title: Evaluation and comparison of the dose received by mandible in head and neck cancer (HNC) patients in radiotherapy by 3D-CRT and Tomotherapy methods). 2020-2023, Project No: 3991034
 44. Mahdis Eivazi (thesis title: Investigation of superparamagnetic iron oxide nanoparticle-porphyrin conjugated with trastuzumab as MR imaging contrast agent for breast cancer detection in mice BALB/C). 2020-2021. Project No: 3981029
 45. Nikta Monadi (thesis title: Evaluation and comparison of the dose received by organs at risk in head and neck patients with involvement of regional lymph nodes with two methods 3D-CRT and Helical Tomotherapy). 2020-2022, Project No: 3991018
 46. Hadis Ghadriyan (thesis title: Assessment of patients dose and their environment in iodine therapy by Monte Carlo and experimental methods). 2019-2023, Project No: 398487
 47. Baranoosh Rahmani (thesis title: Comparison of fused MRI/CT-based contouring and CT-based contouring in helical tomotherapy for rectal cancer). 2020-2023, Project No: 340129

PhD students supervised:

1. Mohammad Abdolahi (thesis title: Designing and fabrication of magnetic nanoparticles imaging probes for evaluation of prostate cancer targeted MR imaging in nude mice). 2011-2015. Project No: 390271
2. Mehrdad Gholami (thesis title: Evaluation accuracy of three-dimensional dose distribution in radiotherapy of chest using equivalent lung gel polymer dosimeter). 2012-2014, Project No: 390489
3. Asghar Maziar (thesis title: Accuracy evaluation of X-Ray diffraction energy

- distribution in breast cancer diagnosis using women hair samples). 2013- 2015, Project No: 391456
4. Mohammad Keshtkar (thesis title: Synthesis and evaluation of aptamer-conjugated iron oxide nanoparticles as an MR imaging new contrast agent in 4T1 cell line). 2015-2018, Project No: 394322
 5. Farideh Koochian Afzal (thesis title: The radioprotective effects of Resveratrol against genotoxicity induced by irradiation of mice). 2018, Project No: 394667
 6. Mojtaba Karbalaee (thesis title: Design and development of a fast Monte Carlo photon dose calculation code for external beam radiotherapy and estimation of the code parallelization feasibility on GPU). 2015-2017, Project No: 393820
 7. Hadi Keivan (thesis title: Evaluation of megavoltage photon beam behavior in small IMRT segments based on static MLC for use in treatment planning of small size tumors). 2015-2016, Project No: 394427
 8. Pegah Moradi Khaniabadi (thesis title: Study of SPION-C595 nanoprobe for early stage breast cancer detection by using Magnetic Resonance Imaging). August 2016. Universiti Sains Malaysia.
 9. Maryam Zahraei (thesis title: Synthesis and evaluation of manganese zinc ferrite nanoparticles as contrast agent in magnetic resonance imaging under in vitro conditions). 2015. Isfahan University of Technology.
 10. Mohsen Saeb (thesis title: Investigation of correlations between Gamma index and dose volume histogram in quality assurance of IMRT technique). 2015-2018, Project No: 394597
 11. Mona Fazel-Ghazyani (thesis title: Synthesis and evaluation of CT molecular imaging probes using gold nanoparticles conjugated with Anti-CD24 on 4T1 mouse cell line under in vitro and in vivo conditions). 2016-2018, Project No: 395550
 12. Fatemeh Ghahremani (thesis title: AS1411 Aptamer conjugated gold nanoclusters as a targeted radiosensitizer for megavoltage radiation therapy of 4T1 breast cancer cells). 2016-2018, Project No: 395468
 13. Zienab Salehnia (thesis title: Synthesis and in vitro evaluation of MR molecular imaging probes using superparamagnetic iron oxide nanoparticles conjugated with epidermal growth factor receptor antibody (SPION-Anti-EGFR) on A549 cell line). 2015-2019, Project No: 394528
 14. Arash Safari (thesis title: Synthesis and in vitro evaluation characterization of iron oxide-gold core - shell nanoparticles and their photo and radio sensitization effect on nasopharyngeal cancer cell (KB)). 2018-2020, Project No: 397536
 15. Parvin Kaviani (thesis title: Synthesis, investigation of attributes and application of metal doped Lithium triborate nano-phosphor in in-vivo dosimetry). 2018-2021, Project ID: 397152
 16. Zahra Arab-Bafrani (thesis title: Investigation the therapeutic efficacy of x-ray on CD133+ and CD133- colon cancer cells in the n existence of gold nanoparticles). 2015, Project No: 92208, Ahwaz Jundishapur University of Medical Sciences
 17. Soheil Fatahian (thesis title: Synthesis of Fe₃O₄ nanoparticles labeled with ^{99m}Tc and applying magnetic fields in order to improve the scintillation images. 2012, Islamic Azad University (Science and Research Branch, Tehran).

18. Sakineh Bagherzadeh (thesis title: Investigation of factors affecting on larynx in radiation therapy of patients with non- laryngeal head and neck cancers). 2019-2022, Project ID: 397780
19. Farshid Mahmoudi (thesis title: Modeling response to spatially fractionated radiation therapy (grid therapy) for prostate cancer using CT images and considering bystander effect). 2020-2023, Project No: 399019
20. Naser Rasouli (thesis title: Synthesis and evaluation of Albumin loaded Iodine nanoparticles and Oxaliplatin uses for chemotherapy and radiotherapy to treat colorectal cancer cells (HT-29). 2020-2023, Project No: 399018
21. Fahimeh Aminolroayaei (thesis title: Chitosan-Imidazolium Core-Shell Nanoparticles of Gd-Mn-Mo Polyoxometalate as Novel Potential MRI Nano-agent for Breast Cancer Detection). 2020-2023, Project No: 3400413
22. Hamideh Nematollahi (thesis title: Diagnostic performance evaluation of multiparametric magnetic resonance imaging in the detection of prostate cancer with supervised machine learning methods). 2020-2023, Project No: 3400544
23. Farideh Momeni (thesis title: Investigating combined structural and functional magnetic resonance images using deep learning method in early diagnosis of Alzheimer's disease). 2022-present, Project No: 3401655

Research Projects:

1. The correlation between high background radiation and blood level of the trace elements (Copper, Zinc, Iron and Magnesium) in workers of Mahallat hot springs). 08/2009-08/2011, Project No: 187011
2. Investigation of patient dose from common radiology examinations in Isfahan, Iran. 01/2010-05/2012, Project No: 288193
3. Evaluation of ovarian cancer targeted diagnosis with designed and using targeting imaging probes of magnetic nanoparticles. 11/2010-03/2014, Project No: 18901
4. Assessment of effectiveness radiotherapy in combination with gold nanoparticle in eradication of colorectal cancer stem cell. 10/2012-06/2018, Project No: 91003517 ISFN
5. Rapid delivery of gold nanoparticles into colon cancer HT-29 cells by electroporation: In-vitro study. 05/2014-08/2016, Project No: 192144
6. AS1411 aptamer-targeted gold nanoclusters effect on enhancement of radiation therapy efficacy in breast tumor-bearing mice. 11/2016-02/2019, Project No: 195113
7. Bromelain inhibitory effect on colony formation: An *in vitro* study on human AGS, PC3, and MCF7 cancer cells. Project No.1059 and 1060 with corresponding registration. 2019, IR.SKUMS.RIC.1395.148/149.

8. In vivo study of anti-epidermal growth factor receptor antibody-based iron oxide nanoparticles (anti-EGFR-SPIONs) as a novel MR imaging contrast agent for lung cancer (LLC1) cell detection. 11/2015-07/2020, Project No: 194116
9. Study of photothermal therapeutic and imaging application of trastuzumab conjugated superparamagnetic iron oxide nanoparticle in HER2-positive breast cancer. 07/2017-2021, Project No: 196053
10. Design of a multivariable normal tissue complication probability (NTCP) model for jaw osteoradionecrosis (ORN) after radiotherapy in head and neck cancer. 02/2021-present, Project No: 199596

Books (in Persian):

- 1- Magnetic Resonance Imaging, IUMS, 2007.
- 2- Quality Control in Medical Imaging, IUMS, 2012.
- 3- Fundamental Physics of Clinical Instruments, IUMS, 2013.
- 4- Basic Physics & Quality Control of CT, Mani publication, Isfahan, Iran, 2016.
- 5- Radiation Detection and Dosimetry, Mani publication, Isfahan, Iran, 2017.
- 6- Advanced Topics in Medical Imaging, IUMS, 2018.
- 7- Medical Physics: An Introduction, IUMS, 4th ed., 2018 (for Medical students).
- 8- Translation of “Radiologic Science for Technologists (Physics, Biology and Protection”, 11th ed., Stewart Carlyle Bushong to Persian, Etminan Publication, Tehran, Iran, 2018.
- 9- Advanced Nuclear Medicine Imaging, 1st ed., Mani publication, Isfahan, Iran, 2020.

National and International Boards, Committees, and Activities:

- Member of the Medical Physics Board of Examiners and Evaluators, Ministry of Health and Medical Education, 2008-2014
- Member of the Examiners, Planning and Evaluation Committee of Medical Imaging, Ministry of Health and Medical Education of Iran July 22, 2012-July 22, 2014
- Member of the Scientific Committee and Judges, 12th Iranian Conference of Medical Physics (ICMP), 19-20 July, 2018, Shahid Beheshti University of Medical

Sciences, Tehran, Iran (22 articles).

- Member of the Scientific Committee, Judges, and Speaker, 11th Iranian Conference of Medical Physics (ICMP), 6-7 November, 2014, Tehran University of Medical Sciences, Tehran, Iran (20 articles).
- Member of the interviewer and Judge Committee for PhD candidate of the Ministry of Health and Medical Education, Iran, 27 July 2017, Mashad University of Medical Sciences (30 PhD candidates).
- Member of the interviewer and Judge Committee for General Exams of PhD candidate, 15 February 2016, Isfahan University of Medical Sciences, Isfahan, Iran.
- Member of the Examiner Committee of Basic Science for MD students, February 2014, Isfahan University of Medical Sciences, Isfahan, Iran.
- Member of the Examiner Committee of Basic Science for MD students, February 2015, Isfahan University of Medical Sciences, Isfahan, Iran.
- Vice chancellor for Research at Dept. of Medical Physics, School of Medicine, Isfahan University of Medical Sciences, from 2010-2019. As reviewer of postgraduate students proposal and thesis (50 students).
- Member of the Scientific Committee and Judges (Referee), 13th Iranian Conference on Biomedical Engineering (ICBME), 21-22 February, 2007, Sharif University of Technology, Tehran, Iran (22 articles).
- Referee, for 17th Iranian Conference on Biomedical Engineering (ICBME), 3-4 November 2010, Isfahan University of Medical Sciences, Isfahan, Iran (30 articles).
- Moderator/ Chair for 17th Iranian Conference on Biomedical Engineering (ICBME), 3-4 November 2010, Isfahan University of Medical Sciences, Isfahan, Iran.
- Lecture in Workshop of Advanced Technics of MRI, 17th Iranian Conference on Biomedical Engineering (ICBME), 3-4 November 2010, Isfahan University of Medical Sciences, Isfahan, Iran.
- Responsible for Scientific Sessions, 17th Iranian Conference on Biomedical Engineering (ICBME), 3-4 November 2010, Isfahan University of Medical Sciences, Isfahan, Iran.
- Member of the Editorial Board of Journal of Isfahan Medical School, 3 December 2014, Isfahan University of Medical Sciences, Isfahan, Iran.

- Member of the Editorial Board of Advanced Materials Science and Technology. July 6 to date, 2020, Omniscient Pte, Ltd.

Journals and Research Centers Reviewer:

- Iran National Science Foundation (INSF)
- Journal of Isfahan Medical School (JIMS)
- International Journal of Radiation Research (Int JRR)
- Journal of Signals and Sensors (JMSS)
- Iranian Journal of Nuclear Medicine
- Iranian Journal of Medical Sciences
- IET Nanobiotechnology
- Journal of Research in Medical Sciences (JRMS)
- Asian Council of Science Editors (ACSE)
- Technical Editor in Biotechnology (Science Alert Publishing)
- Journal of Acoustical Engineering Society of Iran
- Cancers, MDPI
- Diagnostics, MDPI
- Bioengineering, MDPI
- International Journal of Molecular Sciences, MDPI

Research Interests:

- Medical imaging, in particular, application of nanoparticles in diagnosis and treatment (Theranostics)
- MRI and contrast agents for cancer detection
- Molecular imaging
- Multi-modality imaging
- Nanoparticles, Nanobiotechnology, and Nanomedicine
- Radiation dosimetry and protection

- Advanced radiation therapy
- Radiation biology
- Nuclear medicine
- Biological effects of electromagnetic fields
- Machine learning and Deep learning in diagnosis and treatment

Publications:

1. **Shahbazi-Gahrouei D.** Williams M, Rizvi S, Allen BJ. In vivo studies of Gd-DTPA-monoclonal antibody and Gd-porphyrins: potential MR imaging contrast agents for cancer. *J. Magn. Reson. Imaging*, 2001; 14:169-174.
2. **Shahbazi-Gahrouei D.** Williams M, Allen BJ. In vitro study of relationship between signal intensity and Gd-DTPA concentration at high magnetic field strength. *Australasian Radiology*, 2001; 45(3):298-305.
3. **Shahbazi-Gahrouei D.** Williams M, Rizvi S, Allen BJ. In-vitro studies of gadolinium-DTPA conjugated with monoclonal antibodies as cancer-specific magnetic resonance imaging contrast agents. *Australas Phys Eng Sci Med*, 2002; 25(1):31-38.
4. **Shahbazi-Gahrouei D.** Williams M, Allen BJ. Synthesis and application of Gd-porphyrins as MR imaging agent for cancer detection. *Iranian Biomedical Journal*, 2001; 5(2&3):87-95.
5. **Shahbazi-Gahrouei D.** Investigation of relationship between MR imaging signal intensity and contrast agent at high magnetic field strength. *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2000; 2(2):1-9.
6. **Shahbazi-Gahrouei D.** Targeted alpha therapy using radiolabeling of monoclonal antibody. *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2001; 3(3):1-8.
7. **Shahbazi-Gahrouei D.** Natural background radiation dosimetry in the highest altitude region of Iran. *Journal of Radiation Research*, 2003; 44 (3):285-287.
8. **Shahbazi-Gahrouei D.** Annual Background Radiation in Chaharmahal and Bakhtiari Province. *Iranian Journal of Radiation Research*, 2003; 1(2):87-91.
9. Behroozkia Z, **Shahbazi-Gahrouei D.** Comparison of prescribed dose and absorbed dose in body treatment fields on patients with Hodgkin and Uterin adenocarcinoma. *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2002; 4(1):9-16.
10. **Shahbazi-Gahrouei D.** Measurement of natural background radiation in Chaharmahal and Bakhtiari province. *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2002;4(3):21-26.
11. **Shahbazi-Gahrouei D.** Possible effect of background radiation on cancer

- incidence in Chaharmahal and Bakhtiari province. *Iranian Journal of Radiation Research*, 2003; 1(3):171-174.
12. **Shahbazi-Gahrouei D.** Quality control of the radiological equipment in Chaharmahal and Bakhtiari hospitals. *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2004; 5(4):11-18.
 13. **Shahbazi-Gahrouei D.** Danesh Azar. Investigation of cancers incidence relevant to radiation in Chaharmahal and Bakhtiari province during five years (1998-2002). *Journal of Shahrekord University of Medical Sciences (JSKUMS)*, 2004;6(1):7-13.
 14. Behroozkia Z, **Shahbazi-Gahrouei D.** Investigation of pateints exposure from common medical X-ray examination in Chaharmahal and Bakhtiari hospitals. *Shahrekord University of Medical Sciences Journal*, 2005; 7(2):57-63.
 15. **Shahbazi-Gahrouei D.** Tavakoli MB, Nazari V. Gadolinium-Hematoporphyrin: new potential MRI contrast agent for detection of breast cancer cell line (MCF-7). *Journal of Research in Medical Sciences*, 2005; 10(5):309-313.
 16. **Shahbazi-Gahrouei D.** Gadolinium-porphyrins: new potential magnetic resonance imaging contrast agents for melanoma detection. *Journal of Research in Medical Sciences*, 2006; 11(4): 217-223.
 17. **Shahbazi-Gahrouei D.** Roufeh M, Tavakoli MB. Gadolinium-diethylenetriaminepenta-acetic acid conjugated with monoclonal antibody as new magnetic resonance imaging contrast agents for breast cancer (MCF-7) detection. *Iranian Biomedical Journal*, 2006; 10(4):209-213.
 18. Bouzarjomehri F, Zare MH, **Shahbazi-Gahrouei D.** Conventional and spiral CT dose indices in Yazd general hospitals. *Iranian Journal of Radiation Research*, 2006;3(4):183-189.
 19. **Shahbazi-Gahrouei D.** Entrance surface dose measurements for routine x-ray examinations in Chaharmahal and Bakhtiari hospitals. *Iranian Journal of Radiation Research*, 2006; 4(1):29-33.
 20. **Shahbazi-Gahrouei D.** Tavakoli MB, Roufeh M, Nazari V. Assessment of new Gadolinium compounds as contrast agents for detection of MCF-7 breast cancer cell line in MRI. *Feyz Magazine*, 2006; 10(3):16-21.
 21. Bouzarjomehri F, Zare MH, **Shahbazi-Gahrouei D.** Patient dose resulting from CT examinations in Yazd, Iran. *Iranian Journal of Radiation Research*, 2006; 4(3):121-127.
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