

## **Alireza MehdizadehTazangi**

### **CONTACT INFORMATION**

**Address: Number 8, Building 6, Baharan complex, Sattarkhan Blvd, Shiraz, Iran, 7184737476**

**Telephone: +98 713 2349332**

**Cell Phone: +98 917 407 5007**

**Email: Mehdizade@sums.ac.ir, [Alireza.mehdizadeh@gmail.com](mailto:Alireza.mehdizadeh@gmail.com)**



---

### **EMPLOYMENT HISTORY**

- **Associate/assistant professor of Medical physics, 2010-now**
- **department of biomedical physics and engineering, acting as the head 2016-now**
- **Medical Equipment incubator, co-funder and acting as the head 2011-now**
- **Senior medical physicists, Department of nuclear medicine, Nemazee hospital, 2011-2014**
- **Senior medical physicists, Chamran hospital 2014-2015**
- **Senior medical physicists, Saadi hospital 2015-2016**
- **Fellowships: joint university accelerator school, CERN 2007**
- **Nanotechnology and nanosciences, Jülich Aachen Research Alliance 2009**
- **Research and Training**

---

### **EDUCATION**

- **PhD in Medical Physics Mashad University of Medical Sciences, thesis in field of Imaging**
- **MD degree, Shiraz University of Medical Sciences, thesis in field of organ transplantation**

---

### **RESEARCH AND/OR PUBLICATIONS**

**Radiotherapy methods, Radiation protection and dosimetry, Medical Imaging, cancer treatment through nanotechnology(CTTN)**

1. Medical image registration using deep neural networks: A comprehensive review,2020
2. Investigating the mechanisms behind extensive death in human cancer cells following nanoparticle assisted photo-thermo-radiotherapy,2020
3. The efficacy of microaneurysms detection with and without vessel segmentation in color retinal images,2020
4. Lead-free transparent shields for diagnostic X-rays: Monte Carlo simulation and measurements,2020
5. COVID-19: Introducing low dose radiation as an effective treatment for pneumonia that shouldn't induce selective pressure and new mutations,2020
6. Synthesis, Characterization and MRI Application of Cobalt-Zinc Ferrite Nanoparticles Coated with DMSA: An In-vivo Study,2020
7. Editorial,2019
8. Dosimetric investigation of a new quantum dots/nanocomposite (CdTe QDs/PVK) sensor for real-time gamma radiation detection,2019
9. Reduced graphene oxide/polymethyl methacrylate (rGO/PMMA) nanocomposite for real time gamma radiation detection,2019
10. Akhawayni or AI-Akawayni: Which term is correct?,2019
11. Mandibular trabecular bone analysis using local binary pattern for osteoporosis diagnosis,2019
12. Investigating the photo-thermo-radiosensitization effects of folate-conjugated gold nanorods on KB nasopharyngeal carcinoma cells,2018
13. Design and production of two-piece thyroid-neck phantom by the concurrent use of epoxy resin and poly(Methyl methacrylate) soft tissue equivalent materials,2018
14. Effect of microwave Wi-Fi radiation at frequency of 2.4 GH on epileptic behavior of rats,2018
15. "Triple M" effect: A proposed mechanism to explain increased dental amalgam microleakage after exposure to radiofrequency electromagnetic radiation,2018
16. The assessment of mercury released from dental amalgams after exposure to Wi-Fi and X-ray radiation in artificial saliva,2018
17. Sound level analysis in endotracheal tube obstruction in spontaneous breathing and mechanical ventilation—an animal model study,2017
18. Quantitative determination of tumor platinum concentration of patients with advanced Breast, lung, prostate, or colorectal cancers undergone platinum-based chemotherapy,2017
19. Modification of source strength in low-dose-rate lung brachytherapy with<sup>125</sup>I and <sup>103</sup>Pd seeds,2017
20. Mathematical formulation of <sup>125</sup>I seed dosimetry parameters and heterogeneity correction in lung permanent implant brachytherapy,2017
21. Effect of two different preprocessing steps in detection of optic nerve head in fundus images,2017
22. Neural communication through theta-gamma cross-frequency coupling in a bistable motion perception task,2016
23. Ultrasound in cancer treatment through nanotechnology,2016
24. Effect of magnetic fluid hyperthermia on implanted melanoma in mouse models,2016
25. Deep brain stimulation and gene expression alterations in parkinson's disease,2016
26. The synergistic effects of ultrasound and laser on the enhancement of transdermal insulin delivery in diabetic rats,2016
27. Photothermal cancer therapy by gold-ferrite nanocomposite and near-infrared laser in animal model,2016
28. Akhawayni (?–983 AD): A Persian neuropsychiatrist in the early medieval era (9th–12th century AD),2016
29. Mansur ibn Ilyas (1380-1422 AD): A persian anatomist and his book of anatomy, Tashrih-i Mansuri,2016
30. Synthesis, characterization, in vitro and in vivo studies of dextrin-coated zinc-iron ferrite nanoparticles (Zn<sub>0.5</sub>Fe<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>) as contrast agent in MRI,2015
31. Meeting report on first international mobile health seminar: Shiraz, Iran, 17th and 18th may 2015,2015
32. Dextrin-coated zinc substituted cobalt-ferrite nanoparticles as an MRI contrast agent: In vitro and in vivo imaging studies,2015
33. Retinal vascular fractals in Behçet's Disease: A screening method?,2015
34. Evaluation of serum catalase activity and malondialdehyde level as stress oxidative biomarkers among iranian welders,2015
35. A challenging issue in the etiology of speech problems: The effect of maternal exposure to electromagnetic fields on speech problems in the offspring,2015
36. The accuracy of a designed software for automated localization of craniofacial landmarks on CBCT images,2014

37. How did Haly Abbas look at the cardiovascular system?,2014
38. Novel paint design based on nanopowder to protection against X and gamma rays,2014
39. New insights into blindness; Mechanical fatigue of optic nerve head in glaucomatous optic neuropathy,2014
40. Entanglement between bio-photons and tubulins in brain: Implications for memory storage and information processing,2014
41. Enhanced electrocatalytic reduction and highly sensitive nonenzymatic detection of hydrogen peroxide using platinum hierarchical nanoflowers,2014
42. The effects of folate-conjugated gold nanorods in combination with plasmonic photothermal therapy on mouth epidermal carcinoma cells,2014
43. Al-Akawayni, a contributor to medieval Persian knowledge on contraception,2013
44. A complementary method for automated detection of microaneurysms in fluorescein angiography fundus images to assess diabetic retinopathy,2013
45. Increased radioresistance to lethal doses of gamma rays in mice and rats after exposure to microwave radiation emitted by a gsm mobile phone simulator,2013
46. Abkama, the first reported antibiotic in gastritis and infections throughout history.,2013
47. New approach to red blood cell classification using morphological image processing,2013
48. Management of tremor in medieval persia,2013
49. Cataract surgery in albucahis manuscript,2012
50. Oxymel in medieval Persia.,2012
51. Zoroastrian priests: Ancient Persian psychiatrists,2012
52. Effects of renal artery stenosis on realistic model of abdominal aorta and renal arteries incorporating fluid-structure interaction and pulsatile non-Newtonian blood flow,2012
53. Jawarish, a Persian traditional gastrointestinal dosage form.,2012
54. Early detection of diabetic retinopathy in fluorescent angiography retinal images using image processing methods,2011
55. Bilateral tardus-parvus waveforms in a patient with aortic coarctation,2011
56. Radon transform technique for linear structures detection: Application to vessel detection in fluorescein angiography fundus images,2011
57. Designing strategies to control coronary atherosclerosis using a new model,2010
58. Radiation protection principles observance in Iranian dental schools,2010
59. New insights in atherosclerosis: Endothelial shear stress as promoter rather than initiator,2009
60. Alpha particle vascular brachytherapy in the treatment of in-stent Restenosis,2009
61. Introducing the shape of globe as a predisposing factor for glaucoma,2008
62. How ethnicity affects risk of primary open-angle glaucoma?,2008
63. Burnout in hospital nurses: A comparison of internal, surgery, psychiatry and burns wards,2008
64. Life in death: An overview of solid organ transplant in Shiraz, Iran,2007
65. Central corneal thickness as a risk factor for glaucoma,2007
66. Effect of Hypertension on Transplant Kidney Function: Three Year of Follow-up,2007
67. What is the real cause of glaucoma?,2007
68. How to Decrease Cardiovascular Mortality in Renal Transplant Recipients,2006
69. Complications of Arteriovenous Fistula in Dialysis Patients,2006
70. Predictors of cardiovascular events and associated mortality of kidney transplant recipients,2006
71. Incidence of cardiovascular risk factors and complications before and after kidney transplantation,2006
72. Comparison of spousal with other donor groups: Study of a single center,2006

73. Pediatric liver transplantation in the Shiraz Transplant Center,2006
74. Long-term results of renal transplantation: A single-center analysis of 1200 transplants,2006
75. Comparison of serum homocysteine level in Metformin versus glibenclamide treated type 2 DM patients,2005
76. Incidence of posttransplantation diabetes mellitus in kidney transplantation: A single-center experience,2005
77. Effect of body mass index at time of transplantation and weight gain after transplantation on allograft function in kidney transplant recipients in shiraz,2005
78. Biliary tract complications after liver transplantation in a single center,2005
79. Results of liver transplantation: Analysis of 140 cases at a single center,2005
80. Evaluation the cause of end-stage renal disease (ESRD) in kidney transplant patients - A single center study [1],2004