

In the name of GOD



Curriculum Vita

Dr Ahad Zeinali

I- Personal Information

Ahad Zeinali, Medical Physics PhD

Academic Degree: Full Professor

Adress: Department of Medical Physics, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran.

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II- Educational records:

Degree	Institution	Field	Date
Ph.D.	Tarbiat Modares University	Medical Physics	2008

III- Dissertation

Ph.D Dissertation: Noninvasive prediction of Vertebral Body Compressive Fractures (VCF) using Quantitative Computed Tomography (QCT) based Finite Element Analysis (FEA).

IV- Teaching Courses

Physics of Radiotherapy
Radiobiology
Physics of Medical Imaging
Physics for Medical Students
Physics for Dentistry Students
Physics for Pharmacy Students
Health Physics

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V- Membership of Scientific Societies

Iranian Association of Medical Physicists (IAMP)

VI- Invention

**Three Dimensional Color map Bone Mineral Densitometry Using
Quantitative Computed Tomography**

VII- Field Of Interest

- **Medical Images (CT & CBCT) based quantitative Analysis**
- **QCT and QCBCT based Finite Element Analysis**
- **Radiotherapy Treatment Planning**

Two new manuscript under revision

- 1- **QCBCT voxel based FEA can predict biomechanical behaviors of mandibular bone in the site of dental implant(Journal of computer in biology and medicine-under revision)**
- 2- **The use of Artificial Intelligence in determining the location of mandibular nerve in the site of dental implant based of CBCT images(Journal of oral and maxillofacial radiology-under revision)**

VIII- Publications

Journal Papers:

- 1- Prediction of Human Vertebral Compressive Strength Using Quantitative Computed Tomography Based Nonlinear Finite Element Method. Iranian Journal of Medical Physics 4 (3, 4), pp.19-32.2007.
- 2- On Prediction of the Strength Levels and Failure Patterns of Human Vertebrae using Quantitative Computed Tomography (QCT)-Based Finite Element Method. Journal of Biomechanics.42 (11), pp.1584-1591.2009
- 3- Noninvasive prediction of vertebral body compressive strength using finite element method and an image based technique. Physica Medica (European Journal of Medical Physics).26(2), pp.88-97. 2010 .
- 4- Evaluation of the electron energy fluence and angular distributions from a clinical accelerator. A BEAMnrc Monte Carlo study. N Jabbari, H Nedaie, A Zeinali. International Journal of Radiation Research. 9 (1), pp. 29-36.2011.
- 5- Assessment of radiology technology students' internship with objective structured clinical examination. N Jabbari, A Zeinali, S Ageshteh. Future of Medical Education Journal 2 (3), pp.19-23.2012.
- 6- An investigation of mean glandular dose from routine mammography in Urmia, Northwestern Iran and the factors affecting it. Z Behrouzkia, A Zeinali, MH Mohammady, N Jabbari. Research Journal of Applied Sciences, Engineering and Technology 4 (18), pp.3348-3353. 2012.
- 7- The effect of teaching the learning and studying strategies on unsuccessful college students' development in Urmia University of Medical Sciences. H Feizipour, A Zeinali. Journal of Urmia Nursing & Midwifery Faculty, 11 (1) .2013.
- 8- Influence of the intravenous contrast media on treatment planning dose calculations of lower esophageal and rectal cancers. J Nasrollah, M Mikaeil, E Omid, SS Mojtaba, Z Ahad. Journal of Cancer Research and Therapeutics, 10 (1), pp. 147-152 . 2014
- 9- Validation of a prototype optical computed tomography system. SS Zakariaee, M Molazadeh, A Takavar, A Shirazi, A Mesbahi, A Zeinali. Journal of Medical Signals and Sensors .5 (2), pp.123-130 .2015.
- 10- Evaluating dose distribution of bladder and organs at risk doses in 6 and 15 mv photon energies and 3 and 4 radiation fields in the external beam radiation therapy of bladder cancer. A Zeinali, H Saberi, A Arjmand, O Esnaashari, M Aghdasi. Studies in Medical Sciences 26 (7), pp.550-560 .2015.
- 11- On Presentation of Optimal Treatment Plan in Radiotherapy of Parotid Cancer: A Comparison of Nine Techniques in Three Dimensional Conformal Radiation Therapy (3DCRT). A Zeinali, FF Moghadam. International Journal of Medical Imaging. Urmia. 4(4), pp.32-38. 2016.
- 12- Investigating the use of personal information management strategies by faculty members of three medical sciences universities in Iran. A Shirazi, M Molazadeh, A Zeinali, G Geraily. MIER Journal of Educational Studies Trends and Practices, 107-120.2017.
- 13- Dosimetric characteristics of LinaTech DMLCH multi leaf collimator: Monte Carlo simulation and experimental study. M Molazadeh, A Zeinali, M Robatjazi, A Shirazi, G Geraily. Journal of applied clinical medical physics 18 (2), pp.113-124 .2017.

- 14- Comparison of three and four-field radiotherapy technique and the effect of laryngeal shield on vocal and spinal cord radiation dose in radiotherapy of non-laryngeal head and neck tumors. NH Pour, A Farajollahi, M Jamali, A Zeinali, AG Jangjou. Polish Journal of Medical Physics and Engineering 24 (1),pp. 25-31 .2018.
- 15- The effect of bioactive component of turmeric (curcumin) on liver complications-induced by compact fluorescent lamps (CFLs) in rats. N Khalaji, A Zeinali, M Purjabali, K Bolurani, AA Fard. Shiraz E-Medical Journal. 19 (4).e 60572. 2018.
- 16- Histopathological assessment of protective effects of selenium nanoparticles on rat hepatocytes exposed to Gamma radiation. A Sohrabi, AA Tehrani, S Asri-Rezaei, A Zeinali, M Norouzi. Veterinary Research Forum 11 (4), pp.347-353 .2020.
- 17- Three-dimensional IMRT QA of Monte Carlo and full scatter convolution algorithms based on 3D film dosimetry. M Molazadeh, M Robatjazi, G Geraily, H Rezaeejam, A Zeinali, A Shirazi. Radiation Physics and Chemistry 186, 109528 .2021.
- 18- Three-dimensional film dosimetry of photon beam in small field sizes and beyond the heterogeneous regions using a GAF-chromic films array .Z Arab-Bafrani, L Mahani, A Khoshbin-Khoshnazar, A Zeinali. Radiation Physics and Chemistry 188. 2021.
- 19-Evaluation of full scatter convolution algorithm performance in the presence of inhomogeneities using a novel method of three-dimensional film dosimetry. A Zeinali, L Mahani, N Kargar. International Journal of Radiation Research 19 (2), pp.391-399 .2021.
- 20- Comparison of the performance of monte-carlo and collapsed cone algorithms used in MONACO treatment planning system in predicting cardiopulmonary complications due to the left breast radiotherapy. A Zeinali, N Kargar. Studies in Medical Sciences 32 (7), pp.558-571 .2021.
- 21- Performance evaluation of a Monte Carlo-based treatment planning system in out-of-field dose estimation during dynamic IMRT with different dose rates.L Mahmoudi, K Mostafanezhad, A Zeinali. Informatics in Medicine Unlocked 29, 100912. 2022.
- 22- Protective effects of chlorogenic acid against ionizing radiation-induced testicular toxicity.N Abedpour, A Zeinali, M Karimipour, B Pourheidar, GH Farjah, A Abak.Heliyon 8 (10), e10798 .2022.
- 23- The effect of different colors of nail polish on oxygen saturation measured by pulse oximetry in healthy girls. M Delirrad, MA Valizade Hasanloei, A Zeinali, N Shirzad.Studies in Medical Sciences 32 (11), pp. 857-863.2022.
- 24- On prediction of cardio-pulmonary complications during hypofractionated versus conventional fractionated regimens of left breast radiation therapy using Monte Carlo and collapsed Cone Convolution based Algorithms.S Omidvar, K Mostafanezhad, A Zeinali. Iranian Journal of Medical Physics. 2023.
- 25- Improvement of Spermatogenesis and Fertility in Mice under Ionizing Radiation Using Chlorogenic Acid.M Zirak Javanmard, A Zeinali, S Ghazanfar Ahari, N Abedpour.Journal of Isfahan Medical School 40 (697), pp.981-990.2023.
- 26- Using a photographic image processing method as a part of the QA program in some radiotherapy departments where CTs are involved with COVID-19 patients.A Zeinali, Y Ghareayaghi, H Seyedarabi, H Saberi.Health Science Monitor 2 (1), pp.1-9.2023.

27-Collapsed Cone Superposition (CCS) algorithm validation for chest wall tangential fields using Virtual Wedge Filtes. Journal of Medical Signals and Sensors. A.Zeinali, M.molazadeh, S.Ganjgahi and H.Saberi. 13(3), pp.191-198, 2023.

IV- Congresses and Seminars:

- 1- The 3rd Iranian Congress of Medical Physics, 1997- Poster Presentation
- 2- The 4th Iranian Congress of Medical Physics, 2000. Poster Presentation
- 3- The First International Conference on Radiation and its Role in Diagnosis and Treatment, IRAN, 2000.
- 4- The First International Conference of Cancer, IRAN, 2001. Oral Presentation
- 5- The 5th Iranian Congress of Medical Physics, 2002- Poster Presentation
- 6- The 6th Iranian Congress of Medical Physics, Mashhad, IRAN, 2004- Poster Presentation
- 7- The 7th Iranian Congress of Medical Physics, Ahvaz IRAN, 2007- Poster Presentation

- 8- World Congress of Medical Physics & Biomedical engineering, Malaysia, 2008-Oral Presentation
- World Congress of Medical Physics & Biomedical engineering, Germany, 2009-Oral Presentation
- 9- The 8th Iranian Congress of Medical Physics, Shahid Beheshti, Tehran, IRAN, 2009- Oral Presentation
- 10- International Conference of Medical Physics & Biomedical engineering, Ireland, 2011-Oral Presentation
- 12- World Congress of Medical Physics & Biomedical engineering, China, 2012-Oral Presentation.
- 11- 4th International Conference of Medical Physics and Biophysics and 2nd International Conference on Nuclear Medicine & Radiation Therapy. July 27-28, 2017 Rome, Italy.
- 12- Total Body PET Conference. 30 June -2 July, 2018. Ghent, Belgium.
- 13- Dimensional film dosimetry with GAFCHROMIC films for quality assurance and dosimetric verification of 3D conformal radiotherapy in the presence of heterogeneities. Iranian Congress of Medical Physics. 2018. Poster Presentation.
- 14- Comparison of three and four-field radiotherapy techniques and the effect of laryngeal shield on vocal and spinal cord radiation dose in radiotherapy of non-laryngeal head and Neck tumors. Iranian Congress of Medical Physics. 2018. Poster Presentation.
- 15- Measurements of radiation Leakages in TiGRT Dynamic MLC using GAF Chromic Film dosimetry and EDGE-Diode with BEAM nrc .6th Ionizing and Non-Ionizing radiation measurement and safety conference. Shiraz. Iran. 2021

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