



❖ The Scientific Research CV from: Dr. Seyed Alireza Mousavi Shirazi

• Academic Degrees:

- 1- Ph.D. degree in nuclear energy engineering from Islamic AZAD University, Science and Research Branch with achieving an excellent grade in the Ph.D. thesis (the score of 19.75 out of 20). February 2017.
- 2- M.Sc. degree in nuclear reactor engineering from Islamic AZAD University, Science and Research Branch with achieving an excellent grade in the M.Sc. thesis (the score of 19.5 out of 20). September 2005.
- 3- B.Sc. degree in electrical-electronics engineering from Imam Hossein University with achieving a perfect score (20 out of 20) in the B.Sc. project. September 2001.

The title of Ph.D. dissertation: Dosimetry of liver tissue in NCT besides modeling a liver phantom

The title of M.Sc thesis: Designing and making an automatic controller set for nuclear reactor control rods

The title of B.Sc project: Designing and making mine and metal detector

• Current and former positions, occupation and affiliation:

- 1- Assistant professor (17th-grader) and full-time faculty member at “Islamic AZAD University, South Tehran Branch, Engineering Faculty, Department of Physics”. September, 2006 to present.
Type of the Employment: **Official**.
- 2- Member of the specialized committee at Central Organization of Islamic AZAD University for course planning and training nuclear energy engineering. January, 2023 to present.
- 3- Membership at the mind room of the research office at Islamic AZAD University, South Tehran Branch. June, 2019 to present.
- 4- Membership in the intellectual property committee at Islamic AZAD University, South Tehran Branch. February, 2017, February, 2018.
- 5- Member of the Young Researchers Club of Islamic AZAD University. November, 2011- November 2012.

• Areas of interest:

- 1- Nuclear energy engineering, 2- Nuclear physics, 3- Applied radiation and application of radiation, 4- Nuclear Reactors, 5- Medical radiation, 6- Nuclear Fuel Cycle, 7- Electrical and Electronics Engineering.

• Direct Links:

The direct link to access my papers in the Google Scholar database:

<https://scholar.google.com/citations?hl=en&user=CxQSYtAAAAAJ>

The direct link to access my papers in the Web of Science database:

<https://www.webofscience.com/wos/author/record/1192488>

The direct link to access my papers in the ORCID database:

<https://orcid.org/0000-0001-6002-4264>

The direct link to access my papers in the Scopus database:

<https://www.scopus.com/authid/detail.uri?authorId=55387817000>

The direct link to access my papers in the ResearchGate database:

https://www.researchgate.net/profile/Seyed_Alireza_Mousavi_Shirazi

The direct link to access my profile in the WIKIDATA database:

<https://www.wikidata.org/wiki/Q57683925>

The direct link to access my academic profile at my institution:

<https://stb.iau.ir/faculty/sar-mousavi/en>

The direct link to access my profile in Google website (my introduction as an international Researcher):

<https://g.co/kgs/tQiFC5>

List of Publications

- **Journals:**

1- Publishing a paper in an ISI (Web of Science- **Q1**) journal with Impact Factor: “**1.569**” affiliated to the Elsevier publisher: [Hot Paper \(Most cited\)](#)
Seyed Alireza Mousavi Shirazi*, The simulation of a model by SIMULINK of MATLAB for determining the best ranges for velocity and delay time of control rod movement in LWR reactors, Progress in Nuclear Energy, Volume 54, Issue 1, 64-67, January, 2012.
<http://www.sciencedirect.com/science/article/pii/S0149197011001685>

2- Publishing a paper in an ISI (Web of Science- **Q1**) journal with Impact Factor: “**1.380**” affiliated to the Elsevier publisher: [Hot Paper \(Most cited\)](#)
S.A. Mousavi Shirazi*, C. Aghanajafi, S. Sadoughi, N. Sharifloo, Design, Construction and Simulation of a Multipurpose System for Precision Movement of Control Rods in Nuclear Reactor, Annals of Nuclear Energy, Volume 37, Issue 12, 1659-1665, December, 2010.
<http://www.sciencedirect.com/science/article/pii/S0306454910002690>

3- Publishing a paper in an ISI (Web of Science- **Q1**) journal with Impact Factor: “**1.380**” affiliated to the Elsevier publisher: [Hot Paper \(Most cited\)](#)
M. Rafiei Karahroudi, **S.A. Mousavi Shirazi***, K. Sepanloo, Optimization of Designing the Core Fuel Loading Pattern in a VVER-1000 Nuclear Power Reactor Using the Genetic Algorithm, Annals of Nuclear Energy, Volume 57, 142-150, July, 2013.
<http://www.sciencedirect.com/science/article/pii/S0306454913000686>

4- Publishing a paper in an ISI (Web of Science- **Q1**) journal with Impact Factor: “**1.380**” affiliated to the Elsevier publisher:
Mohsen Rafiei Karahroudi, **Seyed Alireza Mousavi Shirazi***, Study of power distribution in the CZP, HFP and normal operation states of VVER-1000 (Bushehr) nuclear reactor core by coupling nuclear codes, Annals of Nuclear Energy, Volume 75, 38-43, January, 2015.
<http://www.sciencedirect.com/science/article/pii/S0306454914003697>

5- Publishing a paper in an ISI (Web of Science- **Q3**) journal with Impact Factor: “**1.315**” and Source Normalized Impact per Paper (SNIP): “**0.680**” and Cite Score: “**1.26**” indexed in the PubMed database affiliated to the Elsevier publisher:
Seyed Alireza Mousavi Shirazi, Ali Pazirandeh*, Gholamreza Jahanfarnia, Mitra Athari Allaf, Presenting and simulating an innovative model of liver phantom and applying two methods for dosimetry of it in neutron radiation therapy, Reports of Practical Oncology & Radiotherapy, Volume 22, Issue 1, 42-51, January-February, 2017.
<http://www.sciencedirect.com/science/article/pii/S1507136716301304>

6- Publishing a paper in a journal affiliated to the Elsevier publisher indexed in DOAJ (Directory of Open Access Journals):
Seyed Alireza Mousavi Shirazi*, Calculation of neutron flux and neutron visualization in a spherical reactor core applying a conceptual approach and drawing a comparison with the results obtained by the CITATION code, International Journal of Advanced Nuclear Reactor Design and Technology, Volume 3, 166-174, October, 2021.
<https://www.sciencedirect.com/science/article/pii/S2468605021000223>

7- Publishing a paper in an ISI (Web of Science- **Q1**) journal with Impact Factor: “**2.155**” affiliated to the Springer Publisher:
S.A. Mousavi Shirazi*, Obtaining the precise required irradiation time for radiotherapy of liver tissue using medical imaging, International Journal of Computer Assisted Radiology and Surgery, Volume 13, Supplement 1, 161-162, June 20-23, 2018.
<https://link.springer.com/article/10.1007/s11548-018-1766-y>

8- Publishing a paper in an ISI (Web of Science- **Q3**) journal with Impact Factor: “**0.644**” affiliated to the **Springer** Publisher:

Javad Sheibani, **Seyed Alireza Mousavi Shirazi***, Mohammad Farhad Rahimi, Studying the Effects of Compound Nucleus Energy on Coefficient of Surface Tension in Fusion Reactions Using Proximity Potential Formalism, Journal of Fusion Energy, Volume 33, Issue 1, 74-82, October, 2013.

<http://link.springer.com/article/10.1007%2Fs10894-013-9641-x>

9- Publishing a paper in an ISI (Web of Science- **Q2**) journal with Impact Factor: “**1.082**” affiliated to **Hindawi** Publisher:

Seyed Alireza Mousavi Shirazi*, Dariush Sardari, Design and Simulation of a New Model for Treatment by NCT, Science and Technology of Nuclear Installations, Volume 2012, 1-7, September, 2012.

<http://www.hindawi.com/journals/stni/2012/213640/>

10- Publishing a paper in an ISI (Web of Science- **Q4**) journal with Impact Factor: “**0.478**” and Cite Score: “**0.54**” affiliated to Tehran University of Medical Sciences and Iranian Society of Radiology (**Kowsar** Publishing Company):

Seyed Alireza Mousavi Shirazi*, Application of medical imaging for dosimetry and evaluation of the required irradiation time in X-ray radiotherapy for liver cancer to prevent radiation overdose, Iranian Journal of Radiology, Volume 16, Issue 3, 1-7, July, 2019.

<http://iranjradiol.com/en/articles/85091.html>

11- Publishing a paper in an ISI (Web of Science- **Q4**) journal with Impact Factor: “**0.549**” affiliated to **American Scientific** Publishers:

S.A. Mousavi Shirazi*, Coupling between MCNPX code and Delphi 7 programming language for studying neutron behavior in a new physical model of liver tissue in neutron radiation therapy, Journal of Medical Imaging and Health Informatics, Volume 8, Issue 2, 208-213, February, 2018.

<http://www.ingentaconnect.com/content/asp/jmih/2018/00000008/00000002/art00008>

12- Publishing a paper in an ISI (Web of Science- **Q4**) journal with Impact Factor: “**0.549**” affiliated to **American Scientific** Publishers:

S.A. Mousavi Shirazi, A. Pazirandeh*, G. Jahanfarnia, M. Athari Allaf, Creating a novel method for precise dosimetry of liver tissue in radiotherapy, Journal of Medical Imaging and Health Informatics, Volume 7, Issue 3, 636-638, June, 2017.

<http://www.ingentaconnect.com/content/asp/jmih/2017/00000007/00000003/art00017>

13- Publishing a paper in an ISI (Web of Science- **Q3**) journal with Impact Factor: “**0.265**” affiliated to Carl Hanser Verlag, **München** Publisher (Germany):

S.A. Mousavi Shirazi*, Numerical solution of diffusion equation to study fast neutrons flux distribution for variant radii of nuclear fuel pin, KERNTECHNIK, Volume 80, Issue 3, 291-294, July, 2015.

<http://www.hanser-elibrary.com/doi/ref/10.3139/124.110498>

14- Publishing a paper in an ISI (Web of Science- **Q3**) journal with Impact Factor: “**0.265**” affiliated to Carl Hanser Verlag, **München** Publisher (Germany):

Mohsen Rafiei Karahroudi and **Seyed Alireza Mousavi Shirazi***, Obtaining the neutronic and thermal-hydraulic parameters of the VVER-1000 Bushehr nuclear reactor core by coupling nuclear codes, KERNTECHNIK, Volume 79, Issue 6, 528-531, December, 2014.

<http://www.hanser-elibrary.com/doi/abs/10.3139/124.110440>

15- Publishing a paper in an ISI (Web of Science- **ESCI** (Emerging Sources Citation Index)) journal affiliated to Egyptian Society of Nuclear Sciences and Applications (ESNSA):

S.A. Mousavi Shirazi*, Development of Two Software Packages for Connecting with the MCNPX and NJOY Nuclear Codes to Directly Obtain and Extract Multi-Group Nuclear Cross Sections for Any Isotope, Arab Journal of Nuclear Sciences and Applications, Volume 54, Issue 1, 120-133, Winter, 2021.

https://ajnsa.journals.ekb.eg/article_143317.html

16- Publishing a paper in an ISI (Web of Science- Q3) journal with Impact Factor: “0.835” and Cite Score: “1.09”:

S.A. MOUSAVI SHIRAZI, A. PAZIRANDEH*, G. JAHANFARNIA, M. ATHARIALLAF, MAKING A NEW METHOD BY DICOM IMAGES FOR ACCURATE DOSIMETRY OF LIVER TISSUE IN NEUTRON RADIATION THERAPY, Acta Medica Mediterranea, Volume 3, Issue 2, 267-269, February, 2017.

<http://www.actamedicamediterranea.com/archive/2017/medica-2/making-a-new-method-by-dicom-images-for-accurate-dosimetry-of-liver-tissue-in-neutron-radiation-therapy/pdf>

17- Publishing a paper in an Iranian scientific research ISC Journal with Impact Factor: “0.3” affiliated to Mashhad University of Medical Sciences and having the grade of “Scientific Research” from Ministry of Health, Treatment and Medical Education of Iran and indexed in Scopus database:

Seyed Alireza Mousavi Shirazi*, Development of a Liver Phantom Based on Computed Tomography Images for Dosimetric Purpose, Iranian Journal of Medical Physics, Volume 15, Issue 3, 183-191, Summer, 2018.

http://ijmp.mums.ac.ir/article_10114.html

18- Publishing a paper in an Iranian ISC Journal with Impact Factor: “0.025” affiliated to Islamic AZAD University (Science and Research Branch) having the grade of “Scientific Research” from Ministry of Science, Research and Technology of Iran:

S.A. Mousavi Shirazi*, A. Pazirandeh, Design of a New System for Neutron Capture Therapy (NCT) of a Sample Tissue for Determination of Requirement Duration and Determination of Absorbed Dose, Journal of Sciences (Physics Issue), Volume 20, Issue 75, 55-68, Spring, 2010.

<http://en.journals.sid.ir/ViewPaper.aspx?ID=257719>

19- Publishing a paper in an Iranian ISC journal affiliated to Kashan University having the grade of “Scientific Research” from Ministry of Science, Research and Technology of Iran:

Seyed Alireza Mousavi Shirazi*, Making a novel method to obtain the required irradiation time in fast neutron radiation therapy of liver tissue, Iranian Journal of Radiation Safety and Measurement, Volume 8, Issue 4, 2020.

<http://rsm.kashanu.ac.ir/article-1-399-en.html>

20- Publishing a paper in an Iranian ISC journal affiliated to Imam Hussein University having the grade of “Scientific Extension” from Ministry of Science, Research and Technology of Iran:

Seyed Alireza Mousavi Shirazi*, Sima Rastayesh, The Enhancement of Nuclear Reactors from Gen II to III and its Effect in Passive Defense, Passive Defense Quarterly, Volume1, Issue 4, 27-33, Autumn, 2010.

<https://www.magiran.com/paper/965781>

21- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- Qom Branch:

Seyed Alireza Mousavi Shirazi*, Determining the Absorbed Dose in Relation to Liver Tissue in Neutron-operated Radiotherapy, Scientific Research Applied Biology, Volume 7, Issue 27, 17-22, Summer, 2017.

http://sjoapb.journal.qom-iau.ac.ir/article_542828_42e114f9bd362e07b2f53e3c6cea20da.pdf

22- Publishing a Persian paper in an Iranian journal (biannually) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- Mashhad Branch:

Seyed Alireza Mousavi Shirazi*, Mehdi Khaki Arani, Designing two nuclear modules to automatically compute the radioisotopes cross sections by coupling MCNPX and NJOY codes, Journal of Information Technology in Engineering Designing, Volume 12, Issue 1, 12-25, Spring and Summer, 2019.

http://ited.sinaweb.net/article_669492.html

23- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- South Tehran Branch:

Azzam Nazem Abdolhadi Shibani, **Seyed Alireza Mousavi Shirazi***, Study of thermal conductivity and temperature distribution under different boundary conditions in composite reinforced with carbon

nanotubes, Journal of Mechanical Research and Application (JMRA), Volume 12, Issue 2, 16-35, September, 2022.

https://jmra.stb.iau.ir/article_702740.html

24- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- South Tehran Branch:

Ahmed Hussein Aljanabi, **Seyed Alireza Mousavi Shirazi***, Investigating the effects of nanoparticles in improving the tensile and bending strength of welding in domestic gas pipelines by shielded metal arc welding (SMAW) method, Journal of Mechanical Research and Application (JMRA), Volume 12, Issue 3, 1-14, November, 2022.

https://jmra.stb.iau.ir/article_702870.html

25- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- South Tehran Branch:

Diyar Mundher Mousa Al-Mamoori, **Seyed Alireza Mousavi Shirazi***, Making a significant improvement on the function of a compact heat-exchanger applying hybrid nanoparticles and simulation of it using SOLIDWORKS software, Journal of Mechanical Research and Application (JMRA), Volume 12, Issue 4, 51-62, February, 2023.

https://jmra.stb.iau.ir/article_704418.html

26- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- South Tehran Branch:

Ali Wael Salman Sangoor, **Seyed Alireza Mousavi Shirazi***, Considering the Thermal Operation Effect after Welding in Corrosion and Tensile Consistency of Stainless Steel in Crude Oil Storage Tank, Journal of Mechanical Research and Application (JMRA), Volume 12, Issue 4, 24-32, February, 2023.

https://jmra.stb.iau.ir/article_704329.html

27- Publishing a Persian paper in an Iranian journal (quarterly) having the grade of “Scientific Research” from Islamic AZAD University affiliated to Islamic AZAD University- South Tehran Branch:

Ali Wael Salman Sangoor, **Seyed Alireza Mousavi Shirazi***, Modeling and Analyzing the Tensile and Bending Tests in Thermal Operation of Crude Oil Storage Tank Applying Abaqus Finite Element Software and Its Comparison with the Experimental Method, Journal of Mechanical Research and Application (JMRA), Volume 13, Issue 2, 6-18, September, 2023.

https://jmra.stb.iau.ir/article_704851.html

28- Publishing a paper in a scientific research journal with Impact Factor: “**0.015**” affiliated to Malaysian Nuclear Society (MNS):

Mousavi Shirazi. Seyed Alireza*, The Comparative Study of Temperature Measuring of The Hottest Fuel Rod in the Nuclear Power Plant of Bushehr City in Iran, Journal of Nuclear and Related Technology (JNRT), Volume 9, Issue 1, 48-55, June, 2012.

http://www.nuklearmalaysia.org/nuklearmalaysia_org/media/JNRT2012-9-1-08%281%29.pdf

29- Publishing a paper in a scientific research journal:

Seyed Alireza Mousavi Shirazi*, Decomposition of a Tissue Into Its Constituent Elements for Specifying the Values of Doses, MOLECULAR SCIENCES AND APPLICATIONS, Volume 2, 55-60, 2022.

<https://wseas.com/journals/articles.php?id=6633>

30- Publishing a paper in a scientific research journal:

Seyed Alireza Mousavi Shirazi*, Finding out and exploration of two new equations for calculating the dead-time of neutron detectors and the energy of slow-downed neutrons, EQUATIONS, Volume 2, 60-64, 2022.

<https://wseas.com/journals/articles.php?id=6722>

31- Publishing a paper in a scientific research journal:

Reza Akbarpourani, Hassan Ghalami Babil Olyae, **Seyed Alireza Mousavi Shirazi***, Double Gates and Short-Channel Carbon Nanotube Transistors, International Journal of Electrical Engineering and Computer Science, Volume 4, 96-100, 2022.

<https://wseas.com/journals/articles.php?id=7520>

32- Publishing a paper in a scientific research journal:

Hassan Ghalami Babil Olyae, **Seyed Alireza Mousavi Shirazi***, I–V characteristics of 5,14-dihydro-5,7,12,14-tetraazapentacene by Zinc, International Journal of Electrical Engineering and Computer Science, Volume 5, 7-10, 2023.

<https://wseas.com/journals/articles.php?id=7807>

33- Publishing a paper in a scientific research journal:

S.A. Mousavi Shirazi*, Applying Mathematical Equations and Computer Programming to Obtain Transferred Energy into Body Tissue, Journal of Mathematical and Theoretical Physics, Volume 1, Issue 4, 148-150, July, 2018.

<https://medcraveonline.com/OAJMTP/applying-mathematical-equations-and-computer-programming-to-obtain-transferred-energy-into-body-tissue.html>

34- Publishing a paper in a scientific research journal:

Seyed Alireza Mousavi Shirazi*, An Evolution in Medical Physics and Radiotherapy Practice, Acta Scientific Clinical Case Reports, Volume 2, Issue 2, 06-08, February, 2021.

<https://actascientific.com/ASCR/ASCR-02-0090.php>

35- Publishing a paper in a scientific research journal:

Seyed Alireza Mousavi Shirazi*, The New Methods for Purifying the Industrial Effluents by Submerged Biofilm Reactors, Journal of Environmental Protection (JEP), Volume 2, Issue 7, 996-1001, September, 2011.

<http://www.scirp.org/journal/PaperInformation.aspx?paperID=7430>

36- Publishing a paper in a scientific research journal affiliated to Textrood Publishing:

S.A. Mousavi Shirazi*, D. Sardari, Analyzing the Interaction of Neutrons for Cancer Treatment Purpose, Journal of Basic and Applied Scientific Research, Volume 3, Issue 2, 503-506, July, 2013.

[http://www.textrood.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%203\(2s\)503-506,%202013.pdf](http://www.textrood.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%203(2s)503-506,%202013.pdf)

37- Publishing a paper in a scientific research journal affiliated to Textrood Publishing:

Seyed Alireza Mousavi Shirazi*, Mohammad Sadegh Shafeie, Calculation of Produced Radioisotopes and Burn up in the Miniature Neutron Source Reactor Using Radioactive Decay Equation, Journal of Basic and Applied Scientific Research, Volume 3, Issue 1, 388-392, July, 2013.

[http://www.textrood.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%203\(1s\)388-392,%202013.pdf](http://www.textrood.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%203(1s)388-392,%202013.pdf)

38- Publishing a paper in a scientific research journal:

Seyed Alireza Mousavi Shirazi*, Cyrus Aghanajafi, The Comparative Investigation for Calculating the Temperatures in the Hottest Fuel Rod of Bushehr Nuclear Power Plant, Advances and Applications in Mechanical Engineering and Technology, Volume 3, Issue 1-2, 21-36, January and April, 2011.

<http://www.scientificadvances.co.in/abstract/7/66/444>

39- Publishing a paper in the Iranian scientific research journal affiliated to Amirkabir University of Technology:

S.A. Mousavi Shirazi*, C. Aghanajaf, Design of Optimum Radiation Shield and Related Radiation Calculation for Nuclear Reactor Core of Bushehr City in Iran, OFOGH , Issue 23, 24, Spring and Summer, 2010.

40- Publishing a paper in a bimonthly specialized-scientific journal indexed in SID database (JAHAD-DANESHGAHI) and having the certificate from Ministry of Culture and Islamic Guidance of Iran.

Seyed Alireza Mousavi Shirazi*. Presenting a conceptual approach to improve the efficiency of both thermal and nuclear power plants, *Journal of Science and Engineering Elites*, Volume 6, Issue 4, 79-88, October, 2021.

<https://elitesjournal.ir/fa/page.php?rid=604>

- **International Conference Proceedings:**

1- Presenting a paper in the “International Conference on Computational Methods in Sciences and Engineering 2016 (ICCMSE 2016)” held in Greece, Athena, and publishing it in the “**American Institute of Physics (AIP)**” Conference Proceedings indexed in the Scopus Database:

S.A. Mousavi Shirazi*, Applying an analytical method to study neutron behavior for dosimetry, ICCMSE 2016, Volume 1790, Issue 1, March 17-20, 2016.

<http://aip.scitation.org/doi/abs/10.1063/1.4968743?journalCode=apc>

2- Presenting a paper in the “International Conference on Neutron and X-Ray Scattering in Advancing Materials Research” held in Malasia, Kuala Lumpur, and publishing it in the “**American Institute of Physics (AIP)**” Conference Proceedings indexed in the Scopus Database:

Mousavi Shirazi. Seyed Alireza*, Taheri. Ali, A New Method for Neutron Capture Therapy (NCT) and Related Simulation by MCNP4C Code, CP1202 2009, Volume 1202, Issue 1. January 8, 2010.

<https://aip.scitation.org/doi/10.1063/1.3295614>

3- Presenting a paper in the “The 7th International Conference on Engineering, Applied Sciences and Technology (ICEAST 2021)” held in Thailand, and publishing it in the “**American Institute of Physics (AIP)**” Conference Proceedings indexed in the Scopus Database:

Seyed Alireza Mousavi Shirazi*, A New Investigation into the Estimation of Transferred Energy from a Neutron Source to a Human’s Body, ICEAST 2021, Volume 2397, Issue 1, April 1-3, 2021.

<https://aip.scitation.org/doi/abs/10.1063/5.0063749>

4- Presenting a paper in the “1st International Conference on Advanced Research in Pure and Applied Science” held in Iraq (Al-Muthana University), and publishing it in the “**American Institute of Physics (AIP)**” Conference Proceedings indexed in the Scopus Database:

Seyed Alireza Mousavi Shirazi*, Estimation of KERMA Because of Neutron Emission into the Constituent Elements of a Tissue in Radiotherapy, ICARPAS 2021, Volume 2398, Issue 1, March 24-25, 2021.

<https://aip.scitation.org/doi/10.1063/5.0093397>

5- Publishing a paper in both the “**Asia-Pacific Power and Energy Engineering Conference (APPEC)**” held in China, Shanghai and also “**E-Journal of IEEE (indexed in Scopus Database)**”:

Seyed Alireza Mousavi Shirazi*, Mohammad Sadegh Shafeie lilehkouhi, The assessment of radioisotopes and radiomedicines in the MNSR reactor of Isfahan and obtaining the burn-up by applying the obtained information, E-Journal of IEEE Xplore. doi:10.1109/APPEEC.2012.6307050, 1-4, March 27-29, 2012.

http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6307050&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D6307050

6- Presenting and publishing a paper in the “International Conference on Mathematical Methods, Mathematical Models and Simulation in Science and Engineering”:

Seyed Alireza Mousavi Shirazi*, Introduction and Simulation of a New Model of Phantom by Monte Carlo to Obtain Depth Dose, MMSSE 2015, Austria, Vienna, March 15-17, 2015.

<http://www.inase.org/library/2015/vienna/bypaper/MAPUR/MAPUR-57.pdf>

7- Presenting and publishing a paper in the “International Conference on Neutron and X-Ray Scattering (ICNX 2009)” indexed in the International Nuclear Information System (INIS-IAEA):

Seyed Alireza Mousavi Shirazi*, Ali Taheri, The Measurements of the Absorbed Dose and Energy in the Liver Tissue and Other Component of Dosimeter System from the Monte Carlo Method (MCNP4C Code) and Analytical Method and Compare of Produced Results Together, ICNX 2009, Malaysia, Kuala Lumpur, June 29- July 1, 2009.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=41031035>

8- Presenting and publishing a paper in the “International Nuclear Conference (INC’09)” indexed in the International Nuclear Information System (INIS-IAEA):

Mousavi Shirazi. Seyed Alireza*, The Effects of Different Mathematical Functional of the Fuel Thermal Conductivity on the Temperature Distribution at the Hot Fuel Pin in the Bushehr City Nuclear Power Plant in Iran, INC’09, Malaysia, Kuala Lumpur, June 29- July 1, 2009.

https://inis.iaea.org/search/search.aspx?orig_q=RN:40082913

9- Presenting and publishing a paper in the “International Nuclear Conference (INC’09)” indexed in the International Nuclear Information System (INIS-IAEA):

Mousavi Shirazi. Seyed Alireza*, Sadoughi. Cirus, Aghanajafi. Cirus, Shariflou. Naser, Jahanfarnia. Gholamreza, Design and make of automatically controller intelligent system for nuclear reactor control rods, INC’09, Malaysia, Kuala Lumpur, June 29- July 1, 2009.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=40080337>

10- Presenting and publishing a paper in “The 1st International Conference on Nuclear Power Plant, Environment and Sustainable Development” indexed in the International Nuclear Information System (INIS-IAEA):

Mousavi Shirazi. S.A*, Daneshvar. Sh, Aghanajafi. C, Jahanfarnia. Gh, Rahgoshay. M, Design of Radiation Shields in Nuclear Reactor Core, NPPESD, Iran, Tehran, November 30- December 1, 2008.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=40091620>

11- Presenting and publishing a paper in “The 1st International Conference on Nuclear Power Plant, Environment and Sustainable Development” indexed in the International Nuclear Information System (INIS-IAEA):

Mousavi Shirazi. S.A*, Jahanfarnia. Gh, Rahgoshay. M, Aghanajafi. C, Sardari. D, Air Activity Variations as Estimation of Inhalation Dose for the Gases Fission Product, NPPESD, Iran, Tehran, November 30- December 1, 2008.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=40091623>

12- Presenting and publishing a paper in “The 1st International Conference on Nuclear Power Plant, Environment and Sustainable Development” indexed in the International Nuclear Information System (INIS-IAEA):

Daneshvar. Sh*, **Mousavi Shirazi. S.A**, Jahanfarnia. Gh, Rahgoshay. M, Aghanajafi. C, New Techniques for the measurement of Tritium Activity Releases in the Air in Heavy Water Reactors, NPPESD, Iran, Tehran, November 30- December 1, 2008.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=40091615>

13- Presenting and publishing a paper in both the “International Conference of WASET (World Academy of Science, Engineering and Technology)” and “scientific research Journal of WASET” (indexed in Scopus Database) held in Thailand, Bangkok:

Mousavi Shirazi. Seyed Alireza*, Rastayesh. Sima, The Comparative Investigation and Calculation of Thermo-Neutronic Parameters on Two Gens II and III Nuclear Reactors with Same Powers, World Academy of Science, Engineering and Technology, Volume 5, Issue 1, 99-103, January, 2011.

<http://waset.org/author/mousavi-shirazi>

14- Presenting and publishing a paper in “The 1st International Conference on Applied Researches in Electrical, Mechanical & Mechatronics Engineering”:

Seyed Alireza Mousavi Shirazi*, Designing a Lead Cell for Shielding to Securely Prevent Radiation off to Environment, EMME, Iran, Tehran. February 17, 2016.

https://www.civillica.com/Paper-ELEMECHCONF03-ELEMECHCONF03_0794.html

15- Presenting and publishing a paper in “The 2nd International Conference on Recent Developments in Information Science and Technology”:

Mousavi Shirazi. S.A*, Paydar, R, Exploring in the calculation of KERMA because of variations of neutron energy in radiotherapy of body tissue, Turkey, Istanbul, August 22, 2019.

https://www.civilica.com/Paper-ICIETCONF02-ICIETCONF02_009=Exploring-in-the-calculation-of-KERMA-because-of-variations-of-neutron-energy-in-radiotherapy-of-body-tissue.html

16- Presenting and publishing a paper in the “International Symposium on Medicine, Social Science and Education”:

Seyed Alireza Mousavi Shirazi*, Making a Model for Obtaining the Kerma in Radiotherapy and Radiography, ISMSE, Thailand, Bangkok. March 15-16, 2015.

17- Acceptance of one abstract in the “International Conference on Neutron and X-Ray Scattering”:

Mousavi Shirazi. S.A*, Taheri. A, Pazirandeh, A, Design and Make of a New Neutron Detector-Moderator and Dosimeter System Respective to Tissue Measurements and Results comparison with Monte Carlo Method, ICNX 2009, Malaysia, Kuala Lumpur, June 29- July 1, 2009.

18- Attending an International Webinar entitled: “IEEE Authorship and Open Access Symposium: Tips and Best Practices to Get Published from IEEE Editors” spanning 90 minutes, September 28, 2022.

WEBINAR LINK:

https://event.on24.com/wcc/r/3928949/45EAF220B2F76D44ABC015B8DCE28F46?mode=login&email=a_moosavi@azad.ac.ir

19- Attending an International Webinar hosted by Kudos entitled: “How to ensure your article influences the Sustainable Development Goals” (Topic: Research Impact) spanning 45 minutes, July 5, 2023.

www.growkudos.com

- **Indexing Some of Papers in the Renowned Scientific Websites:**

Indexing some papers in three international renowned and great scientific websites including one paper indexed in NASA, two paper indexed in AIP (American Institute of Physics), 10 papers indexed in IAEA (International Atomic Energy Agency). The related links are as follows.

<http://adsabs.harvard.edu/abs/2010AIPC.1202...77S>

http://proceedings.aip.org/resource/2/apecps/1202/1/77_1?isAuthorized=no

http://inis.iaea.org/search/search.aspx?orig_q=%22mousavi+shirazi%22&src=ics

- **National Conference Proceedings:**

Publication of 32 papers in the national conference proceedings.

- **Book Chapters:**

1- Publishing a book chapter of a specialized book regarding nuclear engineering affiliated to “INTECH publisher” (Croatia):

Seyed Alireza Mousavi Shirazi*, The Theoretical Simulation of a Model by SIMULINK for Surveying the Work and Dynamical Stability of Nuclear Reactors Cores, Nuclear Reactors, Chapter 9, 175-196, February, 2012.

<http://www.intechopen.com/books/nuclear-reactors/the-theoretical-simulation-of-a-model-by-simulink-for-surveying-the-work-and-dynamical-stability-of->

2- Publishing a book chapter of a specialized book concerning nuclear engineering affiliated to: “Stadium Press LLC” (USA):

SEYED ALIREZA MOUSAVI SHIRAZI*, Nuclear Waste Hazard and its Solution, Energy Science and Technology, Volume 4: Nuclear Energy, Chapter 22, 564-569, June, 2015.

<http://www.stadiumpress.in/energy-science-and-technology-vol-4-nuclear-energy.html>

3- Publishing a book chapter of a Persian (Iranian) book affiliated to “Islamic AZAD University- South Tehran Branch” (Iran) entitled: “Pre-University Physics Book”. The title of chapter authored by me is: “Two Dimensional Kinematics- Projectile and Circular Motions”, 2019.

<https://elmnet.ir/article/31656140-17622/%D9%81%DB%8C%D8%B2%DB%8C%DA%A9-%D9%BE%DB%8C%D8%B4%E2%80%8C%D8%AF%D8%A7%D9%86%D8%B4%DA%AF%D8%A7%D9%87%DB%8C>

- **Book:**

1- Authoring and publishing a specialized Persian (Iranian) book:

SEYED ALIREZA MOUSAVI SHIRAZI*, Physics 2 (Electricity and Magnetism), ISBN: 978-600-123-043-1. Daneshparvar Publisher, December, 2011.

<https://roozahang.com/Product/Book/48311/%D9%81%DB%8C%D8%B2%DB%8C%DA%A9-%D9%BE%D8%A7%DB%8C%D9%87-2>

- **International and National Honors and Awards:**

1- Achieving the title of the best researcher of the year at Islamic AZAD University- South Tehran Branch for three times, and receiving appreciation letters (December 2012, February 2014 and December 2015).

2- Achieving the first rank and the title of the best nuclear researcher of Iran in 2011 and receiving an appreciation letter and one award from Nuclear Society of Iran (Atomic Energy Organization) (February-2012).

3- Achieving the title of the best researcher and receiving an appreciation letter from the minister of culture of Iran in the year 2007.

4- Achieving the titles of the best researcher and outstanding scientist and receiving two awards entitled: “International Scientist Awards on Engineering, Science and Medicine (**INSO AWARDS**)” and “International Research Awards 2022 on Science, Technology and Management (**INSO AWARDS**)” from India in the year 2022.

5- Acknowledgment of me from one of the most credited and renowned nuclear reactors books published by both **ELSEVIER** and **Woodhead** publishers (Sales by **Amazon**) in recognition of my scientific works in the field of nuclear energy engineering. Title of book: **Fractional-Order Models for Nuclear Reactor Analysis**, 1st edition, November 4, 2020.

My name is in the Acknowledgment section of the mentioned book. The related links are as follows.

<https://www.amazon.com/Fractional-Order-Nuclear-Analysis-Woodhead-Publishing/dp/0128236655>

<https://www.scribd.com/book/481700658/Fractional-Order-Models-for-Nuclear-Reactor-Analysis>

6- Achieving the 15th rank among the reviewers of ISI nuclear journals all over the world.

https://publons.com/researcher/?research_field=73890&order_by=num_reviews

7- Achieving the title of “**Outstanding Reviewer**” from the **Elsevier Publisher** (from the Journals: “**Annals of Nuclear Energy**” and “**Progress in Nuclear Energy**”) in the years 2014 and 2022, respectively.

8- Receiving appreciation letters from the journals: “**Progress in Nuclear Energy, Nuclear Engineering and Design and Annals of Nuclear Energy**” affiliated to the Elsevier publisher for reviewing papers for them (2014 and 2022).

- 9- Receiving two appreciation letters from the journal of “**Australasian Physical & Engineering Sciences in Medicine**” affiliated to the Springer publisher for reviewing papers for this journal (2012 and 2015).
- 10- Editorial board membership in an abroad scientific research journal entitled: “**Journal of Human Physiology**” as of the year 2019 (August). The related links are as below.
<https://ojs.bilpublishing.com/index.php/jhp/about/editorialTeamBio/13365>
<https://ojs.bilpublishing.com/index.php/jhp/about/editorialTeam>
- 11- Editorial board membership in an abroad scientific research journal entitled: “**Asian Journal of Applied Science and Technology**” as of the year 2017. The related link is as below.
<http://ajast.net/editorial-board.html>
- 12- Editorial board membership in an abroad scientific research journal entitled: “**ACTA SCIENTIFIC CLINICAL CASE REPORTS**” as of the year 2020. The related links are as follows.
<https://actascientific.com/ASCR-EB.php>
https://actascientific.com/editorial_popup-ascr.php?editor_id=3592
- 13- Editorial board membership in an abroad scientific research journal entitled: “**IASR Journal of Applied Sciences (IJAS)**” as of the year 2021. The related link is as below.
<http://iasrpublication.com/ijas/editorial-board>
- 14- Editorial board membership in an abroad scientific research journal entitled: “**Sisla Medical Surgery & Casereport Journal**” as of the year 2021. The related links are as follows.
http://www.sislamedicaljournals.com/smscj_editorial-board/
<http://www.sislamedicaljournals.com/seyed-alireza-mousavi-shirazi/>
- 15- Editorial board membership in an abroad scientific research journal entitled: “**Engineering and Scientific International Journal (ESIJ)**” as of the year 2021. The related link is as follows.
<https://irdp.info/about-esij/esij-editorial-board>
- 16- Editorial board membership in an abroad scientific research journal entitled: “**ACTA SCIENTIFIC GASTROINTESTINAL DISORDERS**” as of the year 2021. The related links are as follows.
<https://www.actascientific.com/ASGIS-EB.php>
https://www.actascientific.com/editorial_popup-asge.php?editor_id=4020
- 17- Editorial board membership in an abroad scientific research journal entitled: “**Asian Journal of Engineering and Applied Technology**” as of the year 2021. The related link is as below.
<https://ojs.trp.org.in/index.php/ajeat/about/editorialTeam>
- 18- Editorial board membership in an abroad scientific research journal entitled: “**JSM Pain and Management**” as of the year 2021. The related link is as below.
<https://www.jscimedcentral.com/Pain/editors.php>
- 19- Editorial board membership in an abroad scientific research journal entitled: “**Sumerianz Journal of Scientific Research**” as of the year 2021. The related link is as below.
<https://www.sumerianz.com/?ic=journal-home&journal=29&info=edit#s>
- 20- Editorial board membership in an abroad scientific research journal entitled: “**MC Medical Sciences**” as of the year 2021. The related link is as follows.
<https://themedicon.com/medicalsciences-editorial-board>
- 21- Editorial board membership in an abroad scientific research journal entitled: “**International Journal of Applied Science and Research**” as of the year 2021. The related link is as follows.
<https://www.ijasr.org/editorial%20board.html>
- 22- Editorial board membership in an abroad scientific research journal **indexed in the credited Scopus**

database entitled: “**International journal of innovative research and scientific studies**” as of the year 2022. The related link is as follows.

<http://www.ijirss.com/index.php/ijirss/about/editorialTeam>

23- Editorial board membership in an abroad scientific research journal entitled: “**International Journal of Computer Science (IJCS)**” as of the year 2022. The related link is as follows.

<http://ijcsjournal.com/board>

24- Editorial board membership in an abroad scientific research association entitled: “**ABCD INDEX Community**” as of the year 2022. The related link is as follows.

https://abcdindex.com/review_search.php?ProType=R&keyword=mousavi+shirazi&filter_country=101&search_data=Search

25- Editorial board membership in an abroad scientific research journal entitled: “**ES Journal of Gastroenterology and the Digestive System**” as of the year 2022. The related link is as follows.

https://escientificlibrary.com/gastroenterology/Editorial_Board.php

26- Editorial board membership in an American scientific research journal **indexed in the credited PubMed database** entitled: “**Open Access Journal of Applied Science and Technology (OAJAST)**” as of the year 2023. The related link is as follows.

<https://www.opastpublishers.com/editor-info/seyed-alireza-mousavi-shirazi-2769>

27- Member of the reviewers list in an abroad scientific research journal entitled: “**International Journal of Research and Scientific Innovation (IJRSI)**” as of the year 2022.

https://www.rsisinternational.org/journals/ijrsi/board-members/reviewers/?page_112fb=2

<https://www.rsisinternational.org/journals/ijrsi/reviewer/seyed-alireza-mousavi-shirazi/>

28- Selection of me as an “**Academy Mentor**” from “**Publons Academy**”, and mentorship for an abroad researcher (an ISI-journal reviewer). The related link is as follows.

<https://publons.com/researcher/1170329/seyed-alireza-mousavi-shirazi/>

29- Reviewing **34** ISI (Web of Science) papers for ISI journals affiliated to the Elsevier and Springer publishers. The related link is as follows.

<https://publons.com/dashboard/records/review/>

30- Reviewer and honorary member of editorial board of some international scientific research journals such as “**World Journal of Nuclear Science and Technology (WJNST)**”, “**Journal of Electrical and Electronics Engineering Research (JEEER)**”, “**Modeling and Numerical Simulation of Material Science (MNSMS)**”, “**British Journal of Applied Science & Technology**”, “**Journal of Human Physiology**”, “**Journal of Scientific Research and Reports**” and etc, and reviewing **74** papers for them until now.

31- Reviewing **one** paper for an international conference entitled: “The Sixth International Conference on Energy Engineering and Environmental Protection (EEEP2021), Sanya, China, 2021”, and also reviewing **nine** papers for “The 1st Conference on Advanced Technologies in Energy and Materials, Islamic AZAD University, South Tehran Branch, November 2019.

<http://www.iceep.org/ACK.aspx>

32- Editing a foreign book entitled “**Futuristic Trends in Renewable & Sustainable Energy**” belonging to **IIP** publisher, India (is now in progress).

<https://www.iipseries.org/assets/docupload/rs12023F9E6A1D9878CDD6.pdf>

<https://www.iipseries.org/fullviewdetails.php?id=625&title=iipv3ebs18g9-futuristic-trends-in-renewable-and-sustainable-energy>

33- Reviewing two foreign books belonging to “**Book Publisher International**” India, and receiving an appreciation letter from the publisher for reviewing it (March 2021).

34- Official member of the scientific and technical committee & editorial review board on nuclear science and engineering in: “**World Academy of Science, Engineering and Technology (WASET)-USA**”. The related link is as below.

<https://www.waset.org/member/seyedalirezamouslyavishirazi>

35- Member of review panel in the “**1st National Conference on Energy and Materials**” held at Islamic AZAD University, South Tehran Branch (November 2019).

36- Achieving one gold medal and one honorary medal in international invention competition from Malaysia (**ITEX 2007**) and also achieving the special prize from South Korea (**KIPA**) in this competition.

37- Achieving one gold medal in international invention competition from Romania (**INVENTIKA 2007**).

38- Achieving an honorary diploma in international invention competition from Kuwait (**FME 2007**).

39- Achieving the selected title in the “**National Youth Festival of Kharizmi**” relating to inventions and affiliated to Ministry of Science and Technology of Iran. December 2007.

40- Achieving the title of the best paper for presenting one scientific paper in the “**National Conference on Applied Physics and Nanotechnology**” held at Islamic AZAD University-Marvdasht Branch, and receiving an appreciation letter and a memorial statue. June 2009.

41- Achieving the title of the best paper for presenting one scientific paper in the “**National Chemical Engineering Conference**” held at Islamic AZAD University-Islamshahr Branch, and receiving a memorial statue. March 2010.

42- Achieving the second rank and receiving an appreciation letter and award in a scientific congress entitled: “**AHLE GHALAM**” affiliated to Imam Hossein University. January 2006.

43- Achieving the first rank among faculty members of Islamic AZAD University in English testing entitled: “**Translation of Holy Quran in the English Language**” in the year 2015. I achieved the score 940 out of 1000 in this competition.

44- Achieving the first rank among faculty members of Islamic AZAD University in English testing entitled: “**Translation of Holy Quran in the English Language**” in the year 2014. I achieved the score 900 out of 1000 in this competition.

- **Finalized research projects:**

1- The Simulation of a Model by SIMULINK of MATLAB for Determining the Best Ranges for Velocity and Delay Time of Control Rod Movement in LWR Reactors

2- Design and Simulation of a New System for Neutron Capture Therapy (NCT) of a Sample Phantom for Determining the Required Irradiation Time and Computation of Absorbed Dose and Also Reaching the Desirable Energy of Clinical Neutron Source

3- Presenting a New Model of Phantom and Its Simulation by MCNPX Code for Dosimetry and Also Presenting an Analytical Method to Compare the Obtained Results

- **Research Project Reviewing:**

Refereeing two research projects relating to either of Islamic AZAD University- Central Organization and Islamic Azad University- South Tehran Branch.

- **Inventions:**

1- Having an invention patent and authentication of it by the Iran Atomic Energy Organization. The title of the invention is: "Automatic controller set for nuclear reactor control rods".

2- Having an invention patent and authentication of it by Iran Ministry of Power Institute regarding its being applied and its circuit being novel. The title of the invention is: "The protective and automatic controller set for single phase and three phases electrical generator based upon Master-Slave system".

3- Having a patent for an invention entitled: "The system for determination of the static friction coefficient of vertical surfaces (μ_s meter)".

4- Having a patent for an invention entitled: "The system for determining movement course of nuclear reactor control rod".

5- Having a patent for an invention entitled: "The system for determining high and semi-high altitudes like mountain and hill".

- **Supervised Ph.D. dissertations, M.Sc. theses and B.Sc. projects:**

Ph.D. dissertations:

Referee of three Ph.D. proposals in the field of Electrical and Electronics Engineering.

M.Sc. theses:

Supervision of seven M.Sc. theses in the study fields of mechanical engineering (six in progress M.Sc. theses) and metallurgy (one finalized M.Sc. thesis), respectively.

B.Sc. projects (Finalized):

Two projects (the following titles):

1- The Comparative Investigation and Calculation of Thermo-Neutronic Parameters on Two Gens II and III Nuclear Reactors with Same Powers

2- Obtaining the amounts of some radionuclide produced at the core of the Miniature Neutron Source Reactor of Isfahan.

- **Passed Specialized Workshops:**

1- Passing the specialized workshops held by "Nuclear Society of Iran", "Cancer Institute" and "Islamic AZAD University" in many case studies including: "**Radiotherapy, Dosimetry, and Treatment design, Controlling and regulating the power of nuclear power plants (N.P.P), Neutron Activation Analysis (N.A.A), Operation and physics of the low power nuclear reactors**", and also having skills and the related certificates in some specialized nuclear codes including "**MCNPX, RELAP5, GEANT4, and FLUKA**". In addition, I have skills in designing and making the electronic circuits specifically relating to nuclear electronics.

2- Passing too many workshops affiliated to Islamic AZAD University (IAU) such as "**MATLAB Software**", "**Excel**", "a 120-hours training workshop for **TOEFL** (Skills in Reading, Listening, Speaking, and Writing) and "**Principals and techniques of translation in the English language**" and receiving their related certificates.

3- Passing the English language test affiliated to the doctoral program of Islamic AZAD University entitled: "**IAUEPT (Islamic AZAD University English Proficiency Test)**" and receiving its certificate.

- **Educational Booklets:**

1- Physics 1 (Mechanics and thermodynamics)

2- Physics 2 (Electricity and magnetism)

- 3- Physics 1 laboratory
- 4- Physics 2 laboratory