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Degree: *Professor in nuclear physics*

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Educations:

Ph.D of nuclear physics, Shahrood University of technology (2007).

M.Sc: Ferdowsi university of Mashhad (1998).

B.Sc: Ferdowsi university of Mashhad (1993).

Supervisor of 45 PhD and Master students

Translated Book:

Introduction to Nuclear Particle Physics (Author: Saverio D'Auria translated by M.R. Shojaei).

Honors and awards:

Superior research awards of Shahrood University of Technology, (2019).
Superior research awards of Shahrood University of Technology, (2017).
Superior research awards in Semnan Province University, (2015).

Technical skills:

Mont Carlo Simulation

MCNP Code

Programing and simulation

Memberships:

Nuclear physics society of Iran (NSI)

Physics society of Iran (PSI)

Iranian Association of Medical Physics (IAMP)

Publications

1. *Malekinezhad N, Shojaei M, Massimi C. Energy and charge radii of Li isotopes in a two-body configuration. Pramana, 2024.*
2. *Pour HG, Shojaei MR. A novel approach to accelerate training in artificial neural network to detect three-phase flows using a gamma source and a detector. Radiation Physics and Chemistry, 2024.*
3. *Nia, M.M. and Shojaei, M.R., Investigation of ^{70,72,74,76}Ge and ^{84,86,88}Sr in the Cluster Model. Physics of Atomic Nuclei2024.*
4. *Pour HG, Shojaei MR, Soltani J. A new approach to calculating the ratio of the compton to total, mass attenuation coefficient. Radiation Physics and Chemistry. 2023.*
5. *Vaziri H, Shojaei MR. Form factors of the nucleon by using the t dependence of parton distribution functions. Physical Review C, 2023.*
6. *Divshali KD, Shojaei MR. Cluster model for calculation binding energy of Ra-222, Ra-224. INTERNATIONAL JOURNAL OF MODERN PHYSICS E, 2023.*
7. *Haji Hosseini Mojeni H, Shojaei MR. The calculation of nucleon form factors using new ansatz for t-dependence of parton distribution functions. The European Physical Journal Plus, 2022.*
8. *Malekinezhad N, Shojaei MR. Theoretical study of ground state properties of odd-A Cu isotopes in an analytical approach. International Journal of Modern Physics E. 2022.*
9. *Haji Hosseini Mojeni H, Shojaei MR. Dependence of the parton distribution functions on the momentum transfer from the structure function of the nucleon. Physical Review C, 2022.*
10. *Mohammadi H, Shojaei MR, Soltani-Nabipour J. Simulation of Slot-Scan imaging system with GATE and images quality evaluation. Iranian Journal of Physics Research, 2021.*
11. *Hosseini Moghadam MS, Shojaei MR, Hosseinnezhad H. Evaluation of the dose received by women worker in the lung scan centers use 99mTC-MAA by experimental and simulation. Iranian Journal of Radiation Safety and Measurement, 2020.*
12. *Mohammadi H, Shojaei M, Soltani-nabipour J. Investigating the effect of voltage fluctuations on the beam quality of X-rays in the range energy of diagnostic radiology. Journal of Radiation Safety and Measurement, 2020.*
13. *Divshali KD, Shojaei MR. Nuclear structure properties of spin-1/2 heavy nuclei within the relativistic cluster model. International Journal of Modern Physics E, 2020.*
14. *Aslanzadeh S, Shojaei MR, Mowlavi AA. Calculation of the energy levels and charge radius of 24Mg and 32S isotopes in the cluster model. Canadian Journal of physics, 2020.*
15. *Roshanbakht N, Shojaei M. Clustering energy calculation in light alpha-conjugated nuclei. Canadian Journal of Physics, 2020.*
16. *Binesh Z, Shojaei MR, Azadegan B. Mirror nuclei of 9B and 9Be in the shell model and cluster model. Canadian Journal of Physics, 2020.*
17. *Calculation energy levels and charge radius odd 41-49Ca isotopes, M. Mousavi, M. R. Shojaei, Mod. Phy. Letter .A, 2019.*
18. *Nucleon form factors in generalized parton distributions at light momentum transfers, sattari, Shojaei, Physical Review C, 2018.*
19. *Electromagnetic and gravitational form factors by using the modified Gaussian ansats for H, N. sattari, M. R. shojaei, Nuclear Physics A, 2018.*
20. *The cluster model for study of even-even light nuclei, Roshanbakhat, Shojaei, Canadian Journal of Physics, 2018.*
21. *Relativistic solution of eckart plus hulthen potentials in the presence of spin and psedospin symmetry, Mousavi, Shojaei, Indian Journal of pure and applied physics, 2018.*
22. *Assessement of atmospheric dispersion from ANPP Hypothetical accident based on Fukushima by HYSPLIT model, Mirzaei, shojaei, Ebrahimi, 5th international Reliability and safety engineering conference, 2018.*

23. *A New calculation of rotational bands in alpha- cluster model nuclei,Roshanbakhat, Shojaei, Communication in threoretical Physics, 2018.*

24. *7Li and 7Be isotopes in a new cluster model, N. Roshanbakht, M. R .Shojaei, Eur. Phys. J. A, 2018.*

25. *Gravitational and compton form factors and GPDs, N. Sattari,M. R. shojaei,E. Santopinto, Quarto incontro nazionale di fisica nuclear , catania 2018.*

26. *unpolarized and polarized densities based on a light-front quark-diquark model, sattari, shojaei ,International Joural Modern Phys.A,Vol32, No17, 2017.*

27. *Bound state energy of double magic number plus one nucleon with relativistic mean field approach, Pramana.J.Phys, Mousavi, Shojaei , 2017.*

28. *Two - center Gaussian potential wel for studing light nucleus in cluster structurel, Advance in high energy phys, Roshanbakhat , Shojaei, 2017.*

29. *Energy levels of weakly bound nuclei with relativistic effect, F.Rezvani, M.R.Shojaei U.P.B. Sci. Bull., Serie A, 2017.*

30. *The Effect of Tensor Interaction in Splitting the Energy Levels of Relativistic Systems, Advance in high energy physics, Shojaei, Mousavi, 2016.*

31. *Two cluster models for calculation of energy spectrum of 12C isotope with modified Yukawa potential, Pramana journal of physics, Shojaei, Roshanbakht, 2016.*

32. *Calculation of energy and charge radius for doubly magic nucle of 41SC with extra nucleon, Chinese Journal of Physics, 2016.*

33. *Investigating a suitable equation of state for an infinite system of nucleons, New Astronomy, Zoghi, Shojaei , 2016.*

34. *Study of u, d quark form factor in light - front wave function with N2LO approximation, Shojaei, Euro. Phys.Jour.A, 2016.*

35. *The study of zero -spin isopes with Modified Manning -Rosen potential by Relativistic Cluster Models" ،Jordan Journal of physics, 2016.*

36. *A new approach cluster structures in 16O and 20 Ne, Pramana Journal of physics, Zoghi, Shojae, 2016.*

37. *A new non-microscopic study of cluster structures in light alpha-conjugate nuclei, Chinese Physics C,Zoghi, Shojai, 2016.*

38. *Remove degeneracy in relativistic symmetric al for manning -rosen plus quasi hellman potential by tensor interaction, Commun .Theor.Phys. Mousavi, Shojaei, 2016.*

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40. *Relativistic Few-Body Bound Systems with Tietz-Hua (TH) PotentialMousavi , Shojaei ،Iranian Conference on Mathematical Physics (ICMP2016), 2016.*

41. *Cluster picture of weakly nucleus 17F, Proceding of conference (Jou.of Fundamental and Applied Science), Rezvani, Shojaei, 2016.*

42. *Transversecharge and magnetization densities based on Regge parameterizatio ،"Sattari, Shojaei" ،IJMPE, 2015, Vol24, No11, 2016.*

43. *Deutron - Deutron Cluster model for study of He isototes, chinese. Jour. physicsVol53.No.7, Shojaei, Roshanbakht, 2015.*

44. *Dirac and pauli form factor based on consideration of the gluon, Nuclear.Phys.A, shojaei ,sattari, 2015.*

45. *A New Mathematical Model for the Equation of State of an Asymmetric Infinite Nuclear Matter, 5th International Advances in Applied Physics and Materials Science Congress, 2015.*

46. *Energy levels of Oxygen nucleus in the presence of a suitable potential for N-N interaction, Zoghi, Shojaei, APMAS, 2014. A shell model approach to study the N-N interaction in calcium 43, APMAS, Zoghi, Shojaei. 2014.*

47. *Determination of the potential coefficients of the Baryons and the effect of spin - isospin potential on their energy, International Conference, of Meson–Nucleon, Julich, Germany, 2007.*

48. *Hypercentral Constituent quark model and Hyperfine dependence potential, Iranian Journal of Physics, Vol.7, Shojaei, Rajabi, 2007.*

49. *Constituent Quark Model and Spectrum of Mesons, 6-th International Conference, Nuclear and Radiation Physics, June 4-7, 2007, Almaty, Kazakhstan*

50. *A Simple Approach to Study the Isospin Effect in Mass Splitting of Three- Nucleon, Commun. Theor. Phys. 58, (2012).*

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52. *A Mathematical Method for Exact Analytical Solution of the Schrödinger Equation with Non-central Potential, AIP131, 2011.*

53. *Shape-invariance Approach on the D-dimensional Hulthen plus Coulomb Potential for Arbitrary l-state, ASTP, Vol. 6, 2012.*

54. *"Determination of energy levels of the Klein–Gordon equation, with pseudo harmonic potential plus the ring, Shojaei , Rajabi , IJPS, Vol. 6, 2011.*

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58. *Exact Solution of the Schrödinger Equation for a System of Identical Particles with Non-central Interactions by NU Method, Azimzadeh , Shojaei , Rajabi AIP131, 2011.*

59. *Hyperspherical approach to study of schroudinger equation for an N particle system approach " ،Shojaei .Rajabi, IJMPE, Vol.18, 2009.*

60. *Klein-Gordon equation with Hulth'en potential and position-dependent mass, Farrokh, Shojaei,Rajabi,Eur. Phys. J. Plus (2013).*

61. *Hyper-Spherical Harmonics and Anharmonics in M-Dimentional Space, Shojaei, Rajabi, Inter. Jou.Mod.Phys.E, 2008.*