

# Curriculum Vitae

Vahid Zanganeh  
( Ph.D )

## 1 Biographical Data

Date of Birth: 9/5/1981

Place of Birth: Ali abad, Gorgan, Iran

Marital Status: Married

Gender: Male

Nationality :Iranian

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## 2 Education

\*\*\* Ph.D : Nuclear Physics.

From: Department of Physics, Faculty of Basic Sciences, Mazandaran university, Babolsar, Iran

Date: 2008-2012

Supervisor: Dr. Omid Naser Ghodsi

Advisors: Dr. Mohammad Mahdavi

\*\*\* M.Sc : Nuclear physic, Muon Cycle Dynamics In Multi-Layer Solid Hydrogen Isotopes

From: Department of Physics, Faculty of Basic Sciences, Mazandaran university, Babolsar, Iran

Date: 2005-2007

Supervisor: Dr. Mohammad Mahdavi

Advisors: Dr. Omid Naser Ghodsi

\*\*\* B.Sc : Applied Physics

From: Shahrood university of technology, Shahrood, Iran.

Date: 2000-2005

## 3 Research Positions

Sabbatical leave researcher, Department of Physics, Guangxi Normal University Guilin, China.

## 4 Publications in International Journals

\* V. Zanganeh, A.M. Izadpanah, and A. Sadeghloo, ” The rule of surface energy coefficient between nuclei in the simultaneous study of fusion and quasi-elastic reactions”, Annals of Physics, (under review) (2022)

\* H.Karami, V. Zanganeh ,M. Ahmadi, ” Study Nuclear Radiation Shield-

ing, Mechanical and Acoustical Properties of TeO<sub>2</sub>-Na<sub>2</sub>O-BaO-TiO<sub>2</sub> Alloyed Glasses”, Radiation Physics and Chemistry, (under review) (2022)

\* M. Ahmadi, V. Zanganeh ,M. I. Sayed,H.Karami, S.S. Hoseini, ” Effect of Bi<sub>2</sub>O<sub>3</sub> on the Radiation shielding, physical, and mechanical properties of Bi<sub>2</sub>O<sub>3</sub>- SiO<sub>2</sub>- B<sub>2</sub>O<sub>3</sub>- ZnO- Al<sub>2</sub>O<sub>3</sub> Glasses using MCNP and Phy-X PSD software ”, Radiation Physics and Chemistry, (under review) (2022)

\* V Zanganeh, s.s.hoseini, A.M.Izadpanah, ”Influence of deformation on alpha decay Half-lives of <sup>219</sup>239Np Isotopes”, Nuclear Physics A, (accepted) (2022)

\* M. Ahmadi, S.M. Motevalli, P. Taherparvar, V. Zanganeh, ”Calculation of Involved and Noninvolved Organs Doses in Carbon Therapy of Brain Tumor Using Geant4. ”, Radiation Physics and Chemistry (under review) (2022)

\* M. Ahmadi, V. Zanganeh, H.Karami, M. I. Sayed, ”Gamma radiation attenuation characteristics, acoustic and mechanical properties of TeO<sub>2</sub>/TiO<sub>2</sub>/B<sub>2</sub>O<sub>3</sub> glasses using Monte carlo code and Phy-X/PSD software”, OPTIK 270, 169911(2022)

\* V.Zanganeh , S. Mohammad Motavali , S. Bagheri, ”Studying the abundance of heavy nuclei produced in carbon therapy using Geant4 toolkit”, Journal of Nuclear Science and Technology (JonSat), 10.24200/nst.2022.1127.1744 (2022)

\* V Zanganeh,”Effect of WO<sub>3</sub> addition on mechanical, structural, optical, and radiation shielding properties of lead boro phosphate glasses system using Monte Carlo simulation ”, Optik 269, 169900(2022)

\* M. Ahmadi, V. Zanganeh, R.Boodaghi , I.Akkurt , ”Improvement of the Radiation, Physical, Mechanical, and Acoustic Properties of the BaO-B<sub>2</sub>O<sub>3</sub>-Bi<sub>2</sub>O<sub>3</sub> Glass System”, Physica Scripta 97, 105309 (2022)

\* V Zanganeh, R Khabaz, F Aghili ,”Investigation the trend of different magnetic fields types on linac photon beam mode by Monte Carlo method

using Geant4 toolkit”, Radiation Physics and Chemistry, 109603 (2021)

\* V Zanganeh, A Izadpanah, M Ahmadi, ”Study of neutron-rich nuclei reaction using ImQMD model”, Iranian Journal of Physics Research 20 (4), 569-577 (2021)

\* AM Izadpanah, SS Hosseini, V Zanganeh, ”Theoretical cluster decay predictions for the nuclei Md with different nuclear potentials”, International Journal of Modern Physics E 29 (12), 2050095 (2020)

\* V Zanganeh, DT Akrawy, H Hassanabadi, SS Hosseini, S Thakur, ”Calculation of  $\alpha$ -decay and cluster half-lives for  $^{197}\text{Fr}$  using temperature-dependent proximity potential model”, Nuclear Physics A 997, 121714, (2020)

\* R. Boodaghi malidarre, R. Khabaz, M. R. Benam, and V.Zanganeh, ”A feasibility study to reduce the contamination of photoneutrons and photons in organs/tissues during radiotherapy” Iranian Journal of Medical Physics 17 (6), 366-373 (2020)

\* V Zanganeh, R Gharaei, AM Izadpanah, ”Comparative study for different nuclear proximity potentials applied to quasi-elastic scattering and fusion reactions”, Nuclear Physics A 992, 121637 (2019)

\* R Gharaei, A Hadikhani, V Zanganeh, ” An explanation for the anomaly problem of diffuseness parameter of the nucleus-nucleus potential in heavy-ion fusion reactions: A possible thermal solution”, Nuclear Physics A 990, 47-63 (2019)

\* F Sabery Balajaddeh, M Golshanian, V Zanganeh, ” Optimum neutron energy simulation in treatment of head and neck cancer at different depths in the BNCT method”, Iranian Journal of Medical Physics 15 (Special Issue-12th. Iranian Congress (2018)

\* R. Gharaei, Vahid Zanganeh and N. Wang ,”Systematic study of proximity potentials for heavy-ion fusion cross sections” ,Nucl. Phys. A -NPA-D-18-00158 (2018).

\* Rahim Khabaz , Roya Boodaghi , Mohammad Reza Benam and Vahid Zanganeh ,”Estimation of photoneutron dosimetric characteristics in tissues/organs using an improved simple model of linac head” ,Applied Radiation and Isotopes 133, 8894 (2018).

\* V. Zanganeh, R. Gharaei, and N. Wang, Dynamical explanation for the anomaly in the diffuseness parameter of the nucleus-nucleus potential in heavy-ion fusion reactions, Phys. Rev. C 95, 034620 (2017).

\* R. Gharaei, V. Zanganeh, Temperature-dependent potential in cluster-decay process, Nucl. Phys. A 952, 28-40 (2016).

\* V. Zanganeh, M. Mirzaei, N. Wang, The analytical parametrization of fusion barrier by using the skyrme energy-density function model , Commu. Theo. Phys. 64, No. 2, 177-184 (2015).

\* V. Zanganeh, N. Wang, Temperature-dependent potential in alpha-decay process, Nucl. Phys. A 929, 94 (2014).

\* M. Golshanian, O. N. Ghodsi, R. Gharaei, V. Zanganeh, The Analysis of the Fusion Reaction of Two Colliding Nuclei Using the FCC Lattice Model CHIN.PHYS.LETT. Vol. 30, No. 10, 102502(2013).

\* V. Zanganeh, N. Wang and O. N. Ghodsi, Dynamical nucleus-nucleus potential and incompressibility of nuclear matter, Phys. Rev. C 85, 034601 (2012).

\* O.N. Ghodsi and V. Zanganeh, The effect of the nuclear state equation on the surface diffuseness parameter of the Woods Saxon potential in the heavy ion fusion reactions, Nucl. Phys. A 846, 40-50 (2010) .

\* O.N. Ghodsi and V. Zanganeh, Calculation of the total potential between two deformed heavy ion nuclei using the Monte Carlo method and M3Y nucleon-nucleon forces, Phys. Rev. C 79, 044604 (2009).

\* M. Mahdavi and V. Zanganeh, Muon Cycle Dynamics in Multi-Layer Solid Hydrogen Isotopes, CHINESE JOURNAL OF PHYSICS VOL. 46 , NO. 3 (2008).

\* M. Mahdavi and V. Zanganeh, Effects of internal  $^3\text{He}$  breeding on Muon cycle in Tritium target, Far East J. Dynamical systems 9(1),125-131 (2007).

## 5 Refereed Conferences and Seminar Presentations

[36] V. Zanganeh, M. Asri, A. Tajik, F. Ebrahimi, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30,2017.

[35] F. Aghili, M. T. Batyar, S. Sarshad, V. Zanganeh and R. Khabaz, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30,2017.

[34] S. Sarshad, M. T. Batyar, F. Aghili, V. Zanganeh and R. Khabaz, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30,2017.

[33] M. Mirzaei, J. Mirzaei, V. Zanganeh, The National Conference on physics, Shiraz, Iran, May, 10-11,2017.

[32] M. Mirzaei, J. Mirzaei, V. Zanganeh, A. M. Izadpanah, The National Conference on physics, Shiraz, Iran, May, 10-11,2017.

[31] M. Mirzaei, J. Mirzaei, A. M. Izadpanah, V. Zanganeh. The National Conference on physics, Shiraz, Iran, May, 10-11,2017.

[30] S. Sarshad, M. T. Batyar, F. Aghili, V. Zanganeh and R. Khabaz, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23,2017.

[29] V. Zanganeh, A. M. Izadpanah and M. Ahmadi, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23,2017.

[28] M. Kohsarian, A. M. Izadpanah and V. Zanganeh, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23,2017.

[27] V. Zanganeh, A. M. Izadpanah and M. Ahmadi, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.

[26] V. Zanganeh, F. Ebrahimi and A. Tajik, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.

[25] V. Zanganeh, M. Mirzaei, F. Ebrahimi and A. Tajik, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.

[24] V. Zanganeh, F. Ebrahimi and A. Tajik, 1st National Conference on Physics Islamic Azad University, Tabriz, Iran, July 20, 2016.

[23] V. Zanganeh, M. Mirzaei, F. Ebrahimi and A. Tajik, 1st National Conference on Physics Islamic Azad University, Tabriz, Iran, July 20, 2016.

[22] V. Zanganeh, A. M. Izadpanah, M. Ahmadi, Iranian annual Nuclear physics conference, Yazd, Iran, Feb. 24, 2016.

[21] V. Zanganeh, J. Mirzaei, M. Mirzaei , Iranian annual physics conference , Mashhad, Iran, Aug. 24,2015.

[20] T. Koohrokhi, V. Zanganeh, R. Ghazagh, Iranian annual physics conference, Mashhad, Iran, Aug. 24,2015.

[19] A. M. Izadpanah, V. Zanganeh, S. Rahmanimanesh, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.

[18] V. Zanganeh, A. M. Izadpanah, M. Zahedi, S. Rahmanimanesh, M. Ahmadi, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.

[17] A. M. Izadpanah, V. Zanganeh, M. Mirzaei, F. Yaghobi, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.

[16] V. Zanganeh, A. M. Izadpanah, M. Mirzaei, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.

[15] V. Zanganeh, O.N. Ghodsi and R. Gharaei, Iranian annual physics conference, Birjand, Iran, Aug. 26-29,2013.

[14] O. N. Ghodsi, S. Mirzajani, V. Zanganeh, Iranian annual physics conference, Birjand, Iran, Aug. 26-29,2013.

[13] V. Zanganeh, A. M. Izadpanah, Iranian annual physics conference, Birjand, Iran, Aug. 26-29,2013.

[12] V. Zanganeh, O. N. Ghodsi and R. Gharaei, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21,2013.

[11] O. N. Ghodsi, M. Golshanian and V. Zanganeh, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21, 2013.

[10] R. Gharaei, O. N. Ghodsi and V. Zanganeh, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21, 2013.

[9] V. Zanganeh and O. N. Ghodsi, Iranian annual physics conference, Yazd, Iran, Aug. 27-30, 2012.

[8] V.Zanganeh and O.N. Ghodsi, M. Golshanian, Iranian annual physics conference, Oromie, Iran, Sep. 4-8, 2011

[7] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Oromie, Iran, Sep. 4-8, 2011

[6] V.Zanganeh and O.N. Ghodsi, M. Golshanian,Iranian annual Nuclear physics conference, Isfahan, Iran, may 15-19, 2011

[5] V.Zanganeh and O.N. Ghodsi,Iranian annual Nuclear physics conference, Isfahan, Iran, may 15-19, 2011



[4] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Hamedan, Iran, Aug 28-30, 2010

[3] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Isfahan, Iran, Aug 4-7, 2009

[2] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Kashan, Iran, Sep 10-13,2008

[1] V.Zanganeh and M. Mahdavi, Iranian annual Nuclear physics conference, Isfahan, Iran, March 6-7, 2006

## 6 Student Supervisions

- [1] Mrs. R. Boodaghi(Phd.)
- [2] Mrs. M. Ahmadi (phd)
- [3] Mr J. Mirzaei (M.Sc.)
- [4] Mrs F. Ebrahimi Kalokan (M. Sc.)
- [5] Mrs M. Tajik(M.Sc.)
- [6] Mrs F. Ghazagh (M.Sc.)
- [7] Mrs. K. Bagheri (M.Sc.)
- [8] Mrs. S. F. Aghili (M.Sc.)
- [9] Mrs. S. Sarshad (M. Sc.)
- [10] Mrs. M. Kohsarian(M.Sc.)
- [11] Mrs. A. Sadeghlo(M.Sc)
- [12] Mrs. F. Moradi(M.Sc)
- [13] Mrs. F. Saberi(M.Sc)
- [14]Mr M. Mirzaei (M.Sc.)
- [15] Mrs S. Rahmani manesh (M.Sc.)
- [16] Mrs. S. Bagheri (M.Sc)
- [17] Mrs. F. Mahmoodi( M.Sc)
- [18] Mr. S. Adeli (M.Sc)
- [19] Mrs. Z. Jafarpour(M.Sc.)
- [ 20] Mr. M. Atabai(M.Sc.)

- [21] Mrs. A. Niazi(M.Sc.)
- [22] Mr. B. Kohi(M.Sc.)
- [23 ] Mr. H. Bazrafshan(M.Sc.)
- [24] Mrs. G. Mohammad Arazi(M.Sc.)
- [25] Mrs.A. Amini(M.Sc.)
- [26] Mrs. H. Hasanzadeh(M.Sc.)
- [27] Mrs.F. Bafandeh (M.Sc.)
- [28] Mrs. F. erfanian (M.Sc.)
- [29] Mrs. N. Saidi(M.Sc.)
- [30] Mrs.T. Rajabloo (M.Sc.)
- [31 ] Mrs. M. Mohseni(M.Sc.)

## 7 Teaching Experiences

Quantum Mechanics

Analytical Mechanics

laboratory of Fundamental of Physics I

Fundamental of Physics I , II, III and IV

Nuclear Physics I and II

Advance Nuclear Physics I and II

Elementary Physics A (2009)

Computer Applications in Physics,

Advance Computational Physics,

Electricity and Magnetism I and II,

Thermodynamic

statistical mechanic

Radioisotopes and Their applications.

Modern Physics.

Math in physics I and II.

## 8 Computer expertise

[1] Fortran.

[2] Maple.

[3] bash programming in Linux.

- [4] C++
- [5] Root.
- [6] Geant4.
- [7] Gnuplot.
- [8] MCNP (basic)
- 9] Matlab (basic)
- [10] COMSOL Multiphysics (basic).

## 9 Research Interests

Theoretical and Computational heavy ion fusion reaction with static and dynamic approaches, Radiation therapy, Medical Physic, Simulation computer.

## 10 Reference

Prof. Dr. Ning Wang  
Guangxi Normal University  
Prof. of Departement oh Physics  
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Prof. Dr. Mohammad Mahdavi  
Prof. of Mazandaran university  
Department of Physics  
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Department of Physics  
email: o.nghodsi@umz.ac.ir

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