

CURRICULUM VITAE

Personal Data:

Name: **ABBAS**

Surname: **GHASEMIZAD**

Date and Place of Birth: 2 Oct. 1965, Tehran

Nationality: Iranian

Graduated from high school: 1983

Date, place and field of received B.Sc.: 1989, Kerman University, Nuclear Physics, First Rank

Date, place and field of received M.Sc.: 1993, Shiraz University, Nuclear Physics, First Rank

Date, place and field of received Ph.D.: 1997, Shiraz University, Nuclear Physics, First Rank

Position and Place (at present): Professor, University of Guilan.

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The Title of M.Sc Thesis: *The Consideration of Effects of Mean Energy Residence Time Parameter on Non-Linear Dynamical Behavior of Nuclear Fission Reactors.*

The Title of Ph.D Thesis: *The Gain Enhancement in Muon Catalyzed Fusion System by Hybrid Design and Optimization of Energy Expenditure for Negative Pion Production.*

Teaching Activities in Shiraz and Guilan Universities:

I. Ph.D. Courses:

1. Advanced topics in physics
2. Advanced topics in nuclear physics
3. Neutron physics
4. Nuclear Structure

II. M.Sc. Courses:

1. Advanced nuclear physics
2. Nuclear fusion
3. Advanced statistical mechanics
4. Advanced reactor physics
5. Special Topics

III. B.Sc. Courses:

1. Nuclear physics
2. Statistical mechanics
3. Reactor physics
4. Modern physics
5. Radioisotopes
6. Accelerators
7. Mechanics
8. Electricity and Magnetism
9. Detectors and nuclear measurement systems

Position:

Chancellor of University of Applied Science and Technology in Guilan Province, 2009-2015

Head of Physics Department: 2004-2008

Manager of Health Physics of University

Areas of Interest:

NUCLEAR PHYSICS

NUCLEAR ENERGY (NUCLEAR FUSION & FISSION)

Researches:

INERTIAL CONFINEMENT FUSION

MUON CATALYZED FUSION

NUCLEAR FISSION REACTOR DYNAMICS

ACCELERATOR DRIVEN SUBCRITICAL REACTORS

FISSION-FUSION HYBRID REACTORS

HYDRODYNAMIC INSTABILITIES IN FUSION PLASMAS

HEAT TRANSFER IN NUCLEAR FISSION REACTORS

Scientific Cooperation:

- Member of Editorial Board of "SIRT Journal of Engineering Sciences".
- Member of "Society for Interdisciplinary Research and Technology (SIRT)".
- Member of International Scientific Advisory Committee of "International Conference on Frontiers in Fluid Mechanics", ICFFM-09, 2009, Bangalore, India.
- Invited Speaker of "International Conference on Frontiers in Fluid Mechanics", ICFFM-09, 2009, Bangalore, India.
- Member of Scientific Committee of Nuclear Physics Conference of Iran, Gorgan, 2009.
- Member of the Physics Society of Iran (PSI).
- Member of the Nuclear Society of Iran.
- Reviewer of "International Symposium on Optical Engineering and Photonic Technology", OEPT, 2009.
- Reviewer of "International Symposium on Optical Engineering and Photonic Technology", OEPT, 2010.
- Reviewer of "International Symposium on Optical Engineering and Photonic Technology", OEPT, 2011.
- Invited Speaker of "Second International Conference and Sixteenth Annual Conference of Mathematical Sciences", Gwalior Academy of Mathematical Sciences (GAMS), Panajin, Goa, India, 2011.

Research Activities:

I. Published Papers in Journals:

1. M.R. Eskandari, A. Ghasemizad

Dynamics of Intrinsically Safe Pellet Suspension Reactors,

Iranian Journal of Science and Technology, Vol. 20, No.4, A (1996).

2. A. Ghasemizad, M.R. Eskandari

The Energy Balance Study in a Meso-Catalytic Hybrid Reactor with Spin Polarization and its Comparison with an Un-Polarized System,

Nuclear Science Journal, Vol. 34, No. 3 (1997).

3. **A. Ghasemizad**, M.R. Eskandari, S. Khoshbinfar, M. Kamran
On The Investigation Of Spark Formation Conditions and Energy Gain in Inertial Confinement Fusion,
Iranian Journal of Science and Technology, A3 (2005).
4. **A.Ghasemizad**, M.J.Tabatabaei
The Determining of Optimum Proton Pulse Duration Time for Fast Ignition Driver in Inertial Confinement Fusion,
Iranian Journal of Physics Research, Vol.7, No.1 (2007).
5. S.Khoshbinfar, **A.Ghasemizad**
On The Self-Similar Energy Gain Scaling in Isobaric Approach of ICF Target,
Journal of Sciences, Islamic Republic of Iran, Vol.18, No.2 (2007).
6. B.Khanbabaei, **A.Ghasemizad**, H.Farajollahi
CFD-Calculation of Fluid Flow in VVER-1000 Reactors,
Journal of Applied Sciences, 8(5): 780-787 (2008).
7. **A.Ghasemizad**, S.Khoshbinfar
Ignition Criteria of Spark Parameters in Direct Drive Inertial Confinement Fusion,
Journal of Applied Sciences, 8(8): 1586-1589 (2008).
8. H. Farajollahi, **A. Ghasemizad**, B. Khanbabaei
CFD- Calculation of Fluid Flow in a pressurized Water Reactor,
Journal of Sciences, Islamic Republic of Iran, 19(3), 273-281(2008).
9. M. Tajik, **A. Ghasemizad**
The Study of Two, Three and Four Dimensional Nonlinear Dynamics of Nuclear Fission Reactors and Effective Parameters on its Behaviour,
Journal of Nuclear Science and Technology, No. 45 (2008).
10. M.J. Tabatabaei, **A. Ghasemizad**
Optimum Time Available for Fast Ignition in Inertial Confinement Fusion
International Review of Physics Journal, IREPHY, Vol.3, No.4 (2009)
11. **A. Ghasemizad**, H. Zarringhalam, L. Gholamzadeh
The Investigation of Rayleigh-Taylor Instability Growth Rate in Inertial Confinement Fusion
Journal of Plasma and Fusion Research Series, Vol.8 (2009).
12. S. Pourhoseini, **A. Ghasemizad**
On Physical Parameters Study of Direct Drive in Inertial Confinement Fusion
Journal of Theoretical and Applied Physics(JTAPhys), Vol.3, No.3 (2009).
13. M.J. Tabatabaei, **A. Ghasemizad**
Analytical and Numerical Study of the Burn Performance in Central Ignition
Journal of Theoretical and Applied Physics (JTAPhys), Vol.3, No.4, March (2010).
14. M. J. Tabatabaei, **A. Ghasemizad**
Study of fusion gain of fast ignition with conical targets
Iranian Journal of Physics Research, 10, 359-365 (2010).
15. M.J. Tabatabaei, **A. Ghasemizad**
Investigation of Fusion Gain of Fast Ignition with Conical Targets
Iranian Journal of Physics Research, Vol. 10, No. 4 (2011).

16. L. Gholamzadeh, **A. Ghasemizad**
Non-uniformity of Heavy Ion Beam Irradiation on a Direct-Driven Pellet in Inertial Confinement Fusion
Journal of Plasma Science and Technology (IOP), Vol.13, No.1, Jan. (2011).
17. L. Gholamzadeh, **A. Ghasemizad**, Sh. Ghaseminejad
Investigation of Energy Deposition and Irradiation Non-Uniformity of Lead Heavy Ion Beam in Two Different Target Structures
Journal of Theoretical and Applied Physics (JTAPhys), 4-4, 29-38 (2011).
18. M. Abbasi, **A. Ghasemizad**, B. Khanbabaei, K. Keshtkar
CFD Analysis of Coolant Flow at Bushehr Nuclear Reactor
Journal of Theoretical and Applied Physics (JTAPhys), Vol. 5, No.3, 135-141 (2011).
19. Sh. Ghaseminejad, **A. Ghasemizad**, L. Gholamzadeh
3D Visualization of Heavy Ion Beam Energy Deposition in Two Different Target Shapes
Journal of Nuclear Instrument and Methods in Physics Research B, 269, 2514-2519
 July (2011).
20. M. Moosavi, **A. Ghasemizad**
Study Effect of Little Tritium Seeding on Output Energy of Inertial Confinement Fusion Capsule in Fast Ignition Concept
World Applied Programming Journal, Vol. 2, No.3, 167-174, March (2012).
21. M. Moosavi, **A. Ghasemizad**, M.J. Tabatabaei
Investigation of Fuel Energy Gain for Tritium-Poor Fuels in Fast Ignition Fusion Approach
Journal of Plasma Science and Technology (PST), Vol. 15, No.10, Oct. (2013).
22. M. Masoumi, **A. Ghasemizad**, L. Gholamzadeh
Power Balance Consideration in the Design of Indirectly Driven Targets
Journal of Plasma Science and Technology (PST), Vol. 15, No.6, Jun. (2013).
23. F. Abdolahi, **A. Ghasemizad**, M. Tabatabaei
Energy Studies for Central Ignition of Spherical Shell Targets in Inertial Confinement Fusion
Iranian Journal of Science and Engineering, Vol. 1, No.1, 15-20 (2013).
24. S. Rahimi Shamami, **A. Ghasemizad**
Reduction of Growth Rate of Rayleigh-Taylor Instability Using Nano-Structured Porous Lining at ICF Target Shell
The European Physical Journal Plus (Eur. Phys. J. Plus) 128:141 (2013).
25. M. Moosavi, M. Ahmadi, **A. Ghasemizad**
Energy Gain Investigation in Fast Ignition ICF with Electron Ignition Beam by Changing Fuel Characteristics
Chinese Physics Letters, Vol. 13, No.2, 022801 (2014).
26. **A. Ghasemizad**, S. Yaghoubi, S. Khoshbinfar
Stability Analysis of a Proton-Beam Driven Fast Ignition by Using Nyquist Criteria
The European Physical Journal Plus (Eur. Phys. J. Plus) 129:145 (2014).
27. B. Khanbabaei, **A. Ghasemizad**, S. Khoshbinfar
Deuterium-Tritium Catalytic Reaction in Fast Ignition: Optimum Parameters Approach
Pramana Journal of Physics, Vol. 83, No. 3, pp. 395-411, Sep. (2014).

28. S. Jafari, M. Nilkar, **A. Ghasemizad**, H. Mehdian
Inertial Confinement Fusion based on the Ion-Bubble Trigger
Physics of Plasmas, 21, 104503 (2014).
29. **A. Ghasemizad**, B. Khanbabaee, S. Khoshbinfar
The Role of Athermal Fusion in Fast Ignition Driven by Ion Beams
Romanian Journal of Physics, Vol. 59, Nos. 5-6, P. 529-543, Bucharest (2014).
30. **A. Ghasemizad**, M. Masoumi, L. Gholamzadeh
Investigation of Physical Parameters in Ion-Beam-Heated Converters
Journal of Theoretical and Applied Physics (JTAPhys), 9:291-296 (2015).
31. E. Ghorbanpour, **A. Ghasemizad**
Study of Neutron Yield in a Special ADS Sample Target: Optimum Parameters Approach
Indian Journal of Science and Technology, Vol. 8(30), IPL0715, Nov. (2015).
32. M. Nazirzadeh, **A. Ghasemizad**, B. Khanbabaee
Determination of deuterium- tritium critical burn-up parameter by four temperature theory
Physics of Plasmas, 22, 122709 (2015).
33. **A. Ghasemizad**, M. Nazirzadeh, B. Khanbabaee
The effect of relativistic Compton scattering on thermonuclear burn of pure deuterium fuel,
Physics of Plasmas, 23, 082707 (2016).
34. N. Saedjalil, M. Mehrangiz, S. Jafari, **A. Ghasemizad**
Interaction of a self-focused laser beam with a DT fusion target in a plasma-loaded cone-guided ICF scheme,
Eur. Phys. J. Plus, 131,188 (2016).
35. M. Mehrangiz, **A. Ghasemizad**, S. Jafari, B. Khanbabaee
Fusion Energy and Stopping Power in a Degenerate DT Pellet Driven by a Laser-accelerated Proton Beam,
Commun. Theor. Phys., 65, 761 (2016).
36. M. Mehrangiz, **A. Ghasemizad**
Investigating the foil-generated deuteron beam interaction with a DT target in degenerate and classical plasma
Eur. Phys. J. Plus, 132, 270 (2017).
37. M. Nazirzadeh, B. Khanbabaee, **A. Ghasemizad**
The investigation of inertial fusion burning requirements of deuterium-helium3 in degenerate plasma
Physics of Plasmas, 24, 082708 (2017).

II. Submitted Papers in International Conferences:

1. M.R. Eskandari, **A. Ghasemizad**
Safety Studies on Pool-Type Research Reactors,
III International Conference on Nuclear Power Plants Safety and Personnel Training, Obnisk,
RUSSIA (1993).

2. M.R. Eskandari, **A. Ghasemizad**
The Effect of Mean Energy Residence Time on Fission Reactor Behavior,
International Nathiagali Summer College on Physics and Contemporary Needs, Nathiagali,
PAKISTAN (1994).
3. **A. Ghasemizad**
The Calculation of Energy Gain in Central Spark Ignition and the Effects of Different Parameters on it,
30th IEEE International Conference on Plasma Science, Jeju, **KOREA** (2003).
4. **A. Ghasemizad**
The Dynamics Study of Intrinsically Safe Pellet Suspension Reactors,
International Conference on Global Environment and Advanced Nuclear Power Plants,
Kyoto, **JAPAN** (2003).
5. **A. Ghasemizad**, S. Khoshbinfar
The Central Spark Ignition, a way toward Clean Fuels in Nuclear Energy and Environment,
5th International Conference On The Nuclear Option In Countries With Small And Electricity
Grids, Dubrovnik, **CROATIA** (2004).
6. **A. Ghasemizad**, S. Khoshbinfar
Self-Similar Approach to Isobaric Model in Inertial Fusion,
2nd International Conference on Nuclear Science and Technology in Iran, Shiraz University,
Shiraz, **IRAN** (2004).
7. **A. Ghasemizad**, M.Kamran
Calculation of Fuel Gain in Isochoric Central Spark Ignition Model of Inertial Fusion,
2nd International Conference on Nuclear Science and Technology in Iran, Shiraz University,
Shiraz, **IRAN** (2004).
8. **A. Ghasemizad**, N. Khoddam
*Investigation and Analyze of Stability of Muon Catalyzed Fusion System in Triple Mixture of
D-T-³He Accumulation,*
2nd International Conference on Nuclear Science and Technology in Iran, Shiraz University,
Shiraz, **IRAN** (2004).
9. **A. Ghasemizad**, M. Kamran
The Concept of Isochoric Central Spark Ignition and its Fuel Gain in Inertial Fusion, 12th
International Congress on Plasma Physics, October 25-29, Nice, **FRANCE** (2004).
10. A.Ghasemizad, S. Khoshbinfar
The Study of Ignition Conditions and Energy Gain in Inertial Fusion Targets,
March 21-24, Oxford University, **ENGLAND** (2005).
11. **A. Ghasemizad**, S. Khoshbinfar
The Method of Self-similar Solution for Energy Gain scaling in ICF Targets, International
Conference Nuclear Energy for New Europe, Bled, September 5-8, **SLOVENIA** (2005).
12. **A.Ghasemizad**, M.Tabatabaei
The Investigation of High Energy Gain Conditions for Fast Ignition in ICF,
International Conference-Nuclear Energy for New Europe, September 18-21, Portroz,
SLOVENIA (2006).
13. **A. Ghasemizad**, S. Khoshbinfar
Energy Scaling of Inertial Confinement Fusion Targets,

International Conference-Nuclear Energy for New Europe, September 18-21, Portroz, **SLOVENIA** (2006).

14. **A. Ghasemizad**, S. Khoshbinfar
Ignitable Island of Spark Parameters in ICF,
International Conference-Nuclear Energy for New Europe, September 18-21, Portroz, **SLOVENIA** (2007).
15. **A.Ghasemizad**, M.Tabatabaei
The Study of Proton Pulse Duration for Triggering Fast Ignition in ICF,
International Conference-Nuclear Energy for New Europe, September 18-21, Portroz, **SLOVENIA** (2007).
16. **A.Ghasemizad**, Z. Telikani
Analytical and Numerical Investigation of Two Blankets Fission-Fusion Reactor,
25-29 May, Dubrovnik, **CROATIA** (2008).
17. **A. Ghasemizad**, H. Zarringhalam, L. Gholamzadeh
The Investigation of Rayleigh-Taylor Instability growth Rate in Inertial Confinement Fusion,
14th International congress on Plasma physics, Fukuoka International Congress Center,
Fukuoka, **JAPAN** (2008).
18. **A. Ghasemizad**, L. Mollasoltani, M. Shahriari, L. Gholamzadeh
The Numerical Investigation of Neutronic Behavior of Accelerator Driven Subcritical Reactors,
International Conference of Nuclear Energy for New Europe, Portroz, **SLOVENIA**(2008).
19. S. khoshbinfar, M. Vahabi Moghaddam, **A. Ghasemizad**
Effects of Cs-137 spatial Variability in Soil on External Gamma Dose-rate,
International Youth Nuclear Congress (IYNC 2008), Interlaken, **SWITZERLAND** (2008).
20. M. Vahabi Moghaddam, S. Khoshbinfar, **A. Ghasemizad**
Distribution of Cs-137 in South-west Caspian Soil,
International Congress on Radioecology & Environmental Radioactivity, Bergen, **NORWAY**
(2008).
21. **A. Ghasemizad**, F. Adli
Investigation of Kelvin-Helmholtz Hydrodynamic Instability in ICF
International Conference on Frontiers in Fluid Mechanics, ICFFM-09, Bangalore University,
Bangalore, **INDIA** (2009).
22. **A. Ghasemizad**, A. Malekpour
Analytical Investigation of Richtmyer-Meshkov Instability in Inertial Confinement Fusion
9th International Symposium on Fusion Nuclear technology, ISFNT-9, Dalian, **CHINA**
(2009).
23. **A. Ghasemizad**, B. Khanbabaei
CFD- Calculation of Fluid Flow in a Pressurized Water Reactor
International Conference on Frontiers in Fluid Mechanics, ICFFM-09, Bangalore University,
Bangalore, **INDIA** (2009).
24. **A. Ghasemizad**, L. S. Taleb Miandehy
Investigation of Energy Deposition of Charged Particles and Neutrons in ICF- Plasma
21th International Conference on Numerical Simulation of Plasmas, ICNSP09, Lisbon,
PORTUGAL (2009).

- 25. A. Ghasemizad, L. Gholamzadeh**
The Investigation of Non-uniformity of Heavy-Ion Beam Irradiation on a Spherical Target in Inertial Confinement Fusion
 21th International Conference on Numerical Simulation of Plasmas, ICNSP09, Lisbon, **PORTUGAL** (2009).
- 26. A. Ghasemizad, L. Gholamzadeh**
Heavy Ion Beam Irradiation Non-uniformity on Direct Drive Pellet in Inertial Confinement Fusion
 International Conference of Nuclear Energy for New Europe 2009, Bled, **SLOVENIA** (2009).
- 27. A. Ghasemizad, S. Pourhoseini**
Heavy Energy Gain of Direct and Indirect Drive Methods in Inertial Confinement Fusion
 International Conference of Nuclear Energy for New Europe 2009, Bled, **SLOVENIA** (2009).
- 28. A. Ghasemizad, A. Malekpour**
Analytical Investigation of Richtmyer-Meshkov Instability in ICF
 International Conference of Nuclear Energy for New Europe 2009, Bled, **SLOVENIA** (2009).
- 29. A. Ghasemizad, A. Malekpour**
On Hydrodynamic Instability in Inertial Confinement Fusion
 International Conference of Fluid Mechanics, Heat Transfer and Thermodynamics, ICFMHTT , Cape Town, **SOUTH AFRICA** (2010).
- 30. M. Moosavi, A. Ghasemizad**
The Investigation of Fuel Energy Gain for Tritium-Poor Fuels in Fast Ignition Fusion
 International Conference of Nuclear Energy for New Europe, Portoroz, **SLOVENIA**(2010).
- 31. M.J. Tabatabaei, A. Ghasemizad**
Investigation of Energy Gain of Deuterium-Tritium Fusion Targets in Central Ignition Scheme with Planning the Neutrons Energy Deposition
 Second International Conference on Energy Conversion and Conservation (CICME10), Hammamet, **TUNESIA** (2010).
- 32. A. Ghasemizad, Sh. Ghaseminejad, L. Gholamzadeh**
Simulation of Heavy Ion Beam Energy Deposition on Various Target Shapes for Heavy Ion Beam Fusion
 Advances in Applied Physics & Material Science Congress, Antalya, **TURKEY** (2011).
- 33. L. Gholamzadeh, A. Ghasemizad**
 Advances in Applied Physics & Material Science Congress, Antalya, **TURKEY** (2011).
- 34. M. Abbasi, A. Ghasemizad, B. Khanbabaei, K. Keshtkar**
 Advances in Applied Physics & Material Science Congress, Antalya, **TURKEY** (2011).
- 35. S. Rahimi Shamami, A. Ghasemizad**
 Advances in Applied Physics & Material Science Congress, Antalya, **TURKEY** (2011).
- 36. M. Abbasi, A. Ghasemizad, B. Khanbabaei**
CFD simulation of nature flow at the VVER-1000 V446 nuclear reactor,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).

- 37. A. Ghasemizad, L. Gholamzadeh, M. Masoumi**
Simulation of indirectly driven targets for inertial confinement fusion with MULTI hydrodynamic code,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).
- 38. S. Yaghoobi, A. Ghasemizad, M.J. Tabatabaei**
The effects of proton density on micro-instability in fast ignition in ICF,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).
- 39. M. J. Tabatabaei, A. Ghasemizad**
Minimum confinement time available for hydrodynamic ignition in inertial fusion,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).
- 40. F. Abdollahi, A. Ghasemizad, M. J. Tabatabaei**
The study of burn fraction in two-layer spherical shell targets in central ignition,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).
- 41. A. Ghasemizad, L. Gholamzadeh, M. Ahmadi**
Investigation of magnetic field on the rho-r value in cylindrical direct-driven targets,
 20th international conference nuclear energy for new Europe, **SLOVENIA**, sep. 12-15 (2011).
- 42. M. Ahmadi, A. Ghasemizad**
 14th European Fusion Theory Conference, Frascati, **ITALY** (2011).
- 43. A. Ghasemizad, F. Abdollahi**
 8th Conference on Nuclear and Particle Physics, NUPPAC'11, Hurghada, **EGYPT** (2011).
- 44. A. Ghasemizad, F. Abdollahi**
 International Seminar on the Application of Science and Mathematics, ISASM'11, University of Tun Hussein Onn, **MALAYSIA** (2011).
- 45. S. Yaghoobi, A. Ghasemizad, S. F. Eslami**
Investigation of Proton Stable Transport in Fast Ignition Inertial Confinement Fusion by Nyquist Method
 Conference Ljubljana 2012, Nuclear Energy for New Europe, **SLOVENIA** (2012).
- 46. H. Ashouri, A. Ghasemizad, M. Ahmadi**
Adiabatic Shaping In Inertial Confinement Fusion
 Conference Ljubljana 2012, Nuclear Energy for New Europe, **SLOVENIA** (2012).
- 47. A. Ghasemizad, Z. Moradi, S. Rahimi Shamami**
The Effect of Magnetic Field on the Growth Rate of Rayleigh-Taylor Instability in Inertial Confinement Fusion
 Conference Ljubljana 2012, Nuclear Energy for New Europe, **SLOVENIA** (2012).
- 48. S. F. Eslami, A. Ghasemizad, S. Yaghoobi**
Temperature Effect on Micro-Instability in Electron Beam-Plasma System in Fast Ignition Inertial Confinement Fusion
 Conference Ljubljana 2012, Nuclear Energy for New Europe, **SLOVENIA** (2012).

49. A. Ghasemizad, H. Ashouri

The Investigation of Adiabatic Shaping in Inertial Confinement Fusion

Kharkov Institute of Physics and Technology, IPP NSC KIPT, Institute of Plasma Physics, Alushta (Crimea), **UKRAINE** (2012).

III. Submitted Papers in National Conferences:

1. A. Ghasemizad, M.R. Eskandari

The Exact Mathematical Solution of Transport Equation with Asymptotic Equation Terms,
Annual Physics Conference of Iran, Razi University, Kermanshah, IRAN (1993).

2. A. Ghasemizad, M.R. Eskandari

The Boiling Water Reactor Transfer Function Studies by Non-Linear Dynamical Equations,
Annual Physics Conference of Iran, Kordestan University, Sanandaj, IRAN (1994).

3. A. Ghasemizad

The Design of a Meso-Catalytic Hybrid Fusion Reactor with Electro-Nuclear Neutrons and Spin Polarization,
Annual Physics Conference of Iran, Shahid Bahonar University of Kerman, Kerman, IRAN (1998).

4. A. Ghasemizad, M. Tajik

The Study of Two and Three Dimensional Dynamics of Nuclear Fission Reactors and Effective Parameters on its behavior,
Annual Physics Conference of Iran, Teacher Training University of Sabzevar, Sabzevar, IRAN (2001).

5. A. Ghasemizad, M. Motevalli

The Effects of Different Physical Parameters on Muon Stripping Process in Liquid Hydrogen and Plasma Fuels,
9th Gathering of the Iranian Nuclear Physicists and Engineers, Shahid Bahonar University of Kerman, Kerman, IRAN (2003).

6. A. Ghasemizad, N. Khoddam

The Investigation of Helium Accumulation Effect on Muon Catalyzed Fusion Kinetics in Deuterium-Tritium Mixtures,
The 10th National Conference of Physicists & Nuclear Science Specialists, Arak University, Arak, IRAN (2004).

7. A. Ghasemizad, S. Saffari Kisomi

The Determining of Optimal Conditions for Negative Pion Production in Double Target System Design of Muon Catalyzed Fusion Method,
The 10th National Conference of Physicists & Nuclear Science Specialists, Arak University, Arak, IRAN (2004).

8. A. Ghasemizad, S. Khoshbinfar

The Set of Admissible Values of Hot Region Ignition Parameters in Inertial Confinement Fusion,
The 11th National Conference of Physicists & Nuclear Science Specialists", Bushehr Nuclear Power Plant, Bushehr, IRAN (2005).

9. **A. Ghasemizad**, M. Kamran
The Calculation of Accelerated Proton Beams in D-T Dense Plasma in Inertial Fusion Method,
The 11th National Conference of Physicists & Nuclear Science Specialists, Bushehr Nuclear Power Plant, Bushehr, IRAN (2005).
10. **A. Ghasemizad**, M. Rashedzadeh
The Study of Nuclear Fission Reactors Dynamics with Considering of Mechanical and Nuclear Effects,
The 11th National Conference of Physicists & Nuclear Science Specialists, Bushehr Nuclear Power Plant, Bushehr, IRAN (2005).
11. **A. Ghasemizad**, S. Khoshbinfar
The Investigation of Self-Similar Method in Energy Gain Scaling of Inertial Confinement Fusion Target,
Nuclear Conference of Iran, Mash'had University, Mash'had, IRAN (2006).
12. **A. Ghasemizad**, M.Tabatabaei
The Determining of Optimum Confinement Time for Fast Ignition in Inertial Confinement Fusion,
Nuclear Conference of Iran, Mash'had University, Mash'had, IRAN (2006).
13. **A. Ghasemizad**, M.Shahryari, S.Pooiandeh
The Analytical and Numerical Investigation of Burn Up Process for Inertial Confinement Fusion Targets,
Nuclear Conference of Iran, Mash'had University, Mash'had, IRAN (2006).
14. M.Mahdavi, **A.Ghasemizad**, S.M.Motevalli
The Calculation of Intensity of X-ray Transitions for muonic Helium Ion in D-T Fusion Cycle,
Nuclear Conference of Iran, Mash'had University, Mash'had, IRAN (2006).
15. S.Pourhosseini, **A.Ghasemizad**
The Analytical Study of Indirect Drive Energy in Inertial Confinement Fusion,
Nuclear Conference of Iran, Isfahan University, Isfahan, IRAN (2007).
16. V.Taherkhani, **A. Ghasemizad**, Gh.Raeisali
The Analytical and Numerical Investigation of Power Balance in Operation and Safety of Accelerator Driver Subcritical Reactors,
Nuclear Conference of Iran, Isfahan University, Isfahan, IRAN (2007).
17. S.Khoshbinfar, **A.Ghasemizad**
The Energy Gain of Thin Shell Targets in Inertial Confinement Fusion,
Nuclear Conference of Iran, Isfahan University, Isfahan, **IRAN** (2007).
18. Z.Telikani, **A.Ghasemizad**
The Analytical and Numerical Investigation of Idea of Two-Blanket Fission-Fusion Hybrid Reactor,
Nuclear Conference of Iran, Isfahan University, Isfahan, **IRAN** (2007).
19. L. Mollasoltani, M. Shahriari, **A. Ghasemizad**, Fegh'hi
The Calculation of Power Sensitivity of SAD subcritical System for Radius Variations of Spallation Target,
Nuclear Physics Conference, Yazd University, Yazd, **Iran** (2008).

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21. H. Zarringhalam, **A. Ghasemizad**
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23. **A. Ghasemizad**, B. Khanbabaei, H. Farajollahi
The Investigation of Fluid Flow in VVER-1000 Reactor Using Computational Fluid Dynamics Code,
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24. F. Omid Sarajari, **A. Ghasemizad**
The Investigation of Physical Effects of Impurity Presence in Deuterium- Tritium Liquid Mixture on Muon Efficiency of Muon Catalyzed Fusion,
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25. A. Malekpour, **A. Ghasemizad**
The Investigation of Effective Physical Parameters on Richtmeyer- Meshkov in Inertial Confinement Fusion,
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26. A. Malekpour, **A. Ghasemizad**
The Investigation of Effective Physical Parameters on Pressure Wave in Inertial Confinement Fusion,
 Nuclear Physics Conference, Golestan University, Gorgan, **Iran** (2009).
27. L. Gholamzadeh, **A. Ghasemizad**
Investigation of Irradiation Non-uniformity and Energy Deposition of Heavy-Ion Beams in ICF Using OK1- Code
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29. F. Adli, **A. Ghasemizad**
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30. L. Gholamzadeh, **A. Ghasemizad**
Inertial Confinement Fusion Using Heavy Ion Beams
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- 32. F. Adli, A. Ghasemizad**
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- 33. M. Abbasi, A. Ghasemizad, B. Khanbabaee, K. Keshtkar**
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- 35. M. Moosavi, A. Ghasemizad, M.J. Tabatabaei**
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- 36. Sh. Ghaseminejad, A. Ghasemizad, L. Gholamzadeh**
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- 37. M. Abbasi, A. Ghasemizad, B. Khanbabaee, K. Keshtkar**
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- 38. Z. Rahnema, A. Ghasemizad**
Investigation of Shock Collapse Problem in Inertial Confinement Fusion with considering Gaderly's Model
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- 39. S. Rahimi, A. Ghasemizad**
The role of nano structure procity layer in reduction of Rayleigh-Taylor instability growth rate for linear phase of inertial fusion
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- 40. S. Safarnejad, A. Ghasemizad**
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- 41. M. Ahmadi, A. Ghasemizad, L. Gholamzadeh**
Investigation of alpha particles deposition in magnetic cylindrical targets in ICF
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- 42. L. Gholamzadeh, A. Ghasemizad**
The 3D demonstration effect of energy deposition and nonuniformity investigation of cesium ion bear irradiation in heavy ion fusion
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43. S. Yaghoobi, **A. Ghasemizad**
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44. B. Khanbabaei, **A. Ghasemizad**, S. Khoshbinfar
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 Iranian Nuclear Conference, Yazd, **IRAN** (2012).
45. F. Ahmadi, **A. Ghasemizad**, L. Gholamzadeh
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46. F. Abdollahi, **A. Ghasemizad**, M.J. Tabatabaei
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48. Z. Moradi, **A. Ghasemizad**, S. Rahimi Shamami
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49. H. Ashoori, **A. Ghasemizad**, M. Ahmadi
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53. S. Rahimi Shamami, **A. Ghasemizad**
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 4th International Congress on NanoScience and Nanotechnology, Institute of NanoScience and Nanotechnology, ICNN 2012, University of Kashan, Kashan, **IRAN** (2012).
54. S.F. Eslami, **A. Ghasemizad**, S. Yaghoobi
Investigation of Cold Electrons Transfer from Hot Plasma in Fast Ignition of Inertial Confinement Fusion
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55. B. Khanbabaei, **A. Ghasemizad**, S. Khoshbinfar
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58. S. M. Teimoori Sandesi, **A. Ghasemizad**, S. M. Taghizadeh
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60. S. M. Teimoori Sandesi, **A. Ghasemizad**, M. Kabir. M. S. Abbasi
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61. M. Mehrangiz, **A. Ghasemizad**, B. Khanbabaei
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62. S. Yaghoobi, **A. Ghasemizad**, S. Khoshbinfar
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63. M. Mehrangiz, **A. Ghasemizad**, S. Jafari, B. Khanbabaei
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65. S. Esmaeili Bejarsari, **A. Ghasemizad**
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66. E. Ghorbanpour, **A. Ghasemizad**, S. Khoshbinfar
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67. M. Sefareshi, A. Ghasemizad, S. Khoshbinfar

Study of Volume Ignition Dynamics in Simple Spherical Targets

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70. S. Mohammadkhani, A. Ghasemizad, S. Khoshbinfar

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71. M. Rajabnejad, A. Ghasemizad, S. Khoshbinfar

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IV. Presentations in University of Guilan:

1. A. Ghasemizad

The Study of Muon Catalyzed Fusion Method and the Design of Double Target System for Increasing of energy Yield,

The 5th Scientific- Research Gathering of Guilan University, Rasht, Iran (1998).

2. A. Ghasemizad

The Dynamical Study of Pellet Suspension Fuel Reactors and Investigation of Its Stability,

The 6th Scientific –Research Gathering of Guilan University, Rasht, Iran (1999).

3. A. Ghasemizad

The Investigation of Meso-Catalytic Hybrid Fusion Reactor and Its Energy Gain,

The 7th Scientific – Research Gathering of Guilan University, Rasht, Iran (2000).

4. A. Ghasemizad

Nuclear Magnetic Resonance,

University of Guilan, Rasht, Iran (2001).

5. **A. Ghasemizad**
Nuclear Fission and Chernobyl Accident,
University of Guilan, Rasht, Iran (2001).
6. **A. Ghasemizad**
Nuclear Energy,
University of Guilan, Rasht, Iran (2002).
7. **A. Ghasemizad**
The Study of Energy Gain in a Laser Fusion System and the Effects of Different Parameters on it,
8th Scientific-Research Gathering of Guilan University, Rasht, Iran (2002).
8. **A. Ghasemizad**
Muon Catalyzed Fusion, A way to Clean Fuel,
9th Scientific-Research Gathering of Guilan University, Rasht, Iran (2006).
9. **A. Ghasemizad**
Workshop of Nuclear Physics,
University of Guilan (2007).
10. **A. Ghasemizad**
Workshop of Nuclear Physics,
University of Guilan (2008).
11. **A. Ghasemizad, L. Gholamzadeh**
10th Scientific- Research Gathering of Guilan University (2010).
12. **A. Ghasemizad, M.J. Tabatabaei**
10th Scientific- Research Gathering of Guilan University (2010).
13. **A. Ghasemizad**
11th Scientific- Research Gathering of Guilan University (2011).

V. My M.Sc Graduated Students and their thesis titles:

1. Mojtaba Tajik
"The Study of Nonlinear Dynamics, Effective Parameters on Dynamical Behavior and Stability of Nuclear Fission Reactor Systems", (2000).
2. Mohammad Motevalli
"The Analytic Study of Effects of Density, Temperature and Tritium Concentration on Regeneration, Sticking and Muon Efficiency in Molecular Hydrogen and Plasma", (2002).
3. Majid Rasekh
"The Study of Different Lasers for Achieving to Optimal Conditions and Efficiency in Laser Fusion System", (2002).
4. Elham Badiie Gavarti
"The Investigation of Physical Parameters Effects and Tritium Concentration on Energy Gain in Central Spark Ignition Fusion Method", (2003).

5. Soghra Saffari Kisomi
"The Energy Gain Calculation in Ideas of Separate, Identical and Composed Fuel-Target Configuration in a Muon Catalyzed Fusion System", (2003).
6. Aisa Sadeghi
"The Study of Hybrid Nuclear Reactors and Concept of Nuclear Wastes Incineration", (2003).
7. Morteza Kamran
"The Study of Fast Ignition Idea by Laser Beam, Accelerated Protons and Light Ions in Inertial fusion", (2003).
8. Neda Khoddam
"The Study of Helium Accumulation Effect on Muon Catalyzed Fusion Kinetics in Deuterium – Tritium Mixtures", (2004).
9. Soheil Khoshbinfar
"The Study of Ignition Conditions and Energy Gain in Inertial Fusion Targets", (2005).
10. Morteza Rashedzadeh
"The Analytical Study of Nuclear Reactor Dynamics, with Incorporating Mechanical and Nuclear Reactor Effects", (2005).
11. Mohammadjafar Tabatabaei
"The Analytical Model for Investigation of Fast Ignition Dynamics in Inertial Confinement Fusion", (2005).
12. Sima Pooiandeh
"The Analytical and Numerical Study of Burn Process of Inertial Confinement Fusion Target", (2006).
13. Vahid Taherkhani
"The Analytical and Numerical Study of Power in Operation and Safety of Accelerator Driven Subcritical Nuclear Reactors", (2006).
14. Sedigheh Pourhoseini
"The Investigation of Ignition Parameters and Energy Gain in Direct and Indirect Ideas of Inertial Confinement Fusion Methods", (2007).
15. Zeinab Telikani
"The Analytical and Numerical Investigation of Multi-blankets Fission-Fusion Hybrid Reactors Idea", (2007).
16. Jamal Mohammadpour
"The Numerical and Analytical Comparison between Inertial Confinement Fusion and Inertial-Spherical Pinch Confinement Methods", (2007).
17. Babak Khanbabaei
"The Analytical and Numerical Investigation of Heat Transfer Process Using Fluid Dynamics Codes in Coolant System of Pressurized Water Reactors", (2008).
18. Hanif Zarringhalam
"The Study of Hydrodynamics Instabilities and Effective Physical Parameter on Inertial Confinement Fusion", (2008).

19. Leila Mollasoltani
"The Analytical and Numerical Investigation of Neutronic Behaviour of Accelerator Driven subcritical Reactors", (2008).
20. Arash Malekpour,
"The Dynamical Investigation of Richtmyer- Meshkov Instability in Inertial Confinement Fusion", (2009).
21. Hamid Sheikhsazemi Kojour
"The Analytical and Numerical Investigation of Heat Transfer Process Using Fluid Dynamics Codes in Coolant system of Boiling Water Nuclear Reactors", (2009).
22. Seiedeh Zohreh Doodmani, (2009).
23. Fatemeh Omidi Sarajari
" The Kinetic Study of Muonic Atom and Muonic Molecule Formation Process in Muon Catalyzed Fusion ", (2009).
24. Leila Sadat Taleb
"Investigation of Energy Deposition of Charged Particles in ICF- Plasma", (2009).
25. Fereshteh Adli
"Investigation of Kelvin-Helmholtz Hydrodynamic Instability in Inertial Confinement Fusion ", (2009).
26. Shohreh Sayad Mahernia
" The Investigation of Nuclear Fusion Energy Gain in a Degenerate Plasma ",(2010).
27. Sepideh Rahimi Shamami
"The Effect of Nanostructured Porous Lining in Reduction of Growth Rate of Rayleigh-Taylor Instability in Inertial Fusion in Presence of Electric Field", (2011).
28. Mohadaseh Moosavi
" The Study of Energy Gain in Fast Ignition Idea of Inertial Confinement Fusion", (2011).
29. Shiva Ghaseminejad
"Investigation of Energy Deposition Value of Heavy Ion Beams by OK2 Code", (2011).
30. Motahareh Abbasi
"The Dynamical Study of Heat Transfer Process of Bushehr Nuclear Power Plant Using ANSYS Simulation Code", (2011).
31. Zeinab Rahnama Kaskarei
"Investigation of Shock Waves in Inertial Confinement Fusion", (2011).
32. Farzin Safarnejad
" Effects of Deuterium- Tritium Ratio on Energy Gain in Inertial Fusion Targets", (2011).
33. Sam yaghoobi Kajal
" Investigation of Protons Transport in Fast Ignition Inertial Confinement Fusion", (2011).
34. Fatemeh Abdollahi
" Study of Conditions for the Central Ignition of Spherical Shell Targets and Calculation of the Energy Gain ", (2011).

35. Masoumeh Ahmadi
" Investigation of Target Structure Parameter for Direct-Drive Scheme in Inertial Confinement Fusion ", (2011).
36. Mahboobeh Masoumi
" Investigation of Indirect Drive Scheme Parameters Using Heavy Ion Beams in Inertial Confinement Fusion ", (2012).
37. Shohreh Tavana Amlash
" The Analytical Study of Heat Transfer Process of Coolant System of a Typical Pressurized Water Reactor Using Simulation Codes of Computational Fluid Dynamics ", (2012).
38. Reyhane Babaei Velni
" The Study of Concept of Fast Ignition and Energy Deposition of MeV Electrons in Inertial Confinement Fusion ", (2012).
39. Hadigheh Ashoori
" Investigation of Adiabatic Shaping in Reducing Rayleigh- Taylor Instability for Inertial Confinement Fusion ", (2012).
40. Ziba Moradi
"Investigation of Effects of Magnetic Field and Nanostructured Porous Lining on the Growth Rate of Hydrodynamic Rayleigh- Taylor Instability in Inertial Confinement Fusion ", (2012).
41. Seyede Fakhrie Eslami
" Investigation of Relativistic Electrons Transport in Fast Ignition Inertial Confinement Fusion ", (2013).
42. Seyyed Mahdi Teimoori Sendesi
" Investigation of Physics of Hybrid Fission-Fusion Reactors Using MCNP Calculating Code ", (2013).
43. Seyyed Mohsen Taghizadeh pourgarfami
" The Investigation of using antiprotons as driver in Inertial Confinement Fusion ",(2014).
44. Esmat Ghorbanpour
"Investigation of Accelerator Driven Subcritical and Fusion Driven Reactors using MCNPX Simulation Code ",(2014).
45. Saeid Janbozorgi
" Calculation of Neutron Energy Spectrum Produced in Neutron-Proton Decay by the Use of MCNPX Code " (2015).
46. Zahra Ghanbari
"Investing ation of Homogeneous and Heterogeneous Reactors Using MCNPX simulation Code ", (2015).
47. Mahsa Mehrangiz
"The Study of Fast Ignition Conditions for Degenerate DT Targets by the Double – Laser – Accelerated Deuteron Beams based on the Mirror Hohlräum Suggested Scheme and Radiation Pressure Accelerator Concept ", (2016).
48. Soheil Esmaili
"Study of Resonance and Importance of $^{21}\text{Na}(p,\gamma)^{22}\text{Mg}$ Reaction in Nuclear Astrophysics ", (2016).

49. Kobra Cheraghzadeh
"Analytical derivation of ignition conditions for advanced P-11B fuel", (2017).
50. Mohadeseh Sefareshi
"Study of ignition and burn dynamics of deuterium-tritium fuel in volume ignition driven by heavy ion", (2017).
51. Vahid Ghorbani
52. Mohsen Moghimi

VI. My Ph.D Graduated Students and their thesis titles:

1. Soheil Khoshbinfar
" Study of Depth Distribution Of Cs-137 in the Southwest Caspian Region", (2011).
2. Leila Gholamzadeh
"Investigation of the Energy Deposition Parameters and Heavy Ion Beam Irradiation Non-Uniformity in Inertial Confinement Fusion Using OKI Code Simulation", (2012).
3. Mohammadjafar Tabatabaei
" Investigation of the Conditions for the Hydrodynamics Ignition and Fast Ignition of Inertial Confinement Fusion Targets", (2014).
4. Babak Khanbabaee
" Kinematic Study of Ignition and Burn of Tritium Catalytic Fuels in Inertial Confinement Fusion by Fast Ignition Method" , (2014).
5. Mehdi Nazirzadeh
"The investigation of the relativistic Compton scattering effect on the critical burn-up parameter of inertial confinement fusion fuels", (2017).
6. Hadigheh Ashoori
7. Esmat Ghorbanpour
8. Seyyed Mehdi Teimoori Sendesi
9. Ziba Zibandehnezam
10. Samira Mohammadkhani
11. Sepideh Mohebbi
12. Sedigheh Pourhoseini
13. Rezvan Rezaeizadeh

VII. Research Proposals in University of Guilan:

1. **A. Ghasemizad**, *"The Determination of Optimum Conditions for Negative Pion Production of Double Target System Design in Muon Catalyzed Fusion Method"*, (2007).
2. **A. Ghasemizad**, H. Farajollahi, B. Khanbabaee, H. Sheykhkazemi, *"The Numerical Analysis of Heat Transfer Analysis in Coolant System of Pressurized Water Reactors"*, (2008).

3. **A. Ghasemizad**, Sh. Ghaseminejad, L. Gholamzadeh, “ *The Simulation of Heavy Ion Beam Energy Deposition on Different Target Structures*”, (2014).

AWARDS:

1. The Kerman Shahid Bahonar University Award, for the Top B.S Student of Kerman University, 1989.
2. The Physical Society of Iran Award, for the Best Physics Research in Iran, 1994.
3. The Ministry of Science Award, for the Notable Student of Iranian Universities, 1996.
4. The Shiraz University Award, for the Top Ph.D. Student of Shiraz University (1st Rank), 1996.
5. The University of Guilan Award, for the being elected as the eminent Researcher of the University, 2007.
6. The University of Guilan Award, for the being elected as the eminent Researcher of the University, 2011.