CURRICULUM VITAE:
Hossein Ghaffarnejad,
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Faculty of Physics, Semnan University, Semnan, Iran, P.C. 35131-19111,

I was born in 1967 (23/4), in Tehran, IRAN. I studied at the **Shahid Beheshti University at Tehran, IRAN** where I was awarded my PhD degree in 2006 under supervisory **Professor Mohammad Hadi Salehi Kermani**. My PhD proposal was about the gravitational scalar tensor theories and Bohmian quantum gravity. He was also my supervisor at **Sharif University of technology at Tehran, IRAN** where I was awarded my MSc degree at 1998. My MSc proposal was about the quantum black hole Hawking radiation. At 1995, I was awarded my BSc degree at **University of Tehran** and I passed my courses at atomic and molecular branch of physics. In Oct. 2006, I moved to **Semnan University at Semnan, IRAN** with role of assistant professor and joined with the theoretical physics group in the Faculty of Physics and i am now employed as academic member with position of professor in theoretical physics. My previous executive positions are in the Faculty of Group Planning Management and the Management of Education and Postgraduate Studies and Research Management and the Dean of the Faculty at years 2012 to 2024.
My ORCID (Connecting research and researchers) is 0000-0002-0438-6452
And my academic Email addresses is **hghafarnejad@semnan.ac.ir.**
Also i have **hegafarnejad@yahoo.com** and **hghafarnejad@gmail.com** addresses for communications.

1 Research interest:

I work on gravitational physics. I started my research by working on black hole physics. I have been working on several other problems in Theoretical Physics. Thus, here is a list of research fields on which I have work on: General Relativity, Black Holes, Cosmology, Quantum Gravity, Gravitational lensing, De Broglie Bohm aspect of Gravity, Holographic approach of black hole thermodynamics. The time traveling (Machine). Galaxy rotation curves and alternative gravity models, Dark sector of matter and energy, Machine Learning for gravitational objects

2 Teaching interest:

I teach more the following courses at the Semnan University:
Analytical Mechanics, Quantum Mechanics, Mathematical Physics, Electromagnetic theory, Special Relativity, Philosophy of Physics and general physics for BSc students and Electrodynamics, Advance Q.M, General Relativity, Quantum Field Theory, String theory and Cosmology and for MSc and PhD students.

3 My National and Int. Presentations:

1. **Bratislava, Slovakia(2019)**:
   https://iopscience.iop.org/article/10.1088/1742- 6596/1391/1/012028
2. **Moscow, Russia (2018)**:
   https://iopscience.iop.org/article/10.1088/1742- 6596/1141/1/012048
3. . **Athens, Greece (2016)**:
   https://iopscience.iop.org/article/10.1088/1742- 6596/738/1/012031 4.
4. **Geneva, Switzerland(2015)**:
   https://indico.cern.ch/event/336103/overview, https:
   //arxiv.org/abs/1512.03686 5.
5. **Vienna, Austria (2015)**:
   http://www.inase.org/conferences/2015/vienna/Program.pdf 6.
6. **Greece, Mykonos, (2015)**:
   https://iopscience.iop.org/article/10.1088/1742- 6596/633/1/012020 7.
7. **Iran, Shahrood, (2018)**:
   https://www.parat.com/v/hpK91?playlist=123804 8.
8. **Iran, Damghan, (2022)**,
   https://holography.du.ac.ir/en/; https://civilica.com/doc/1445524/

4 My publications:

My papers are available at ORCID, INSPIRE, Google Scholar and Research gate and some of them are available at ArXiv.org websites as follows:

1. https://orcid.org/0000-0002-0438-6452
2. https://inspirehep.net/search?p=exactauthor
3. https://scholar.google.com/citations?user=o5fxbkMAAAAJ
4. https://www.researchgate.net/profile/Hossein-Ghaffarnejad

5. 5 My Published Books:

1. **Elementary Fluid Mechanics (Tsutomu Kambe)**, (translated to Persian language) ISBN: 978-600-5940-77-0, Semnan University press 2013.
2. **A Shorter Course in Classical Gravity and Cosmology ,** ISBN: 978-600-5940-44-2, Semnan University Press 2012. 2.
3. **Einstein's Special Relativity**(Theory and Applications), ISBN: 978-9664-7978-70-5, Semnan University Press, Second Edition 2012 and First Edition 2009. 3.
4. **A Shorter Course in Group Theory,** ISBN: 978-600-5940-00-8, Semnan University Press 2010. 4.
5. **Philosophical Concepts of Quantum and Gravity Theories,** ISBN:978-964-975- 080-4, Publisher: Nopardazan, Tehran 2009. 5.
6. **Advanced quantum mechanics**(Sakurai and Napolinato 2011) (translated to Persian language) ISBN: 978-964-975-233-4, Publisher: Nopardazan, Tehran 2016
7. **The General Theory of Relativity**(A Mathematical Approach, Farook Rahaman 2022), Translated to persian language , Semnan University press, ISBN: 978-622-7237-95-5, (2025)

6 Research Proposals

1. Role of Preferred Reference Frames in Metric Signature Transition in Quantum Cosmology, Finished at Oct. 2009, sponsor: Semnan University
2. Modified Gravity Theories in the Presence of Preferred Reference Frames, Finished at Nov. 2008. sponsor: Semnan University
3. Role of Quantum fields backreaction corrections in design of time machine, Finished, at Sep. 2008. sponsor: Semnan University
4. Final state of an evaporating spherically symmetric quantum Black hole, Finished at Sep. 2006. sponsor: Semnan University
5. Probe in Galaxies center by the strong gravitational lensing, Finished at Sep.2016, sponsor: Semnan University
6. Effects of magnetic fields in stability of Stars, Finished at December 2023 , sponsor, Semnan University

7 Memberships:

1. The Physics Society of IRAN, http://www.psi.ir
2. Astronomical Society of IRAN, http://asi.ir/

8 Supervision for students(Not Graduated)

8.1 PhD students

1. Amir Hossein Firoozi
2. Samira Dehghani
3. Lyda Vali

8.2 MSc students

1. ....

9 Reviewer for some Scientific Journals:

1. Classical and Quantum gravity(IOP)
2. Gravitation and cosmology(Springer)
3. Modern Physics Letters A(World Scientific)
4. Journal of Physics communications(IOP)
5. Journal of Holography Applications in physics(IRAN, Damghan University)
6. Iranian Journal of Astronomy and Astrophysics(IRAN, Damghan University)
7. Nonlinear dynamics(Springer)
8. Astrophysics And Space Science(springer)
9. Canadian Journal of Physics(Canada)
10. Proceedings of The Royal Society A(London)
11. New Journal of Physics(IOP)
12. Chinses physics C (IOP)
13. Nuclear Physics B(Elsevier)
14. European Journal of Physics C(Springer)
15. New Journal of Physics (IOP)
16. Advances in High Energy Physics(Hindawi)
17. https://www.mdpi.com/: Symmetry, Mathematics, Axioms, etc.
18. Int. J. Mod. Physics D(World Scientific)
19. Int. J. Mod. Physics A(World Scientific)
20. Physics Letters B (Elsevier)