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EDUCATION

Ph.D. Nuclear physics, University of Tehran, ۲۰۰۶-۲۰۱۱

M.Sc. Nuclear physics, University of Kashan, ۲۰۰۴-۲۰۰۶

B.Sc. Applied physics, Isfahan University of Technology, ۲۰۰۰-۲۰۰۴

RESEARCH INTERESTS

- Thermodynamic properties of nuclear matter
- Evolution and structure of neutron stars

PUBLICATIONS

۱. S. A. Ghaemmaghmi and M. Ghazanfari Mojarrad, *Hot hybrid neutron star matter within a statistical baryonic approach and the PNJL quark model*, Physical Review D, Vol. ۱۱۱, pp. ۲۳۰۲۶, ۲۰۲۵.
۲. S. A. Ghaemmaghmi and M. Ghazanfari Mojarrad, *Nuclear symmetry energy and its role in the thermodynamic instabilities of nuclear matter using an ab initio statistical approach*, Radiation Physics and Engineering, Vol. ۶(۳), pp. ۹, ۲۰۲۵.
۳. S. A. Ghaemmaghmi and M. Ghazanfari Mojarrad, *Thermal effects on the baryon-quark phase transition in hot hybrid neutron stars: a statistical mean-field baryonic model with the standard NJL model for deconfined quarks*, The European Physical Journal Plus, Vol. ۱۳۸(۱۱), pp. ۱, ۲۰۲۳.
۴. S. A. Ghaemmaghmi, M. R. Khoshi and M. Ghazanfari Mojarrad, *Influence of a phase-space extension of nuclear forces on the sharp baryon-quark phase transition in hybrid neutron stars*, The European Physical Journal Plus, Vol. ۱۳۸(۵), pp. ۱, ۲۰۲۳.
۵. N. S. Razavi and M. Ghazanfari Mojarrad, *Hot dense nuclear matter with the Thomas-Fermi approximation*, NUCLEAR PHYSICS A, Vol. ۱۰۲۹, pp. ۱۲۲۵۵۶, ۲۰۲۳.
۶. S. A. Ghaemmaghmi and M. Ghazanfari Mojarrad, *A statistical model for the thermodynamic instabilities of asymmetric nuclear matter*, European Physical Journal A, Vol. ۵۸, pp. ۲۵۵, ۲۰۲۲.

۷. J. Ranjbar and M. GHazanfari Mojarrad, *Hybrid neutron stars with the Thomas-Fermi approximation and nonlocal Nambu–Jona-Lasinio model*, Physical Review C, Vol. ۱۰۴, pp. ۰۴۵۸۰۷, ۲۰۲۱.
۸. M. Ghazanfari Mojarrad and J. Ranjbar, *Thomas–Fermi approximation in the phase transition of neutron star matter from β -stable nuclear matter to quark matter*, Annals of Physics, Vol. ۴۱۲, pp. ۱۶۸۰۴۸, ۲۰۱۹.
۹. M. Ghazanfari Mojarrad and J. Ranjbar, *Hybrid neutron stars in the Thomas-Fermi theory*, Physical Review C, Vol. ۱۰۰, pp. ۱۵۸۰۴۱, ۲۰۱۹.
۱۰. M. Ghazanfari Mojarrad and M. S. Fatemi, *Symmetry energy and symmetry free energy of asymmetric nuclear matter in the Thomas-Fermi Approximation*, Journal of Research on Many-body Systems, Vol. ۹, pp. ۱۲۴, ۲۰۱۹.
- M. Ghazanfari Mojarrad, & N.S. Razavi, *Proto-neutron stars in the Thomas-Fermi theory*, NUCLEAR PHYSICS A, Vol. ۹۸۶, No. ۳, pp. ۱۱۳, ۲۰۱۹.
۱۱. M. Ghazanfari Mojarrad, N. S. Razavi and S. Vaezzade, *Thomas–Fermi approximation for β -stable nuclear matter in the Landau Fermi-liquid theory*, NUCLEAR PHYSICS A, Vol. ۹۸۰, pp. ۵۱, ۲۰۱۸.
۱۲. M. Ghazanfari Mojarrad and S. K. Mousavi Khoroshtomi, *Thomas–Fermi approximation for the equation of state of nuclear matter: A semi-classical approach from the Landau Fermi-Liquid theory*, International Journal of Modern Physics E, Vol. ۲۶, pp. ۱۷۵۰۰۳۸, ۲۰۱۷.
۱۳. M. Ghazanfari Mojarrad and Mahdokht Minaee Bidgoli, *Explicit form of the nucleonic chemical potential in nuclear matter on the basis of Thomas-Fermi approximation*, Journal of Research on Many-body Systems, Vol. ۷, pp. ۱۵۳, ۲۰۱۷.
۱۴. M. Ghazanfari Mojarrad and R. Arabsaeidi, *Hyperon-rich matter in a two-solar-mass neutron star within the Thomas-Fermi approximation*, International Journal of Modern Physics E, Vol. ۲۵, pp. ۱۶۵۰۱۰۲, ۲۰۱۶.

۱۵. M. Ghazanfari Mojarrad, S. K. Mousavi Khoreshdami, A. Mostajeran, *Thomas-Fermi calculations for determination of critical properties of symmetric nuclear matter on the basis of extended effective mass approach*, Iranian Journal of Physics Research, Vol. ۱۶, pp. ۲۰۷, ۲۰۱۶.
۱۶. H. R. Moshfegh and M. Ghazanfari Mojarrad, *Strange baryonic matter in the Thomas-Fermi theory*, European Physical Journal A, Vol. ۴۹, pp. ۱, ۲۰۱۳.
۱۷. H. R. Moshfegh and M. Ghazanfari Mojarrad, *Thermal properties of baryonic matter*, Journal of Physics G: Nuclear and Particle Physics, Vol. ۳۸, pp. ۰۸۵۱۰۲, ۲۰۱۱.

Ph. D students:

۱. S. A. Ghaemmaghani, graduated.
۲. J. Ranjbar, graduated.
۳. N. S. Razavi, graduated.

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M. Sc. students:

- ۱- A. Lotfi, graduated.
- ۲- M. R. Khoshi, graduated.
- ۳- A. Sakhaee, graduated.
- ۴- S. Alavandi Ashiani, graduated.
- ۵- M. S. Fatemi, graduated.
- ۶- M. Minaee Bidgoli, graduated.
- ۷- S. K. Mousavi Khoreshtami, graduated.
- ۸- S. Vaezzade, graduated.
- ۹- A. Mostajeran Gurtani, graduated.
- ۱۰- R. Arabsaeidi, graduated.

COURSES

- Advanced topics in nuclear physics
- Thermodynamics
- Statistical mechanics
- Nuclear physics
- Reactor physics
- Modern physics
- General physics