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Faculty of Physics

Kharazmi University

Kamal Hajisharifi

Scientific Position: Assistant Professor

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Education

Ph.D.: Physics, Department of Physics, Kharazmi University, Tehran, Iran

M.Sc.: Physics, Department of Physics, Isfahan University of Technology, Isfahan, Iran

B.Sc.: Physics, Department of Physics, Shahrekord University, Shahrekord, Iran

Honors

- **2014-2015** **Iran's National Elites Foundation(INEF) Fellowship,** INEF fellowship for the academic year of 2014-2015.
- **2015** **1st Rank,** Achieving the highest GPA among all university Physics PhD students.
- **2014** **Iran's National Elites Foundation member,** since 2014
- **2011-2015** **Talented member,** Talented member of Kharazmi University, Tehran, Iran
- **2011** **1st Rank,** PhD entrance exam in Physics of Kharazmi University
- **2011** **1st Rank,** Achieving the highest GPA among all university Physics graduate students.
- **20٠9-2011** **Talented member,** Talented member of Isfahan University of Technology, Isfahan, Iran
- **2009** **1st Rank,** Achieving the highest GPA among all university Physics students.
- **2005-2009** **Talented member,** Talented member of Shahrekord University, Shahrekord, Iran

Research Interests

Fundamental plasma physics, Astrophysical plasma, Magnetic and inertial confinement fusion.

Courses

Bs.c courses

- General Physics I & II.
- Mathematical Physics I & II.

Ms.c courses

- Advanced plasma Physics.

References

- Prof. Hassan Mehdian (PhD Supervisor) Email: mehdian@khu.ac.ir

Selected Journal Articles

2015

[1] Mehdian, H., Hajisharifi, K., & Hasanbeigi, A., "Induced Maximum Magnetic Field in a Cosmic Outflow System by Relativistic Current Filamentation Instability: Exact Analytical Model", *The Astrophysical Journal*

[2] MEHDIAN, H., A. KARGARIAN, A. HASANBEIGI, and K. HAJISHARIFI. "A relativistic PIC model of nonlinear laser absorption in a finite-size plasma with arbitrary mass and density ratios.", *Laser and particle beams journal*

[3] Mehdian, H., A. Kargarian, and K. Hajisharifi. "Kinetic (particle-in-cell) simulation of nonlinear laser absorption in a finite-size plasma with a background inhomogeneous magnetic field." *Physics of Plasmas*

[4] Mehdian, H., Hajisharifi, K., & Hasanbeigi, A.,” The general dispersion relation finite-size magneto plasma." *The European Physical Journal D* of induced streaming instabilities in quantum outflow systems” *AIP Advance journal*

2014

[5] Mehdian, H., K. Hajisharifi, and A. Hasanbeigi. "The effect of plasma background on the instability of two non-parallel quantum plasma shells in whole K space." *Physics of Plasmas*

[6] Mehdian, H., A. Kargarian, and K. Hajisharifi. "Spatiotemporal evolution of a thin plasma foil with Kappa distribution." *Laser and Particle Beams*

[7] Mehdian, Hasan, Ameneh Kargarian, **Kamal Hajisharifi**, and Ali Hasanbeigi. "A spatiotemporal study of the relativistic nonlinear effects on laser absorption by a finite-size magneto plasma." *The European Physical Journal D*

2013

[8] Mehdian, H., A. Hasanbeigi, and K. Hajisharifi. "The instability of two non-parallel plasma shells in quantum plasma." *Astrophysics and Space Science*

[9] Mehdian, H., K. Hajisharifi, and A. Hasanbeigi. "Quantum instability of two non-parallel flows: Parallel wave propagation." *Physics Letters A*

[10] Parvazian, A., and K. HajiSharifi. "Investigation of electron heating in laser-plasma interaction." *Iranian Journal of Physics Research*

List of papers presented in conferences

1. Maximum magnetic field in cosmic outflows systems

Plasma Sciences (ICOPS), IEEE International Conference on, 1-1 (2015)