

Hooman Moradpour

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RESEARCH INTERESTS	Cosmological and Astrophysical Aspects of Alternative Theories of Gravity, High Energy Physics, Analogue Gravity, Quantum information, Cloak
EDUCATION	Shiraz University, Fars, Shiraz Ph.D., Theoretical Physics (Astrophysics and Cosmology), (2014-3.5 years). – Thesis Topic: Thermodynamics of symmetric and conformally symmetric spacetimes – Supervisor: Nematollah Riazi, Ph.D M.Sc., Condensed Matter Physics (2010). – Topic: Non Locality, Bell's Inequality, Quantum Entanglement and Special Relativity – Supervisor: Afshin Montakhab, Ph.D B.Sc., Physics (2007).
AWARDS	<ul style="list-style-type: none">• Top two percent of the world's most cited scientists (2020).• Khwarizmi Youth Award in fundamental research, Iran (2019).• Distinguished researcher at the basic science, Maragheh, Iran (2019).• Distinguished researcher, RIAAM, University of Maragheh, Iran (2019).• Distinguished researcher, RIAAM, Iran (2016).
TEACHING EXPERIENCES	<ul style="list-style-type: none">• Advanced Quantum Mechanics• Gravitation and General Relativity• Classical Electrodynamics• Advanced Statistical Mechanics• Particle Physics• Modern Physics• Quantum Mechanics• Analytical Mechanics• Special Relativity• Thermodynamics• Fundamental of Physics
GRADUATE STUDENTS	<ul style="list-style-type: none">• MSc., <i>Thermodynamics of black holes in the Sharma-Mittal generalized entropy formalism</i> (2019).• MSc., <i>Thermodynamic equilibrium in cosmos and generalized entropies</i> (2019).
ADMINISTRATIVE RECORDS	<ul style="list-style-type: none">• Member of Research Council, RIAAM (2015-2019).• Member of Scientific Estimation Committee, RIAAM (2015-2019).• International Relations and Cooperations, RIAAM (2016-2019).• Member of the HSE (Health and Safety Executive) committee of RIAAM Lab, University of Maragheh (Since 2019).
EXPERIENCES IN SCIENTIFIC SOCIETY	Editorial Board

- Lead Editor of Special Issue entitled *Non-Minimal Coupling, Generalized Entropy, and Deformed Statistics in Gravitation*, AHEP 2020
- Journal of High Energy Physics, Gravitation and Cosmology

Reviewer

- Physics of the Dark Universe
- European Physical Journal C
- Physical Review D
- Monthly Notices of the Royal Astronomical Society
- Nuclear Physics B
- Quantum Information Processing
- Physics Letters A
- Astrophysics and Space Science
- General Relativity and Gravitation
- The European Physical Journal Plus
- Modern Physics Letters A
- Advances in High Energy Physics
- Chinese Journal of Physics
- International Journal of Modern Physics A
- International Journal of Theoretical Physics
- Gravitation and Cosmology
- Canadian Journal of Physics
- New Astronomy
- Iranian Journal of Science and Technology Transactions A: Science
- Journal of Research on Many-body Systems
- Iranian Journal of Astronomy and Astrophysics
- Iranian Nanophotonics Conference 2020

REFEREED JOURNAL PUBLICATIONS

1. S. Aghababaei, H. Moradpour, G. Rezaei and S. Khorshidian: *Effects of minimal length on Berry phase and spin-orbit interactions*, Accepted by Physica Scripta (2021).
2. M. Kord Zangeneh, F. S.N. Lobo and H. Moradpour: *Evolving traversable wormholes satisfying the energy conditions in the presence of pole dark energy*, Phys. Dark. Univ. 31, 100779 (2021).
3. H. Moradpour, S. Aghababaei and A. H. Ziaie: *A Note on Effects of Generalized and Extended Uncertainty Principles on Jttner Gas*, Symmetry 13, 213 (2021).
4. H. Moradpour: *Cosmic future singularities in Rastall cosmology*, Journal of Research on Many-body Systems, 10 (3), 101 (2020).
5. A. H. Ziaie, H. Moradpour and H. Shabani: *Structure Formation in Generalized Rastall Gravity*, Eur. Phys. J. Plus 135, 916 (2020).
6. S. Ghaffari, A. A. Mamon, H. Moradpour and A. H. Ziaie: *Holographic dark energy in Rastall theory*, Mod. Phys. Lett. A 35, 2050276 (2020).
7. H. Moradpour, A. H. Ziaie and M. Kord Zangeneh: *Generalized entropies and corresponding holographic dark energy models*, Eur. Phys. J. C 80, 732 (2020).
8. I. P. Lobo, M. G. Richarte, J. P. Morais Graca and H. Moradpour: *Thin-shell wormholes in Rastall gravity*, Eur. Phys. J. Plus 135, 550 (2020).

9. H. Moradpour and M. Valipour: *Generalized Misner-Sharp energy in the generalized Rastall theory*, Can. J. Phys. 98, 853 (2020).
10. M. Abdollahi Zadeh, A. Sheykhi, K. Bamba and H. Moradpour: *Effects of anisotropy on the sign-changeable interacting Tsallis holographic dark energy*, Mod. Phys. Lett. A 33, 2050053 (2020).
11. S. Ghaffari, A. H. Ziaie, V. B. Bezerra and H. Moradpour: *Inflation in the Rényi cosmology*, Mod. Phys. Lett. A 35, 1950341 (2020).
12. H. Moradpour, C. Corda, A. H. Ziaie and S. Ghaffari: *The extended uncertainty principle inspires the Rényi entropy*, EPL 127, 60006 (2019).
13. S. Ghaffari, H. Moradpour, A. H. Ziaie, F. Asgharian, F. Feleppa and M. Tavayef: *Black holes Thermodynamics in Sharma-Mittal generalized entropy formalism*, Gen. Relativ. Gravit. 51, 93 (2019).
14. H. Moradpour, Y. Heydarzade, C. Corda, A. H. Ziaie and S. Ghaffari: *Black hole solutions and Euler equation in Rastall and generalized Rastall theories of gravity*, Mod. Phys. Lett. A 34, 1950304 (2019).
15. H. Moradpour, A. H. Ziaie, S. Ghaffari and F. Feleppa: *The generalized and extended uncertainty principles and their implications on the Jeans mass*, Mon. Not. Roy. Astron. Soc. 488, L69-L74 (2019).
16. H. Moradpour, A. Amiri and A. Sheykhi: *Implications of Maximum Acceleration on Dynamics*, Iran. J. Sci. Technol. Trans. Sci. 43, 1295 (2019).
17. A. H. Ziaie, H. Moradpour and S. Ghaffari: *Gravitational collapse in Rastall gravity*, Phys. Lett. B 793, 276 (2019).
18. M. Kord Zangeneh, H. Moradpour and N. Sadeghnezhad: *A note on cosmological features of modified Newtonian potentials*, Mod. Phys. Lett. A 34, 1950168 (2019).
19. E. Benedetto, F. Feleppa, I. Licata, H. Moradpour and C. Corda: *On the general relativistic framework of the Sagnac effect*, Eur. Phys. J. C 79, 187 (2019).
20. H. Moradpour, I. Licata, C. Corda and I. G. Salako: *4-index theory of gravity and its relation with the violation of the energy-momentum conservation law*, Mod. Phys. Lett. A 33, 1950096 (2019).
21. M. Abdollahi Zadeh, A. Sheykhi and H. Moradpour: *Tsallis Agegraphic Dark Energy Model*, Mod. Phys. Lett. A 33, 1950086 (2019).
22. A. Sheykhi, S. Ghaffari and H. Moradpour: *Ghost Dark Energy in the Deformed Horava-Lifshitz Cosmology*, Int. J. Mod. Phys. D 28, 1950080 (2019).
23. M. Younas, A. Jawad, S. Qammar, H. Moradpour and S. Rani: *Cosmological Implications of the Generalized Entropy Based Holographic Dark Energy Models in Dynamical Chern-Simons Modified Gravity*, AHEP. 1287932 (2019).
24. S. Ghaffari, H. Moradpour, I. P. Lobo, J. P. Morais Graca and V. B. Bezerra: *Tsallis holographic dark energy in the Brane Cosmology*, Phys. Dark. Univ. 23, 100246 (2019).
25. M. Abdollahi Zadeh, A. Sheykhi and H. Moradpour: *Thermal Stability of Tsallis Holographic Dark Energy in Non-falt Universe*, Gen. Relativ. Gravit. 51, 12 (2019).

26. K. Bamba, A. Jawad, S. Rafique and H. Moradpour: *Thermodynamics in Rastall Gravity with Entropy Corrections*, Eur. Phys. J. C 78, 986 (2018).
27. M. Abdollahi Zadeh, A. Sheykhi, H. Moradpour and K. Bamba: *Note on Tsallis Holographic Dark Energy*, Eur. Phys. J. C 78, 940 (2018).
28. H. Moradpour, M. Bahadoran, P. Youplao, P. Yupapin and A. Ghasemi: *One and two spin-1/2 particle systems under the Lorentz transformations*, Journal of King Saud University Science, 30, 560 (2018).
29. A. Jawad and H. Moradpour: *Non-minimal Torsion-matter Coupling and Wormhole Solutions*, Int. Jour. Geom. Meth. Mod. Phys. 15, 1850210 (2018).
30. H. Moradpour, S. A. Moosavi, I. P. Lobo, J. P. Morais Graca, A. Jawad and I. G. Salako: *Thermodynamic approach to holographic dark energy and the Rényi entropy*, Eur. Phys. J. C 78, 829 (2018).
31. J. P. Morais Graca, Iarley P. Lobo, V. B. Bezerra and H. Moradpour: *Effects of a string cloud on the criticality and efficiency of AdS black holes as heat engines*, Eur. Phys. J. C 78, 823 (2018).
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33. H. Moradpour, J. P. Morais Graa, I. P. Lobo and I. G. Salako: *Energy Definition and Dark Energy: A Thermodynamic Analysis*, AHEP. 7124730 (2018) [Featured Article].
34. A. Jawad, T. Nawaz, S. Rani, R. Manzoor and H. Moradpour: *Role of $f(T, \Theta)$ gravity on dynamical instability of collapsing star*, Phys. Dark. Univ. 21, 70 (2018).
35. H. Moradpour, A. Sheykhi, C. Corda and I. G. Salako: *Implications of the generalized entropy formalisms on the Newtonian gravity and dynamics*, Phys. Lett. B 783, 82 (2018).
36. M. Tavayef, A. Sheykhi, K. Bamba and H. Moradpour: *Tsallis holographic dark energy*, Phys. Lett. B 781, 195 (2018).
37. A. Sayahian Jahromi, S. A. Moosavi, H. Moradpour, J. P. Morais Graca, I. P. Lobo, I. G. Salako and A. Jawad: *Generalized entropy formalism and a new holographic dark energy model*, Phys. Lett. B 780, 21 (2018).
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40. I. G. Salako, A. Jawad and H. Moradpour: *Anisotropic compact stars in non-conservative theory of gravity*, Int. Jour. Geom. Meth. Mod. Phys. 15, 1850093 (2018).
41. F. Darabi, H. Moradpour, I. Licata, Y. Heydarzade and C. Corda: *Einstein and Rastall Theories of Gravitation in Comparison*, Eur. Phys. J. C 78, 25 (2018).
42. I. G. Salako, A. Jawad and H. Moradpour: *Cosmological Implications of Scalar Field Dark Energy Models in $f(T, \mathcal{T})$ gravity*, Int. Jour. Geom. Meth. Mod. Phys. 15, 1850063 (2018).

43. A. Sayahian Jahromi and H. Moradpour: *Static traversable wormholes in Lyra manifold*, Int. J. Mod. Phys. D 27, 1850024 (2018).
44. R. C. Nunes, H. Moradpour, E. M. Barboza Jr, E. M. C. Abreu and J. A. Neto: *Entropic gravity from non-commutative black holes*, Int. Jour. Geom. Meth. Mod. Phys. 15, 1850004 (2018).
45. H. Moradpour, A. Bonilla, E. M. C. Abreu and J. A. Neto: *Accelerated cosmos in a nonextensive setup*, Phys. Rev. D 96, 123504 (2017).
46. H. Moradpour, Y. Heydarzade, F. Darabi and I. G. Salako: *A generalization to the Rastall theory and cosmic eras*, Eur. Phys. J. C 77, 259 (2017).
47. M. G. Richarte, I. G. Salako, J. P. Morais Graca, H. Moradpour and A. Ovgun: *Relativistic Bose-Einstein condensates thin-shell wormholes*, Phys. Rev. D 96, 084022 (2017).
48. M. Abdollahi Zadeh, A. Sheykhi and H. Moradpour: *Holographic dark energy with the sign-changeable interaction term*, Int. J. Mod. Phys. D 26, 1750080 (2017).
49. M. Bahadoran, H. Moradpour, J. Ali and R. R. Poznanski: *A survey of the new proposal about the photon momentum*, Optik. 139, 6 (2017).
50. H. Moradpour, R. C. Nunes, E. M. C. Abreu and J. A. Neto: *A note on the relations between thermodynamics, energy definitions and Friedmann equations*, Mod. Phys. Lett. A 32, 1750078 (2017).
51. Y. Heydarzade, H. Moradpour and F. Darabi: *Black Hole Solutions in Rastall Theory*, Can. J. Phys. 95, 1253 (2017).
52. H. Moradpour, N. Sadeghnezhad and S. H. Hendi: *Traversable asymptotically flat wormholes in Rastall gravity*, Can. J. Phys. 95, 1257 (2017).
53. H. Moradpour, N. Sadeghnezhad, S. Ghaffari and A. Jahan: *Thermodynamic Analysis of Gravitational Field Equations in Lyra Manifold*, AHEP. 9687976 (2017).
54. M. Abdollahi Zadeh, A. Sheykhi and H. Moradpour: *Ghost Dark Energy with Sign-changeable Interaction Term*, Int. J. Theor. Phys. 56, 3477 (2017).
55. I. Licata, H. Moradpour and C. Corda: *The commutator algebra of covariant derivative as general framework for extended gravity. The Rastall theory case and the role of the torsion*, Int. Jour. Geom. Meth. Mod. Phys. 14, 1730003 (2017).
56. H. Moradpour, A. Abri and H. Ebadi: *Thermodynamic behavior and stability of Polytropic gas*, Int. J. Mod. Phys. D 25, 1650014 (2016).
57. H. Moradpour and M. T. Mohammadi Sabet: *Thermodynamic descriptions of Polytropic gas and its viscous type as the dark energy candidates*, Can. J. Phys. 94, 1 (2016).
58. H. Moradpour: *Thermodynamics of flat FLRW universe in Rastall theory*, Phys. Lett. B 757, 187 (2016).
59. H. Moradpour and R. Dehghani: *Thermodynamical Study of FRW Universe in Quasi-Topological Theory*, AHEP. 2016, 7248520 (2016).
60. H. Moradpour and A. Montakhab: *Relativistic three-partite non-locality*, Int. J. Quant. Inf. 14, 1650008 (2016).
61. H. Moradpour: *Implications, Consequences and Interpretations of Generalized Entropy in the Cosmological Setups*, Int. J. Theo. Phys. 55, 4176 (2016).

62. H. Moradpour and I. G. Salako: *Thermodynamic Analysis of the Static Spherically Symmetric Field Equations in Rastall Theory*, AHEP. 2016, 349279 (2016).
63. H. Moradpour and S. Nasirimoghadam: *Thermodynamic motivations of spherically symmetric static metrics*, Rom. Journ. Phys. 61, 9 (2016).
64. H. Moradpour and N. Riazi: *Dynamic conformal spherically symmetric solutions in an accelerated background*, Rom. Rep. Phys. 68, 4 (2016).
65. H. Moradpour and N. Riazi: *Thermodynamic Equilibrium and Rise of Complexity in an Accelerated Universe*, Int. J. Theor. Phys. 55, 268 (2015).
66. H. Moradpour and N. Riazi: *Spherically symmetric solutions in a FRW background*, Mod. Phys. Lett. A 30, 1550042 (2015).
67. M. Honarvaryan, A. Sheykhi and H. Moradpour: *Thermodynamical description of the ghost dark energy model*, Int. J. Mod. Phys. D 24, 1550048 (2015).
68. H. Ebadi and H. Moradpour: *Thermodynamical Description of Modified Generalized Chaplygin Gas Model of Dark Energy*, Int. J. Theor. Phys. 55, 1612 (2015).
69. H. Ebadi and H. Moradpour: *Thermodynamics of universe with a varying dark energy component*, Int. J. Mod. Phys. D 24, 1550098 (2015).
70. Y. Heydarzade, N. Riazi and H. Moradpour: *Phantom Wormhole Solutions in a Generic Cosmological Constant Background*, Can. J. Phys. 93, 1523 (2015).
71. H. Moradpour, M. T. Mohammadi Sabet and A. Ghasemi: *Thermodynamic analysis of universes with the initial and final de Sitter eras*, Mod. Phys. Lett. A 30, 1550158 (2015).
72. H. Moradpour and A. Sheykhi: *From the Komar Mass and Entropic Force Scenarios to the Einstein Field Equations on the Ads Brane*, Int. J. Theor. Phys. 55, 1145 (2015).
73. H. Moradpour, S. Maghool and S. A. Moosavi: *Three-particle Bell-like inequalities under Lorentz transformations*, Quantum. Inf. Process 14, 3913 (2015).
74. H. Moradpour, A. Dehghani and M. T. Mohammadi Sabet: *Dynamic black holes in an FRW background: Lemaître transformations*, Mod. Phys. Lett. A 30, 1550207 (2015).
75. A. Sheykhi, H. Moradpour, K. Rezazadeh Sarab and B. Wang: *Generalized Second Law of Thermodynamics in Parabolic LTB Inhomogeneous Cosmology*, Commun. Theor. Phys. 64, 597 (2015).
76. H. Moradpour, A. Sheykhi, N. Riazi and B. Wang: *Necessity of Dark Energy from Thermodynamic Arguments*, AHEP. 2014, 718583 (2014).
77. N. Riazi, H. Moradpour and A. Sheykhi: *Conformally Schwarzschild black holes in an accelerating universe*, Int. J. Mod. Phys. D 5, 1450048 (2014).
78. N. Riazi, S. Davatolhagh and H. Moradpour: *Evolution of Information and Complexity in an Ever-Expanding Universe*, Iran. J. Astro. Astrophys. 1, 87 (2014).
79. A. Sheykhi, H. Moradpour and N. Riazi: *Lovelock gravity from entropic force*, Gen. Relativ. Gravit. 45 (5), 1033 (2013).
80. N. Riazi, H. Moradpour, and A. Amiri: *Physical and Mathematical Properties of Conformally RW Spacetimes*, Prog. Theo. Phys. 126, 6 (2011).

PRESENTATIONS

- National symposium on Gravity and Cosmology, Shahid Beheshti University, Iran (2015).
- National symposium on Gravity and Cosmology, Tehran University, Iran (2014).