LIST OF ALL PUBLICATIONS

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1. Books/Monographs

1. **Second Edition:** *The de Sitter (dS) group and its representations: an introduction to elementary systems and modeling the dark energy universe*

   Mohammad Enayati, Jean-Pierre Gazeau*[1], Hamed Pejhan, and Anzhong Wang

   Publisher: Springer Nature (2024)

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2. **First Edition:** *The de Sitter (dS) group and its representations: an introduction to elementary systems and modeling the dark energy universe*

   Mohammad Enayati, Jean-Pierre Gazeau*, Hamed Pejhan, and Anzhong Wang

   Publisher: Springer Nature (2022)

   DOI: 10.1007/978-3-031-16045-5 — PDF (a preliminary version, https://arxiv.org/pdf/2201.11457.pdf)

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2. Peer-Reviewed Journal Papers

1. *A unified framework for graviton, "partially massless" graviton, and photon fields in de Sitter spacetime under conformal symmetry*

   Jean-Pierre Gazeau and Hamed Pejhan*

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[1] * = corresponding author

2. *A misleading naming convention: de Sitter 'tachyonic' scalar fields*
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3. *Anti-de Sitterian "massive" elementary systems and their Minkowskian and Newton-Hooke contraction limits*
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4. *Matter-antimatter (a)symmetry in de Sitter Universe*
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5. *A novel holographic framework preserving reflection positivity in dS_d spacetime*
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6. *Covariant quantization of the partially massless graviton field in de Sitter spacetime*
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7. *Massive Rarita-Schwinger field in de Sitter space*
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   Phys. Rev. D 100 (2019) no.12, 125022
   DOI: 10.1103/PhysRevD.100.125022 — PDF (https://arxiv.org/pdf/1909.13450.pdf)
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8. *Gupta-Bleuler quantization for linearized gravity in de Sitter spacetime*
   Hamed Pejhan*, Mohammad Enayati, Jean-Pierre Gazeau, and Anzhong Wang
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9. *'Hidden' symmetry of linearized gravity in de Sitter space*
   Hamed Pejhan*, Surena Rahbardehghan, Mohammad Enayati, Kazuharu Bamba, and Anzhong Wang
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10. *A small non-vanishing cosmological constant from the Krein-Gupta-Bleuler vacuum*
    Hamed Pejhan*, Kazuharu Bamba, Mohammad Enayati, and Surena Rahbardehghan
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12. *Vacuum states for gravitons field in de Sitter space*
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    Hamed Pejhan* and Surena Rahbardehghan
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14. *Casimir energy-momentum tensor for a quantized bulk scalar field in the geometry of two curved branes on Friedmann-Robertson-Walker background*
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15. *Covariant and infrared-free graviton two-point function in de Sitter spacetime*
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16. *Examining a covariant and renormalizable quantum field theory in de Sitter space by studying "black hole radiation"*
    Hamed Pejhan* and Surena Rahbardehghan
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17. *Krein–Gupta–Bleuler quantization in de Sitter spacetime; Casimir energy–momentum tensor for a curved brane*
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18. *A group theoretical approach to graviton two-point function*
    Surena Rahbardehghan, Hamed Pejhan*, and Marjan Elmizadeh
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21. *Auxiliary "massless" spin-2 field in de Sitter universe*
    Hamed Pejhan, Mohammad Reza Tanhayi*, and Mohammad Vahid Takook
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3. Conference Papers

1. *Matrix elements and characters of the discrete series ("massive") unitary irreducible representations of* $Sp(4,\mathbb{R})$
    Jean-Pierre Gazeau, Mariano A. del Olmo*, and Hamed Pejhan
    The 33rd/35th International Colloquium on Group Theoretical Methods in Physics (ICGTMP, Group33/35), Cotonou, Benin, 15-19 July 2024.
    Accepted for publication in Int. J. Geom. Meth. Mod. Phys. — PDF (https://arxiv.org/pdf/2411.03031)

2. *de Sitter relativity group*
    Hamed Pejhan*
    15th International Workshop "Lie Theory and Its Applications in Physics" (LT-15), 19-25 June 2023, Varna, Bulgaria
    Accepted for publication in Springer Proceedings in Mathematics & Statistics — PDF (https://arxiv.org/pdf/2310.18061.pdf)