

Research Papers

Hemant K. Mishra

Journal Publications

1. Rudra R. Kamat and Hemant K. Mishra. Simultaneous symplectic reduction of quadratic forms to normal forms. *Linear Algebra and its Applications* 737:298–307, 2026. <https://doi.org/10.1016/j.laa.2026.02.023>.
2. Hemant K. Mishra. On generalization of Williamson’s theorem to real symmetric matrices. *Accepted in the Journal of Symplectic Geometry* 2026. [arXiv:2408.04894](https://arxiv.org/abs/2408.04894).
3. Kaiyuan Ji, Hemant K. Mishra, Milan Mosonyi, and Mark M. Wilde. Barycentric bounds on the error exponents of quantum hypothesis exclusion. *IEEE Transactions on Information Theory* 72(4):2391–2423, 2026. <https://doi.org/10.1109/TIT.2026.3661340>.
4. Hemant K. Mishra. Equality in some symplectic eigenvalue inequalities. *Linear Algebra and its Applications* 728:141–160, 2026. <https://doi.org/10.1016/j.laa.2025.08.021>.
5. Theshani Nuradha, Hemant K. Mishra, Felix Leditzky, and Mark M. Wilde. Multivariate fidelities. *Journal of Physics A: Mathematical and Theoretical* 58(16):165304, 2025. <https://doi.org/10.1088/1751-8121/adc645>.
6. Shaowu Huang and Hemant K. Mishra. Majorization in some symplectic weak supermajorizations. *Linear Algebra and its Applications* 703:1–10, 2024. <https://doi.org/10.1016/j.laa.2024.08.019>.
7. Hemant K. Mishra, Michael Nussbaum, and Mark M. Wilde. On the optimal error exponents for classical and quantum antidistinguishability. *Letters in Mathematical Physics* 114(76), 2024. <https://doi.org/10.1007/s11005-024-01821-z>.
8. Hemant K. Mishra, Ludovico Lami, Prabha Mandayam, and Mark M. Wilde. Pretty good measurement for bosonic Gaussian ensembles. *International Journal of Quantum Information* 22(5):2440010, 2024. <https://doi.org/10.1142/S0219749924400100>.
9. Gajendra Babu, and Hemant K. Mishra. Block perturbation of symplectic matrices in Williamson’s theorem. *Canadian Mathematical Bulletin* 67(1):201–214, 2024. <https://doi.org/10.4153/S0008439523000620>.
10. Hemant K. Mishra, Samad Khabbazi Oskouei, and Mark M. Wilde. Optimal input states for quantifying the performance of continuous-variable unidirectional and bidirectional teleportation. *Physical Review A* 107:062603, 2023. <https://link.aps.org/doi/10.1103/PhysRevA.107.062603>.
11. Tanvi Jain and Hemant K. Mishra. Derivatives of symplectic eigenvalues and a Lidskii type theorem. *Canadian Journal of Mathematics* 74(2):457–485, 2022. <https://doi.org/10.4153/S0008414X2000084X>.
12. Hemant K. Mishra. First order sensitivity analysis of symplectic eigenvalues. *Linear Algebra and its Applications* 604:324–345, 2020. <https://doi.org/10.1016/j.laa.2020.07.003>.

Conference Proceedings

1. Kaiyuan Ji, Hemant K. Mishra, Milan Mosonyi, and Mark M. Wilde. Converse bounds for quantum hypothesis exclusion: A divergence-radius approach. *IEEE ISIT 2025*. <https://doi.org/10.1109/ISIT63088.2025.11195689>.
2. Tiju Cherian John, Hemant K. Mishra, and Saikat Guha. A complete characterization of passive unitary normalizable (PUN) Gaussian states. *IEEE ISIT 2025*. <https://doi.org/10.1109/ISIT63088.2025.11195518>.