

# List of Publications

Dániel Virosztek

## 1 Papers

1. G.P. Gehér, J. Pitrik, T. Titkos, D. Virosztek, Quantum Wasserstein isometries on the qubit state space. *J. Math. Anal. Appl.* **522** (2023), 126955.  
Available online: <https://doi.org/10.1016/j.jmaa.2022.126955>  
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  - (a) Duvenhage, R., S. Skosana, and M. Snyman. "Extending quantum detailed balance through optimal transport." arXiv preprint arXiv:2206.15287 (2022).
2. G.P. Gehér, T. Titkos, D. Virosztek, Isometric rigidity of Wasserstein tori and spheres. *Matematika* **69** (2023), 20-32.  
Available online: <https://doi.org/10.1112/mtk.12174>
3. G.P. Gehér, T. Titkos, D. Virosztek, The isometry group of Wasserstein spaces: the Hilbertian case. *J. London Math. Soc.* **106** (2022), 3865-3894.  
Available online: <https://doi.org/10.1112/jlms.12676>  
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  - (a) J. S. Rodríguez. "On isometries of compact  $L^p$ -Wasserstein spaces." *Adv. Math.* **409** (2022), 108632. <https://doi.org/10.1016/j.aim.2022.108632>
4. G.P. Gehér, T. Titkos, D. Virosztek, On isometries of Wasserstein spaces. *RIMS Kôkyûroku Bessatsu* (2022), to appear.
5. D. Virosztek, The metric property of the quantum Jensen-Shannon divergence. *Adv. Math.* **380** (2021), 107595.  
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  - (b) Megier, N. "Different distinguishability quantifiers for quantum non-Markovianity." *Il Nuovo Cimento* **45** (2022), 174. DOI: 10.1393/ncc/i2022-22174-8
  - (c) Settimo, F., H.P. Breuer, and B. Vacchini. "Entropic and trace distance based measures of non-Markovianity." arXiv preprint arXiv:2207.13183 (2022).
  - (d) Osán, T.M., D.G. Bussandri, and P.W. Lamberti. "Quantum metrics based upon classical Jensen-Shannon divergence." *Physica A* **594** (2022), 127001.
  - (e) Megier, N., A. Smirne, S. Campbell, and B. Vacchini. "Correlations, information backflow, and objectivity in a class of pure dephasing models." arXiv preprint arXiv:2201.10573 (2022).
  - (f) Chang, S., M.F.F. Siu, H. Li, and X. Luo. "Evolution pathways of robotic technologies and applications in construction." *Adv. Eng. Inform.* **51** (2022), 101529.
  - (g) Smirne, A., N. Megier, and B. Vacchini. "Holevo skew divergence for the characterization of information backflow." arXiv preprint arXiv:2201.07812 (2022).
  - (h) Sra, S. "Positive definite functions of noncommuting contractions, Hua-Bellman matrices, and a new distance metric." arXiv preprint arXiv:2112.00056 (2021).

- (i) Minh, H.Q. "Quantum Jensen-Shannon Divergences Between Infinite-Dimensional Positive Definite Operators." In: Nielsen F., Barbaresco F. (eds) Geometric Science of Information. GSI 2021. Lecture Notes in Computer Science, vol 12829. Springer, Cham. [https://doi.org/10.1007/978-3-030-80209-7\\_18](https://doi.org/10.1007/978-3-030-80209-7_18)
  - (j) Nielsen, F. "On a variational definition for the Jensen-Shannon symmetrization of distances based on the information radius." arXiv preprint arXiv:2102.09728 (2021).
  - (k) Friedland, S., M. Eckstein, S. Cole, and K Życzkowski. "Quantum Monge-Kantorovich problem and transport distance between density matrices." arXiv preprint arXiv:2102.07787 (2021).
  - (l) Megier, N., A. Smirne, and B. Vacchini. "Entropic bounds on information backflow." *Phys. Rev. Lett.* **127** (2021), 030401.
  - (m) Sra, S. "Metrics induced by Jensen-Shannon and related divergences on positive definite matrices." *Linear Algebra Appl.* **616** (2021), 125–138.
  - (n) Lam, N., and P.L. Le. "Quantum divergences with  $p$ -power means." *Linear Algebra Appl.* **609** (2021), 289–307.
  - (o) Lam, N., and R. Milley. "Some notes on quantum Hellinger divergences with Heinz means." *Electron. J. Linear Algebra* **36** (2020), 704–722.
  - (p) Pires, D.P., K. Modi, and L.C. Céleri. "Bounding generalized relative entropies: non-asymptotic quantum speed limits." arXiv preprint arXiv:2008.12192 (2020).
6. J. Pitrik, D. Viosztek, A divergence center interpretation of general symmetric Kubo-Ando means, and related weighted multivariate operator means. *Linear Algebra Appl.* **609** (2021), 203–217. Available online: <https://doi.org/10.1016/j.laa.2020.09.007>  
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  - (c) Dinh, T. H., A. V. Le, C. T. Le, and N. Y. Phan. "The matrix Heinz mean and related divergence." *Hacettepe J. Math. Stat.* (2022), 1–11. DOI: 10.15672/hujms.902879
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  - (b) J. S. Rodríguez. "Symmetries of curved metric measure spaces." Ph.D. Thesis, Universidad Autónoma de Madrid, 2020. [https://www.icmat.es/Thesis/2020/Tesis\\_Jaime\\_Santos.pdf](https://www.icmat.es/Thesis/2020/Tesis_Jaime_Santos.pdf)
8. J. Pitrik, D. Viosztek, Quantum Hellinger distances revisited. *Lett. Math. Phys.* **110** (2020), 2039–2052. Available online: <https://doi.org/10.1007/s11005-020-01282-0>  
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  - (b) Mosonyi, M., and T. Ogawa. "Divergence radii and the strong converse exponent of classical-quantum channel coding with constant compositions." *IEEE Trans. Inf. Theory* **67** (2021), 1668–1698.

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- (b) J. S. Rodríguez. "On isometries of compact  $L^p$ -Wasserstein spaces." *Adv. Math.* **409** (2022), 108632. <https://doi.org/10.1016/j.aim.2022.108632>
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