Tomasz Partryk Młynik

Born in 1992, living in Gdańsk

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🔗 Tomek Młynik   🌐 https://orcid.org/0000-0003-4182-907X

Education

2019 – till now	**Ph.D., Physics Science, University of Gdansk** Thesis title: *Odwzorowania k-dodatnie w Fizyce (eng. k-positive maps in physics)*.
2015 – 2019	**M.Sc. Physics Science, University of Gdansk** Thesis title: *Nierozkładalne odwzorowania k-dodatnie na algebrach macierzowych (eng. k-positive indecomposable maps on matrix algebras)*.
2012 – 2015	**B.A. Physics Science, University of Gdansk** Thesis title: *Badanie krzywej rotacji galaktyki (eng. Study of the galaxy's rotation curve)*.

Employment History

2016 - 2018	Assistant - **Translation Agency**
2015 - 2016	Instructor - **Roboty i Spółka**
2013 - 2015	Chef - **North Fish**
2012 - 2013	Customer Consultant - **Gabor** (Fashion store)

Selected Presentations & Invited Talks

Sep 2023	**Invited talk in Tokyo University, Japan** PBT with k copies of the input state.
Aug 2023	**23rd Asian Quantum Information Science Conference in Seoul, Korea** Transformation of an unknown unitary operation: complex conjugation.
Nov 2022	**Quantum Fundaments and Quantum Information Theory seminar in Kyoto, Japan** Construction and characterization of 1-parameter (non)decomposable maps.

Research Publications

Journal Articles

1. D. Ebler, M. Horodecki, M. Marciniak, T. Młynik, M. T. Quintino, and M. Studziński, "Optimal universal quantum circuits for unitary complex conjugation," *IEEE Transactions on Information Theory*, vol. 69, no. 8, pp. 5069–5082, Aug. 2023, ISSN: 1557-9654. 🔗 DOI: 10.1109/tit.2023.3263771.

2. P. Gnaciński and T. Młynik, "Keplerian rotation of our galaxy?" *Publications of the Astronomical Society of the Pacific*, vol. 129, no. 974, p. 044 101, Feb. 2017. 🔗 DOI: 10.1088/1538-3873/aa5c9b.

Pre-published

1. T. Młynik, H. Osaka, and M. Marciniak, *Characterization of k-positive maps*, 2024. arXiv: 2104.14058 [quant-ph]. 🔗 URL: https://arxiv.org/abs/2104.14058.

Skills

Languages	Polish (native), English (reading, writing, and speaking B2+).
Coding	Python, MATLAB, Wolfram Mathematica, LaTeX.
Databases	Linear algebra, functional analysis, data analysis.
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting, and publishing.

Miscellaneous Experience

Projects and Grands

2021-2024	**Sonata 16 - PhD student position**, Symmetries and Entanglement in Quantum Circuits.
2022	**NAVA - PI**, Academic Exchange "International scholarship exchange of PhD candidates and academic staff".
2021-2022	**UGrants start 2 - PI**, On a class of k-entanglement witness.

Certification

2021	**English Language Certification**. Awarded by the University of Gdańsk.

References

Available on Request