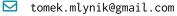
# Tomasz Partryk Młynik

Born in 1992, living in Gdańsk



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#### **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**

- 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. *Opioi:* 10.1109/tit.2023.3263771.
- 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. ODOI: 10.1088/1538-3873/aa5c9b.

#### **Pre-published**

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, Language Python, Mathe

Databases Linear algebra, functional analysis, data analysis.

Misc. Academic research, teaching, training, consultation, Lagrange typesetting, and publishing.

## Miscellaneous Experience

### **Projects and Grands**

2021-2024 Sonata 16 - PhD student position, Symmetries and Entanglement in Quantum Circuits.

NAVA - PI, Academic Exchange "International scholarship exchange of PhD candidates and academic staff".

#### Certification

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

### References

Available on Request