



Jakub Wawruszczak

Nationality: Polish **Date of birth:** 16/12/2004 **Gender:** Male

Email address: jakubwawruszczak2@gmail.com

Home: Klonowa 1, 74-400 Dębno (Poland)

ABOUT ME

I am a physics graduate from Wrocław University of Science and Technology, currently pursuing a Master's degree in Technical Physics with a specialization in Theoretical Physics. My academic focus lies in quantum systems, quantum information, and computational methods in many-body physics.

EDUCATION AND TRAINING

Quantum engineer

Wrocław University of Science and Technology [01/10/2022 – 02/02/2026]

City: Wrocław | Country: Poland | Website: <https://pwr.edu.pl/en/> | Field(s) of study: Natural sciences, mathematics and statistics: • Physics • Physical sciences not elsewhere classified

Internship - "Gate Tunable Flux Qubit Josephson Junctions Circuits"

Universität Wien [07/07/2025 – 13/09/2025]

City: Vienna | Country: Austria | Website: <https://quantumtransport.univie.ac.at> | Field(s) of study: Natural sciences, mathematics and statistics: • Physics

Internship - "CPT symmetry violations in positronium (Ps) decays"

Jagiellonian University [02/09/2024 – 30/09/2024]

City: Kraków | Country: Poland | Website: <https://www.uj.edu.pl/pl> | Field(s) of study: Natural sciences, mathematics and statistics: • Physics • Biology

Workshops at the Institute of Low Temperatures and Structural Research

Institute of Low Temperatures and Structural Research [26/06/2023 – 04/07/2023]

City: Wrocław | Country: Poland | Website: www.intibs.pl/en

PROJECTS

[15/03/2024 – 25/11/2024]

Numerical simulations of simple quantum systems and networks I researched the delocalization of particles and attempted to determine the quantum percolation threshold for several different lattices. I explored a variety of methods, some of which I designed myself. Furthermore, I compared these results with classical solutions.

[20/10/2024 – 01/01/2026]

Bachelor's thesis: The influence of measurement on the dynamics of quantum systems My bachelor's thesis focused on analyzing the influence of regular (projective) and Bell measurements on the dynamics of a quantum system. I compared their impact on the system's evolution and investigated strategies for monitoring quantum systems in a way that preserves their quantum properties to the greatest possible extent.

[19/10/2025 – 26/10/2025]

Global Quantum Hackaton Together with my team we developed a quantum-inspired Sudoku solver—and won first place. It was sudoku with elements of quantum mechanic like superposition or entanglement.

LANGUAGE SKILLS

Mother tongue(s): Polish

Other language(s):

English

LISTENING C1 READING C1 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION C1

German

LISTENING A2 READING A2 WRITING A2

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

CONFERENCES AND SEMINARS

[01/08/2024 – 14/08/2024] Tbilisi, Georgia

International Conference of Physics Students (ICPS) participation

[24/10/2025 – 26/10/2025] Skopje, Macedonia

The Fourth Physics for Physicists Students Conference participation

[25/02/2026 – 28/02/2026] Jena, Germany

PSSF-jDPG Exchange I presented a scientific poster based on my Bachelor's thesis, which investigated the impact of regular (projective) and Bell-type measurements on the dynamics of the Heisenberg spin chain.

WORK EXPERIENCE

 **Self-employment** – Wrocław, Poland

Private tutor

[15/10/2022 – Current]

- tutoring primary/high school/university students in math, physic and calculus
- preparing learning materials, lesson plans etc.

SKILLS

Microsoft Office

Programming

MATLAB / Python (computer programming) / c++ programmer / armadillo directories

Modeling 2D/3D

Inventor / Autocad

VOLUNTEERING

[01/12/2024 – 12/04/2025] Wrocław

Interships opportunities

I am organizing meetings for students from my university with companies around my city, to help them find the best possibilities for their carriers development.