

Kirill Kukharenko

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EDUCATION

10.2024–
today

M.Sc. in Economics, OVGU Magdeburg, Germany.
Specialization: Operations Research and Business Analytics,
Finance

10.2021–
08.2025

PhD candidate, OVGU Magdeburg, Germany.
Supervisor: Prof. Dr. Volker Kaibel
Thesis: "Short Paths for the Simplex Algorithm"
○ Grade: summa cum laude

10.2019–
09.2021

M.Sc. in Mathematics, OVGU Magdeburg, Germany.
Specialization: Computational Mathematics
Supervisor: Prof. Dr. Volker Kaibel
Thesis: "Polygon Extensions with Small Diameters"
○ DAAD scholarship
○ Best Graduate Math Student Award 2022

08.2020–
10.2020

Internship, OVGU Magdeburg, Germany.
Work on the research project "Optimization and Vehicular Traffic Light Intersections" with Volkswagen AG.

09.2015–
06.2019

B.Sc. in Applied Mathematics & Computer Science,
BSU, Minsk, Belarus.
Specialization: Discrete Mathematics and Algorithms
Supervisor: Yury Orlovich, PhD
Thesis: "Spanning Trees with Special Properties: Algorithmic and Structural Aspects"
○ University entrance exam score: 390/400
○ Graduated with distinction

PUBLICATIONS

Kaibel, V., & **Kukharenko, K.** (2024). Rock extensions with linear diameters. *SIAM Journal on Discrete Mathematics*, 38(4), 2982–3003. <https://doi.org/10.1137/23M1585878>

Kukharenko, K. & Sanità, L. (2024a). On the number of degenerate simplex pivots. In J. Vygen & J. Byrka (Eds.), *Integer programming and combinatorial optimization* (pp. 252–264). Springer Nature Switzerland.

Orlovich, Y., **Kukharenko, K.**, Kaibel, V., & Skums, P. (2021). Scale-free spanning trees and their application in genomic epidemiology. *Journal of Computational Biology*, 28(10), 945–960. <https://doi.org/10.1089/cmb.2020.0500>

SELECTED TALKS

Kukharenko, K. & Sanità, L. (2024b, July). *On the number of degenerate simplex pivots* [The 25th Conference on Integer Programming and Combinatorial Optimization (IPCO 2024)].

Kukharenko, K. & Sanità, L. (2024c, July). *On the number of degenerate simplex pivots* [The 25th International Symposium on Mathematical Programming (ISMP 2024)].

Kukharenko, K. (2022, September). *Polytope extensions with small diameters* [The 25th Workshop on Future Research in Combinatorial Optimization (FRICO 2022)] [Best Talk Award].

SKILLS

- Mathematical optimization
- Operations research
- Foundations of CS & ML
- Coding in Python
- Analytical thinking & problem solving
- Teaching & presenting

MANAGERIAL EXPERIENCE

09.2023–
09.2024 **Main organizer** of the 27th Workshop on Future Research in Combinatorial Optimization, **FRICO 2024**. September 9–13, 2024, OVGU Magdeburg. <https://frico2024.ovgu.de/>

TEACHING

10.2019–
02.2025 **Teaching Assistant**, OVGU Magdeburg

LANGUAGES

- English, German *Proficient*
- Belarusian, Russian *Native*