

Joel Hakavuori

Curriculum Vitae

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Education

- 1/2025– **PhD Student**, *Sorbonne Université / IMJ-PRG*
Advised by Karim Adiprasito. I will spend the 2025-26 academic year as a Fulbright scholar at the University of Michigan.
- 1/2023– **MSc Mathematics**, *Aalto University*, GPA 4.94/5
9/2024 MSc thesis: "Nonpositive curvature, ℓ^2 -invariants, and right-angled Coxeter groups".
Advised by Karim Adiprasito and Kaie Kubjas.
- 8/2020– **BSc Engineering Physics & Mathematics**, *Aalto University*, GPA 4.94/5
1/2023

Experience

- 5/2024– **Research Assistant**, *Aalto University, Department of Mathematics*
7/2024 Research assistant in the group of Prof. Kaie Kubjas, writing my MSc thesis.
- 5/2023– **Visiting Research Fellow**, *Hebrew University of Jerusalem, Einstein Institute of Mathematics*
7/2023 REU participant, advised by Karim Adiprasito and Eran Nevo.
- 11/2022– **Research Intern**, *Nokia*
5/2023
- 6/2022– **Research Assistant**, *Aalto University, Department of Mathematics*
8/2022 Research project in combinatorial commutative algebra advised by Alexander Engström and Milo Orlich.
- 9/2021– **Teaching Assistant**, *Aalto University, Department of Mathematics*
12/2024 TA for various courses in mathematics, including linear algebra, discrete mathematics, calculus, and optimization.

Research

Subadditivity of shifts, Eilenberg-Zilber shuffle products and homology of lattices (with Karim Adiprasito, Anders Björner, Minas Margaritis and Volkmar Welker), 2024. Submitted, available at [arXiv:2404.16643](https://arxiv.org/abs/2404.16643).

Honours and Awards

- 2024 **Fulbright Finland Foundation**, *Fulbright–Technology Industries of Finland Doctoral Grant*, \$35,000–\$50,000
Fulbright grant for 1-year doctoral research visit in the US.

- 2024 **Osk. Huttunen Foundation**, *Doctoral Grant*, 85,500€
A three-year grant for doctoral studies in mathematics at the Institut de Mathématiques de Jussieu-Paris Rive Gauche (IMJ-PRG).
- 2023 **Aalto University**, *Combined Student Fund Scholarship*, 1,000€
Award for academically successful master's students who have completed their BSc degree in Aalto University.
- 2023 **Aalto University, Department of Mathematics**, *Travel grant*, 500€
Travel grant to attend HUJI REU program.
- 2022 **Aalto University**, *Professor E.J. Nyström's scholarship*, 1,000€
Award for success in studies in mathematics.
- 2021-2024 **Aalto University**, *Dean's scholarship*, 500€ (annual)
Award for success in studies.

Languages

Finnish Native
English Fluent
Swedish Professional proficiency