

Filip Jankovec

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Google Scholar: Filip Jankovec

Education

Faculty of Mathematics and Physics, Charles University

Algebra, Number Theory, and Mathematical Logic

since 2022 (ongoing), PhD

Dissertation: **Non-integral generalizations of Łukasiewicz logic**, supervised by Petr Cintula and Carles Noguera.

Faculty of Mathematics and Physics, Charles University

Mathematical Structures

2020 - 2022, Master's, graduated

Thesis: **Minimal Taylor Clones on Three Elements**, supervised by Libor Barto.

Faculty of Mathematics and Physics, Charles University

General Mathematics

2017 - 2020, Bachelor's, graduated

Thesis: **Structure of pure-injective abelian groups** (in Czech), supervised by Jan Šároch.

Publications

F. Jankovec, W. Poiger. **Pointed Modal Abelian Logic, Algebraically**. *Advances in Modal Logic 2026*, Electronic Proceedings in Theoretical Computer Science (EPTCS), Open Publishing Association, Sydney, Australia, 2026. (Accepted, to appear; ISSN: 2075-2180).

P. Cintula, F. Jankovec, C. Noguera **Superabelian logics**, *The Review of Symbolic Logic*, vol. 19, no. 2, pp. 218–244, 2026. doi:10.1017/S1755020326101129

Z. Haniková, F. Jankovec, **Satisfiability in Łukasiewicz Logic and Its Unbounded Relative**, *34th EACSL Annual Conference on Computer Science Logic (CSL 2026)*, LIPIcs vol. 363, pp. 14:1–14:18, 2026. doi:10.4230/LIPIcs.CSL.2026.14

F. Jankovec, **Subvarieties of pointed Abelian ℓ -groups**, submitted, 2025, preprint on arXiv.

Academic Positions

Institute of Computer Science, Czech Academy of Sciences

Researcher (PhD Candidate), *Department of Theoretical Computer Science*, since 2022.

Research Interests

algebraic logic, universal algebra, many-valued logic, ℓ -group theory, complexity, modal logics, duality theory.

Research stays

Mathematisches Institut, **University of Bern**, Bern, Switzerland, 2026.

Schmid College Faculty, **Chapman University**, Orange, USA, 2025.

Department of Mathematics, **University of Denver**, Denver, USA, 2025.

Department of Information engineering and mathematics, **University of Siena**, Siena, Italy, 2024.

Faculty of Mathematics, Astronomy and Physics, **National University of Córdoba**, Cordoba, Argentina, 2023.

Conference and Summer School Presentations

Product Łukasiewicz Unbound Logic, **Topology, Algebra, and Categories in Logic (TACL)**, Krakow, Poland, 2026

Pointed Modal Abelian Logic, Algebraically, **Advances in Modal Logic (AiML)**, Amsterdam, Netherlands, July 1, 2026

Logic of Unitary Commutative ℓ -Rings and Its Extensions, **LOGICA**, Hejnice, Czech Republic, 2026

Satisfiability in Łukasiewicz Logic and Its Unbounded Relative, **EACSL Annual Conference on Computer Science Logic**, Paris, France, 2026.

About the lattice of sub(quasi)varieties of the class of pointed Abelian ℓ -groups, **SSAOS**, Blansko, Czech Republic, 2025

Semilinear Finitary Extensions of Pointed Abelian logic, **Logic and Truth Degrees**, Siena, Italy, 2025

Characterization of axiomatic extensions of Łukasiewicz unbound logic, **LOGICA**, Hejnice, Czech Republic, 2025

Variety of pointed Abelian l-groups, **RAMICS**, Prague, Czech Republic, 2024

On (modal) expansions of pointed Abelian logic **Topology, Algebra, and Categories in Logic**, Barcelona, Spain, 2024

Infinitary semilinear extensions of Abelian logic **Cracow Logic Conference**, Krakow, Poland, 2024

Subvariety lattice of the variety of pointed Abelian l-groups **Arbeitstagung Allgemeine Algebrae**, Prague, Czech Republic, 2024

Łukasiewicz Unbound Logic and its Completeness Theorem, **Czech Gathering of Logicians**, Brno, Czech Republic, 2024

From Abelian logic to Łukasiewicz unbound, **Phds in Logics**, Granada, Spain, 2023

Pointed Abelian logic and its fuzzy extensions, **Logic and Truth Degrees**, Tbilisi, Georgia, 2023

Awards & Fellowships

Best Research Results by Young Researchers, Institute of Computer Science, Czech Academy of Sciences, 2025. Awarded for the paper *Satisfiability in Łukasiewicz logic and its unbounded relative* (joint with Z. Haniková).

Karel Urbánek Fellowship: Research and study stay in University of Denver, USA, 2025.

Charles University POINT Fellowship: Attending Summer school Algebra week in Siena, Italy, 2023.

Mobility Fund Grant of Charles University: Visiting Faculty of Mathematics, Astronomy and Physics in The National University of Córdoba, Argentina, 2023.

Seminar Talks

Algebraic Semantics for Real-Valued Pointed Modal Logic, **Seminar on Applied Mathematical Logic**, Prague, Czech Republic, June 24, 2026

The pointed modal Abelian ℓ -groups, **Bern Logic Seminar**, Bern, Switzerland, 2026

Complexity of Unbounded Łukasiewicz logic, **Seminar on Applied Mathematical Logic**, Prague, Czech Republic, 2026

The structure theory of Abelian l-groups with an additional constant, **Seminar of Universal Algebra and Set Arrangement**, Olomouc, Czech Republic, 2025

Varieties of pointed Abelian ℓ -groups, **el Seminario de Lógica**, Cordoba, Argentina, 2025

Łukasiewicz unbound logic and its extensions, **General Algebra, Logic and Artificial Intelligence Seminar**, Orange, USA, 2025

On some prominent expansions of Abelian logic, **Algebra and Logic Seminar**, Denver, USA, 2025

About semilinear prevarieties of Abelian ℓ -groups, **Seminar on Applied Mathematical Logic**, Prague, Czech Republic, 2024

Infinitary rules for Abelian logic, **Seminar on Applied Mathematical Logic**, Prague, Czech Republic, 2024

From algebraic logic to Vopěnka principle, **Posetting**, Cordoba, Argentina, 2023

Infinitary rules for abelian logic, **Research seminar in Logic**, Prague, Czech Republic, 2023

From Abelian logic to Łukasiewicz unbound, **Seminar on Applied Mathematical Logic**, Prague, Czech Republic, 2023

Academic Service

Organizing Committee for:

- **Czech Gathering of Logicians**, 2026.
- **Advances in Modal Logic**, 2024.

Peer Reviewer for:

- **Annals of Pure and Applied Logic**
- **Bulletin of Symbolic Logic**
- **Fuzzy Sets and Systems**
- **Studia Logica**
- **Logic Journal of the IGPL**

Teaching

Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University

- Mathematical Logic (Exercise Classes) Winter 2023/24, 2025/26

Faculty of Mathematics and Physics, Charles University

- Introduction to Group Theory (Exercise Classes) Winter 2024/25
- Algebra 1 (Exercise Classes) Winter 2022/23
- Linear Algebra 2 (Exercise Classes) Summer 2020/21, 2021/22
- Linear Algebra 1 (Exercise Classes) Winter 2021/22

Faculty of Arts, Charles University

- Logic Exercise II Summer 2022/23, 2023/24
- Logic Exercise I Winter 2022/23

Languages

English, level C1

Czech (native speaker)

Spanish, level A1