Curriculum Vitae

Personal Data

Name and Surname:	Serhii Bardyla
Current residence:	Vienna, Austria
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Work Experience

April 2024 – March 2027	Postdoctoral fellow at the Institute of Mathematics, University of Vienna.
April 2023 – March 2024	Postdoctoral fellow at the Institute of Mathematics, Pavol Jozef Šafárik University in Košice.
January 2023 – March 2023	Postdoctoral fellow at the Institute of Discrete Mathematics and Geometry, Technical University of Vienna.
October 2020 – December 2022	Postdoctoral fellow at the Institute of Mathematics, University of Vienna.
January 2019 – September 2020	Postdoctoral fellow at Kurt Gödel Research Center, University of Vienna.
December 2017 – December 2018	Assistant at the department of Discrete Analysis and Intelligent System, Ivan Franko National University of Lviv, Ukraine.
September 2016 – December 2018	Junior researcher at the department of Geometry and Topology, Ivan Franko National University of Lviv, Ukraine.

Education

Nov 2014–Dec 2017	PhD student at the department of Geometry and Topology, Ivan Franko National University of Lviv, Ukraine. PhD Thesis: "Completeness of topological semilattices and semigroups" (in ukrainian). Advisor: Prof. Oleg Gutik.
Sept 2013–June 2014	Master student at the faculty of Mechanics and Mathematics, Ivan Franko National University of Lviv, Ukraine. Master Thesis: "H-closed topological semilattices" (in ukrainian). Advisor: Prof. Oleg Gutik. Master Degree with honour.
Sept 2009–June 2013	Undergraduate student at the faculty of Mechanics and Mathematics, Ivan Franko National University of Lviv, Ukraine. Undergraduate Degree with honour.

Preprints

1. S. Bardyla, L. Elliott, J. Mitchell, Y. Péresse: "Classifying the Polish semigroup topologies on the symmetric inverse monoid", arXiv.2405.20134.
2. S. Bardyla, J. Šupina, L. Zdomskyy: "Open filters and measurable cardinals", arXiv:2301.08704.
3. T. Banakh, S. Bardyla: "Subgroups of categorically closed semigroups", arXiv:2209.08013.

Publications

1. S. Bardyla, J. Cancino, V. Fisher, C. Switzer: "Filters, ideal independence and ideal Mrowka spaces", Trans. Amer. Math. Soc. accepted (2025) arXiv:2304.04651v1.
2. S. Bardyla, P. Zlatoš: "Schur ultrafilters and Bohr compactifications of topological groups", Israel Journal of Mathematics. accepted (2025) arXiv.2409.07280.
3. S. Bardyla, B. Novotný, J. Šupina: "Local and global properties of spaces of minimal usco maps", Journal of Mathematical Analysis and Applications, published online (2025), 129472.
4. S. Bardyla, P. Nyikos, L. Zdomskyy: "Countably compact extensions and cardinal characteristics of the continuum", The Journal of Symbolic Logic, published online (2025), 1–27.
5. S. Bardyla, L. Elliott, J. Mitchell, Y. Péresse: "Topological embedding into transformation monoids", Forum Mathematicum **36**:6 (2024), 1537–1554.
6. T. Banakh, S. Bardyla: "Absolutely closed semigroups", Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat. **118** (2024), 23.
7. T. Banakh, S. Bardyla, A. Ravsky: "Embeddings into countably compact Hausdorff spaces", Ukrainian Mathematical Journal **75** (2024), 1178–1189.
8. S. Bardyla, F. Maesano, L. Zdomskyy: "Selective separability properties of Fréchet-Urysohn spaces and their products", Fundamenta Mathematicae **263**:3 (2023), 271–299.
9. S. Bardyla, J. Šupina, L. Zdomskyy: "Ideal approach to convergence in functional spaces", Trans. Amer. Math. Soc. **376** (2023), 8495–8528.
10. T. Banakh, S. Bardyla: "Categorically closed countable semigroups", Forum Mathematicum **35**:3 (2023), 689–711.
11. S. Bardyla "On topological McAlister semigroups", Journal of Pure and Applied Algebra **227**:4 (2023), 107274.
12. S. Bardyla, L. Zdomskyy: "On regular separable countably compact $\mathbb{R}$-rigid spaces", Israel Journal of Mathematics (published online), https://doi.org/10.1007/s11856-022-2454-8.
13. T. Banakh, S. Bardyla: "Characterizing categorically closed commutative semigroups", Journal of Algebra **591** (2022), 84–110.
14. S. Bardyla, A. Osipov: "On regular κ-bounded spaces admitting only constant continuous mappings into T_1 spaces of pseudo-character $\leq \kappa$", Act. Math. Hung. **163** (2021), 323–333.

15. T. Banakh, S. Bardyla, O. Gutik: "The Lawson number of a semitopological semilattice", Semigroup Forum **103** (2021), 24–37.

16. I. Banakh, T. Banakh, S. Bardyla: "A semigroup is finite if and only if it is chain-finite and antichain-finite", Axioms **10**:1 (2021), 9.

17. T. Banakh, S. Bardyla: "Complete topologized posets and semilattices", Topology Proceedings **57** (2021), 177–196.

18. S. Bardyla, A. Ravsky, L. Zdomskyy: "A countably compact topological group with the non-countably pracompact square", Topology Appl. **279** (2020), 107251.

19. S. Bardyla: "On universal objects in the class of graph inverse semigroups", Eur. J. Math. **6** (2020), p.4–13.

20. T. Banakh, S. Bardyla, A. Ravsky: "Embedding topological spaces into Hausdorff κ-bounded spaces", Topology Appl. **280** (2020), 107277.

21. T. Banakh, S. Bardyla: "On images of complete topologized subsemilattices in sequential semitopological semilattices", Semigroup Forum **100** (2020), 662–670.

22. S. Bardyla: "Embedding of graph inverse semigroups into CLP-compact topological semigroups", Topology Appl., **272** (2020), 107058.

23. T. Banakh, S. Bardyla, A. Ravsky: "A metrizable Lawson semitopological semilattice with non-closed partial order", Proc. Intern. Geom. Centr., **13**:3 (2020), 10–17.

24. T. Banakh, S. Bardyla, I. Guran, O. Gutik, A. Ravsky: "Positive answers to Koch's problem in special cases", Topol. Algebra Appl., **8** (2020), 76–87.

25. S. Bardyla, A. Ravsky: "Closed subsets of compact-like topological spaces", Applied General Topology, **21**:2 (2020), 201–214.

26. S. Bardyla, O. Gutik: "On the lattice of weak topologies on the bicyclic monoid with adjoined zero", Algebra Discr. Math., **30**:1 (2020), 26–43.

27. T. Banakh, S. Bardyla, A. Ravsky: "A metrizable semitopological semilattice with non-closed partial order", Topol. Algebra Appl., **8** (2020), 67–75.

28. S. Bardyla: "On locally compact topological graph inverse semigroups", Topology Appl., **267** (2019), 106873.

29. S. Bardyla: "An alternative look at the structure of graph inverse semigroups", Mat. Stud. **51**:1 (2019), 3–11.

30. T. Banakh, S. Bardyla: "Characterizing chain-compact and chain-finite topological semilattices", Semigroup Forum, **98** (2019), no.2, 234–250.

31. T. Banakh, S. Bardyla, A. Ravsky: "The closedness of complete subsemilattices in functionally Hausdorff semitopological semilattices", Topology Appl. **267**, (2019), 106874.

32. T. Banakh, S. Bardyla: "Completeness and absolute H-closedness of topological semilattices", Topology Appl. **260** (2019), 189–202.

33. T. Banakh, S. Bardyla: "The Interplay between weak topologies on topological semilattices", Topology Appl. **259** (2019), 134–154.

34. S. Bardyla: "On locally compact shift-continuous topologies on the α-bicyclic monoid", Topol. Algebra Appl. **6**:1 (2018), 34–42.

35. S. Bardyla: "On locally compact semitopological graph inverse semigroups", Mat. Stud. **49**:1 (2018), 19–28.
36. S. Bardyla: "On a semitopological α-bicyclic monoid", Visn. L'viv. Univ., Ser. Mekh.-Mat. **81** (2017), 9–22.
37. S. Bardyla, O. Gutik, O.Ravsky: "H-closed quasitopological groups", Topology Appl. **217** (2017), 51–58.
38. S. Bardyla, O. Gutik: "On a complete topological inverse polycyclic monoid", Carp. Math. Publ. **8**:2 (2016) 183–194.
39. S. Bardyla: "Classifying locally compact semitopological polycyclic monoids", Math. Bull. Shevchenko Scient. Soc. **13** (2016), 13–28.
40. S. Bardyla, O. Gutik: "On a semitopological polycyclic monoid", Algebra Discr. Math. **21**:2 (2016), 163–183.
41. S. Bardyla, O. Gutik: "On H-complete topological semilattices", Mat. Stud. **38**:2 (2012), 118–123.

Invited presentations

- Young Topology and Set Theory Meeting, Catania, Italy, 2025.
  Talk: Cardinal characteristics of the continuum and Nyikos problem.
- Set Theory Workshop "Compactness and cardinal invariants", Vienna, Austria, 2024.
  Talk: Schur ultrafilters and Bohr compactfications of topological groups.
- Inspirations in Real Analysis II, Bedlewo, Poland, 2024.
  Abstract: "Around Nyikos problem".
- Algebra, Topology and Their Interactions, Udine, Italy, 2022.
  Abstract: "Algebraically closed semigroups".
- Wilhelm Killing Colloquium, Münster, Germany, 2022.
  Abstract: "Algebra, Topology and Completeness".

Languages

Ukrainian:	Native
English:	Fluent
Russian:	Fluent
German:	B.1
Slovak:	B.2

My profiles

Personal webpage
Google Scholar
Researchgate

Grants and Awards

- (2023) Esprit Grant (ESP399)
- (2020) Lise Meitner Grant (M-2967);

- (2019) Third prize in the Shevchenko Scientific Society Contest for the best young (under 35) mathematician who made PhD in Ukraine.

Scientific interests

My area of research lies on the intersection of Algebra, Topology and Set Theory.