

Complete list of publications

Iosif Petrakis

A) Publications with peer-review process

1. Misselbeck-Wessel, D., **Petrakis, I.** (2024): Complemented subsets and boolean-valued partial functions. In: Computability, to appear.
2. **Petrakis, I.** (2024): Topologies of open complemented subsets. In: *Constructive Mathematics: Foundation and Practice*, “Mathematics in Mind” series, M. Mitrović, M. N. Hounkonnou (Eds.), Springer, forthcoming.
3. **Petrakis, I.** (2023): Bases of pseudocompact Bishop spaces. In: *Handbook of Constructive Mathematics* (Encyclopedia of Mathematics and its Applications), D. S. Bridges, H. Ishihara, M. Rathjen, H. Schwichtenberg (Eds.), Cambridge University Press, 359-394, 2023.
4. **Petrakis, I.** (2022): Strict computability models over categories and presheaves. In: Journal of Logic and Computation, exac077, 2022, <https://doi.org/10.1093/logcom/exac077>.
5. **Petrakis, I.** (2022): Closed subsets in Bishop topological groups. In: Theoretical Computer Science, 935, 2022, 128-143, <https://doi.org/10.1016/j.tcs.2022.09.004>
6. **Petrakis, I.** (2022): Proof-relevance in Bishop-style constructive mathematics. In: Mathematical Structures in Computer Science, Volume 32, Issue 1, 2022, 1-43. doi:10.1017/S0960129522000159.
7. **Petrakis, I.**, Wessel., D. (2022): Algebras of complemented subsets. In: U. Berger et.al. (Eds): *Revolutions and Revelations in Computability*, CiE 2022, Lecture Notes in Computer Science 13359, Springer, 2022, 246–258. DOI:10.1007/978-3-031-08740-0_21.
8. **Petrakis, I.** (2022): Computability Models over Categories and Presheaves. In: Logical Foundations of Computer Science 2022, S. Artemov and A. Nerode (Eds.), Springer, LNCS 13137, 253-265. https://doi.org/10.1007/978-3-030-93100-1_16
9. **Petrakis, I.** (2021): Chu representations of categories related to constructive mathematics. Abstract. In: The Bulletin of Symbolic Logic, Vol. 28, No. 2, June 2022, 310–311.
10. **Petrakis, I.** (2021): Direct spectra of Bishop spaces and their limits. In: Logical Methods in Computer Science, Volume 17, Issue 2, 2021, pp. 4:1-4:50. DOI: 10.23638/LMCS-17(2:4)2021

11. **Petrakis, I.** (2020): Functions of Baire class one over a Bishop topology. In: *Beyond the Horizon of Computability*, M. Anselmo et al. (Eds.), CiE 2020, Springer, LNCS 12098, 2020, 215-227. https://doi.org/10.1007/978-3-030-51466-2_19
12. **Petrakis, I.** (2020): Embeddings of Bishop spaces. In: *Journal of Logic and Computation*, Volume 30, Issue 1, January 2020, 349-379, <https://doi.org/10.1093/logcom/exaa015>
13. **Petrakis, I.** (2020): McShane-Whitney extensions in constructive analysis. In: *Logical Methods in Computer Science*, Volume 16, Issue 1, 2020, pp. 18:1-18:23. DOI: 10.23638/LMCS-16(1:18)2020
14. **Petrakis, I.** (2019): Dependent sums and dependent products in Bishop's set theory. In: *TYPES 2018*, P. Dybjer et al. (Eds.), LIPIcs, Vol. 130, Article No. 3, 2019. DOI 10.4230/LIPIcs.TYPES.2018.3
15. **Petrakis, I.** (2019): Constructive uniformities of pseudometrics and Bishop topologies. In: *Journal of Logic and Analysis* 11:FT2, 1-44. <https://doi.org/10.4115/jla.2019.11.FT2>
16. **Petrakis, I.** (2019): Borel and Baire sets in Bishop Spaces. In: *Computing with Foresight and Industry*, F. Manea et al. (Eds.), CiE 2019, LNCS 11558, Springer, 240-252. https://doi.org/10.1007/978-3-030-22996-2_21
17. **Petrakis, I.** (2017): McShane-Whitney pairs. In: *Unveiling Dynamics and Complexity*, J. Kari et al. (Eds.), CiE 2017, LNCS 10307, Springer, 351-363. DOI:10.1007/978-3-319-58741-7_33.
18. **Petrakis, I.** (2017): A density theorem for hierarchies of limit spaces over separable metric spaces. In: *Theory and Applications of Models of Computation*, T. V. Gopal et al. (Eds.), LNCS 10185, Springer, 484-498. DOI: 10.1007/978-3-319-55911-7_35
19. **Petrakis, I.** (2016): Limit spaces with approximations. In: *Annals of Pure and Applied Logic* 167 (9), 737-752. DOI: 10.1016/j.apal.2016.04.013
20. **Petrakis, I.** (2016): A constructive function-theoretic approach to topological compactness. In: *LICS 2016*, IEEE Computer Society Publications, 605-614. DOI: 10.1145/2933575.2933582
21. **Petrakis, I.** (2016): A direct constructive proof of a Stone-Weierstrass theorem for metric spaces. In: *Pursuit of the Universal*, A. Beckmann et al. (Eds.), CiE 2016, LNCS 9709, Springer, 364-374. DOI: 10.1007/978-3-319-40189-8_37
22. **Petrakis, I.** (2016): The Urysohn Extension Theorem for Bishop Spaces. In: *Symposium on Logical Foundations in Computer Science 2016*, S. Artemov et al. (Eds.), LNCS 9537, Springer, 299-316. DOI: 10.1007/978-3-319-27683-0-21

23. **Petrakis, I.** (2015): Completely Regular Bishop Spaces. In: *Evolving Computability*, A. Beckmann et al. (Eds.), CiE 2015, LNCS 9136, Springer, 302-312. DOI: 10.1007/978-3-319-20028-6_31
24. **Petrakis, I.** (2012): The Contrapositive of Countable Choice for Inhabited Sets of Naturals. In: *Journal of Universal Computer Science*, Vol. 18, No. 20, 2879-2892. DOI: 10.3217/jucs-018-20-2879
25. **Petrakis, I.** (2008): The role of the Fifth Postulate in the Euclidean construction of parallels. In: *History and Epistemology in Mathematics Education*, E. Barbin et al. (Eds.), Vydavatelský servis, Plzeň, 595-604.
26. **Petrakis, I.** (2008): Brouwer's intuitionism as a self-interpreted mathematical theory. In: *Electronic Proceedings of the HPM 2008, History and Pedagogy of Mathematics*, R. Cantoral et al. (Eds.), 1-12.

B) Submitted papers with peer-review process

1. Koepp, N., **Petrakis, I.** (2023): Strong negation in the theory of computable functionals TCF, *Logical Methods in Computer Science*.
2. Grubmüller, F. L., **Petrakis, I.** (2023): A predicative approach to the constructive integration theory of locally compact metric spaces, *Journal of Logic and Analysis*.
3. **Petrakis, I.** (2022): *Sets completely separated by functions in Bishop Set Theory*, *Notre Dame Journal of Formal Logic*, 2022.
4. **Petrakis, I.**, Zeuner, M. (2022): Pre-measure spaces and pre-integration spaces in predicative Bishop-Cheng measure theory. *Logical Methods in Computer Science*.

C) Publications without peer-review process

1. **Petrakis, I.** (2023): Categories with dependent arrows, arXiv:2303.14754v1.
2. **Petrakis, I.**, Köpp, N. (2022): Strong negation in the theory of computable functionals TCF, arXiv:2210.05491, 2022.
3. **Petrakis, I.** (2022): Sets completely separated by functions in Bishop Set Theory, arXiv:2208.07826, 2022.
4. **Petrakis, I.** (2022): Univalent typoids, arXiv:2205.06651v1.

5. **Petrakis, I.** (2022): Constructive Combinatorics of Dickson’s Lemma, arXiv:2204.11298v1.
6. **Petrakis, I.** (2022): The distributivity of the category of dependent objects over the Grothendieck category, Dagstuhl report of the Dagstuhl seminar 21472 “Geometric Logic, Constructivisation, and Automated Theorem Proving” <https://drops.dagstuhl.de/opus/volltexte/2022/15932/>.
7. **Petrakis, I.** (2021): Families of Sets in Bishop Set Theory, arXiv:2109.04183v1.
8. **Petrakis, I.** (2021): From the Sigma-type to the Grothendieck construction, arXiv:2109.04239v1.
9. **Petrakis, I.** (2021): Chu representations of categories related to constructive mathematics, arXiv:2106.01878v1.
10. **Petrakis, I.** (2021): Computability models over categories, arXiv:2105.06933v1.
11. **Petrakis, I.** (2021): Closed subsets in Bishop topological groups, arXiv:2103.04718v1.
12. **Petrakis, I.** (2014): Bishop spaces: constructive point-function topology. In: Mathematisches Oberwolfach Report No. 52/2014, Mathematical Logic: Proof Theory, Constructive Mathematics, 26-27.

D) Editorial work

1. Leitgeb, H., **Petrakis, I.**, Schwichtenberg, H., Schuster, P. (2016): Editorial. In: IfCoLog Journal of Logics and their Applications, Special “Issue Proof, truth, Computation”, Vol.3 No.4, 513-515.