

Open problems on the connections between Halmos' polyadic and Tarski's cylindric algebras

Andréka, Hajnal & Németi, István

In the talk we will present three open problems about the connection between polyadic and cylindric algebras. After stating the problems, we will explain them and provide logical and algebraic motivation and background for each. The problems are connected to [1]-[6].

Bibliography:

- [1] Halmos, P.R., Algebraic Logic. Chelsea Pub., 1962.
- [2] Sági, G., Non-computability of the equational theory of polyadic algebras. Bulletin of the Section of Logic 30,3 (2001), 155-164.
- [3] Sayed, T., What is the spirit of the cylindric paradigm, as opposed to that of the polyadic one? arXiv:1303.7386. 88pp.
- [4] Ferenczi, M., The polyadic generalization of the Boolean axiomatization of fields of sets. Transaction of the American Mathematical Society 364,2 (2012), 867-886.
- [5] Sain, I., Thompson, R., Strictly finite schema axiomatization of quasi-polyadic algebras. In Andréka, H., Monk, J.D., Németi, I., eds., Algebraic Logic, North-Holland, 1991, pp.539–571
- [6] Andréka, H., Németi, I., Tuza, Zs., Transposition of variables is hard to describe in finite-variable logics. arXiv: 2409.04088, 2024.