

Several questions and notions of loop theory relevant for universal algebra

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Consider a class consisting of loops that have no nontrivial section in a given variety. Each such class is a pseudovariety. If the variety is the variety of groups, then it is not clear if the avoiding pseudovariety is a variety or not. A similar question arises for isotopically invariant classes of loops. This is connected to (so called) Falconer varieties---a notion that will be explained. Reieterman's characterization of finite pseudovarieties induces another class of problems: under which conditions on the pseudovariety of loops does there exist a proper implicit operation?

If time allows, I will also mention the notion of propagating equations and explain how the notion has been derived from loop-theoretical results.

References

- [1] A. Drápal and P. Vojtěchovský: *Subdirect products and propagating equations with an application to Moufang Theorem*, The Art of Discrete and Applied Mathematics (accepted).
- [2] Etta Falconer: *Isotopy Invariants in Quasigroups*, Trans. Amer. Math. Soc., **151** (1970), 511--526.