

**Report on the doctoral thesis *Generalizing CSP-related results to infinite algebras* by Miroslav Olšák**

*Structure of the thesis.*

The thesis is an amalgam of five research articles authored single-handedly by Miroslav Olšák. One of the articles has already published in the Bulletin of the LMS, the other four have been submitted for publication. In addition, there is a 12-page motivational introduction, about half of which is accessible to a more general audience.

*Contents.*

The dissertation consists of several results on the equational theory of infinite algebras, inspired by similar results for finite algebras. The results for finite algebras which are generalized have strong connections to the theory of a certain kind of computational problems called Constraint Satisfaction Problems.

*Novelty.*

All scientific results presented in the thesis as new are new (Section 2).

*Importance within and outside the area.*

Some of the results (e.g., Theorem 2.1) are solutions to problems which were well-known in the field. All of the results provide significant technical insights and advances that will certainly influence the further development of universal algebra. Outside universal algebra, some of the techniques developed here will almost certainly inspire research related to Constraint Satisfaction Problems of infinite templates.

*Creativity.*

The results are of outstanding quality and exceptional technical sophistication and creativity, and prove the author's ability of creative scientific work.

Vienna, 16th of May, 2019



Michael Pinsker