Weak congruence lattice representation problem

BRANIMIR ŠEŠELJA

Department of Mathematics and Informatics
Faculty of Science, University of NOVI SAD
`seselja@dmi.uns.ac.rs`

Representation of an algebraic lattice by a weak congruence lattice of an algebra is still an open problem in universal algebra formulated 20 years ago. Its nontrivial version is to locate an element of a lattice representing the diagonal relation and then to find a corresponding algebra. There are solutions for some special cases, e.g., the diagonal being in the center of the lattice. Many sufficient conditions have also been obtained. The aim of the talk is to present the history of the topic and some recent new results.

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