

Characterising Categorical Equivalence of Finite Semigroups

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Algebras \mathbf{A} and \mathbf{B} are categorically equivalent if there is a categorical equivalence between the varieties they generate that maps \mathbf{A} to \mathbf{B} .

Algebras \mathbf{A} and \mathbf{B} are called weakly isomorphic, if \mathbf{A} is isomorphic to some algebra \mathbf{A}' that shares its type with \mathbf{A} and its carrier set and clone of term operations with \mathbf{B} . Such algebras are known to be categorically equivalent.

For finite semigroups the converse can be shown to be true, as well. Indeed, finite semigroups are categorically equivalent if and only if they are weakly isomorphic.

This presents joint work with Tamás Waldhauser, University of Szeged, and extends an earlier result about finite groups by László Zádori.

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