Mal'tsev conditions and centrality

Emil W. Kiss

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If an algebra has a majority term, then its congruence lattice is distributive, and no proper congruence can centralize itself. Thus, a Mal'tsev-condition can influence the shape of the congruence lattice, and the behavior of the commutator operation as well. A systematic study of this phenomenon for locally finite varieties has been given by David Hobby and Ralph McKenzie, using tame congruence theory. It turned out later, by the work of K. Kearnes, Á. Szendrei and the author, that parts of this classification can be carried over to the general, nonfinite case via different methods. A new type of centrality, called rectangularity, played an important role in these investigations. The lecture gives an introduction to this topic, and an overview of some of these new results.