Commutator Theory for Specific Classes of Algebras: A Case Study

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What is the center of an inverse semigroup? Are Moufang loops of odd order solvable? Why there are no left self-distributive quasigroups of order $4k+2$? The abstract commutator theory has been developed for congruence modular varieties, and successfully applied to many problems of general nature, such as the finite basis problem. However, applying the general theory to a specific class of algebras is not always straightforward. I will summarize our attempts to adapt the commutator theory to loops, inverse semigroups and quandles, answering the aforementioned questions.