The Subpower Intersection Problem for semigroups

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The Subpower Intersection Problem (SIP) for a fixed finite algebra A asks whether two subalgebras of A^n given by their sets of generators have a nonempty intersection. While the SIP for finite monoids is trivial because of the identity element, the problem becomes nontrivial for semigroups. Building upon the work of Bulatov, Kozik, Mayr, and Steindl (2016) on the related Subpower Membership Problem (SMP), we discuss the computational complexity of SIP for special classes of semigroups, in particular on commutative semigroups and normal bands.