

A survey of recent work in algebra applied to the study of constraint satisfaction problems

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The constraint satisfaction dichotomy conjecture of Feder and Vardi has been equivalently reformulated as a conjecture about the algorithmic problems $\text{CSP}(\mathbf{A})$ associated with finite idempotent algebras \mathbf{A} . It is now known that each of two very weak assumptions about \mathbf{A} implies that $\text{CSP}(\mathbf{A})$ is polynomial time solvable. These results combined appear to subsume all known tractable instances of the CSP. These results and related ones will be examined and discussed in the talk.