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*Computational methods for solving word equations*

Word equations are equations in which each side is a word consisting of terminal symbols (constants) and variables. Solutions are substitutions of the variables for words containing only terminal symbols which result in both sides becoming identical. E.g.  $X=bab$  is a solution to  $Xab=baX$ .

Motivated by applications in software analysis, several tools called string solvers have been developed for automatically deciding the truth of various statements concerning strings, which often involve combinations of word equations with other constraints (regular language membership, comparing lengths of words...). I will discuss some approaches for solving word equations in this setting.