



LOGIC AND COMPUTATION

Anti-Unification on Absorption Theories.

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Abstract.

Anti-unification or generalization is the process of finding commonalities between expressions. There are many applications of generalization as clone and plagiarism detection. While syntactic forms of anti-unification are enough for many applications, some aspects of software analysis methods are more appropriately modeled by reasoning modulo equational theories. Some important theories include the absorption property; i.e., operators with axioms $f(x, \epsilon_f) \approx f(\epsilon_f, x) \approx \epsilon_f$. This work presents a sound and complete anti-unification algorithm for such theories. Additionally, it shows that anti-unification of absorption theories is of type infinitary, and provides a finitary representation of the minimal complete set of generalizations.