

Finite model finding is a problem defined as follows: given a theory in first-order logic, find a finite model of this theory. We present a new approach to finite model finding based on a translation of axioms to a system of multivariate polynomial equation. Existence of a model of given size is then equivalent to an existence of a solution of the system. We prove the correctness of this approach, implement it and compare its performance with current state-of-the-art model finders.