SYMMETRIC PROPERTIES AND BOOLEAN COMPLEXITY

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A property of sets of CNF formulas is *symmetric* if it is preserved under complementation of variables. Let CNF^Δ be a formulation of CNF where distinct formulas have disjoint sets of variables, and SAT^Δ the satisfiable formulas in CNF^Δ. The main theorem says that no symmetric property of sets of CNF formulas can force an algorithm for SAT^Δ to take superlinear time. This result is based on observations of Ryan Williams from 2010.

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