Nearly all k-SAT functions are unate

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Abstract: We prove that 1-o(1) fraction of all k-SAT functions on n Boolean variables are unate (i.e., monotone after first negating some variables), for any fixed positive integer k and as n tends to infinity. This resolves a conjecture by Bollobas, Brightwell, and Leader. The proof uses among others the container method and the method of (computer-free) flag algebras.

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