Codimensions of Algebras with additional structures

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Let A be an associative algebra over a field F of characteristic zero and let $\mathrm{Id}(A)$ be the T-ideal of polynomial identities of A.

One associates to A, in a natural way, a numerical sequence $c_n(A)$, $n = 1, 2, \ldots$, called the sequence of codimensions of A which is the main tool for the quantitative investigation of the polynomial identities of the algebra A. Such a sequence, in case A satisfies a non-trivial identity, is exponentially bounded.

The purpose of this talk is to survey some recent results on the growth of codimensions of algebras with additional structures.