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On Poisson Customary Polynomial Identities

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We study Poisson customary and Poisson extended customary polynomials. We show that the sequence of codimensions $\{r_n(V)\}_{n \geq 1}$ of every extended customary space of variety V of Poisson algebras over an arbitrary field is either bounded by a polynomial or at least exponential. Furthermore, if this sequence is bounded by polynomial then there is a polynomial $R(x)$ with rational coefficients such that $r_n(V) = R(n)$ for all sufficiently large n . We present lower and upper bounds for the polynomials $R(x)$ of an arbitrary fixed degree.

Key words: Poisson algebra, variety of algebras, growth of a variety.

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