Abstract

The so-called standard identity gives a weak version of commutativity for products of k>2 elements. This identity was first put in the spotlight in 1950 in a famous article of Amitsur and Levitzki who proved that the algebra of square matrices of size n is weakly commutative for k=2n. In the 1970s, numerous researchers found that identity in differential geometry, more precisely for the Lie algebra of vector fields on smooth manifolds. Last year, I found two other surprising situations where this identity appears: the Rankin-Cohen brackets of modular forms and the bilinear operations used in Kontsevich's deformation quantization of Poisson manifolds. In this talk, I shall give an accessible introduction to all these results.