



# Koszul spaces

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We prove that a nilpotent space is both formal and coformal if and only if it is rationally homotopy equivalent to the derived spatial realization of a graded commutative Koszul algebra. We call such spaces Koszul spaces and we show that the rational homotopy groups and the rational homology of iterated loop spaces of Koszul spaces can be computed by applying certain Koszul duality constructions to the cohomology algebra.

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