Künneth decompositions of algebraic varieties

Thursday, 21 September 2023 14:30 (1 hour)

Given a nice topological space X, for example a topological manifold, one can study it by means of a cellular decomposition, which allows to define and compute important invariants of X. But even when X arises from a smooth projective algebraic variety, cellular decompositions may not be of an algebraic nature. By replacing them with the notion of "Künneth decompositions", one hopes to provide a purely algebraic way of defining the resulting invariants. The aim of this talk is to give an overview of these ideas and to explain recent progress on the existence of Künneth decompositions, in particular for hyperkähler varieties.

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