

Homological algebra of graphs

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Abstract

There are various monomial ideals associated to any finite simple graph. People are interested to study the interplay between the homological algebra of these ideals and the combinatorics of the graph. In this talk we shall discuss various such problems. In particular we shall discuss the relation between Castelnuovo-Mumford regularity of some of these ideals and the cycle structure in the complement graph.

Keywords: Monomial ideals, simple graph, homological algebra.