

1120-13-19

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Dominant, semidominant, and GNP ideals.

Dominant, semidominant, and GNP ideals are classes of monomial ideals originated in the study of free resolutions. Because they are defined by simple combinatorial properties, these families are good for making computations. In particular, dominant ideals give a complete characterization of when the Taylor resolution is minimal, and semidominant ideals are used to construct some interesting examples and counterexamples within the topic of monomial resolutions. GNP ideals extend the class of generic ideals, a concept introduced by Bayer, Peeva, and Sturmfels. Like generic ideals, GNP ideals are minimally resolved by the Scarf complex. (Received January 17, 2016)