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A NOTE ON F- IDEALS

f-vector is an important invariant of a simplicial complex $\Delta$. It is also very useful in computing the Hilbert series of the Stanley-Reisner ring $K[\Delta]$. f-Ideals are precisely those square-free monomial ideals in the polynomial ring $S = K[x_1, x_2, \ldots, x_n]$ for which the corresponding facet complex and the non-face complex have the same f-vector. Thus, for an f-ideal $I$, the Hilbert series of $S/I$ can be computed more easily, by using the f-vector of facet complex of $I$. The notion of f-ideals is recent, and have so far been studied in the papers given in references only. In my talk, I will present, systematically, what have been done in this particular direction, and propose some new problems to see what can be done more.

References


