

Commutative Algebra Seminar

The geometry of quasi-Gorenstein rings

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Abstract: Quasi-Gorenstein rings are, roughly speaking, "Gorenstein rings which possibly fail the Cohen-Macaulay property". They are much more than Gorenstein rings, and in some situation they are more natural: For example, the Stanley-Reisner ring of an orientable manifold is quasi-Gorenstein, while the only orientable manifolds whose Stanley-Reisner ring is Gorenstein are (homology) spheres. In this talk I will discuss some features of quasi-Gorenstein rings, a liaison theory by quasi-Gorenstein ideals generalizing the classical one by Gorenstein ideals, and two applications of the latter: one on the combinatorics of the minimal prime ideals of a quasi-Gorenstein ring, and the other one explaining a connection with the topological Lefschetz duality. All this is based on a joint work with Hongmiao Yu.

Tuesday, November 29 at 11:00 AM in Zoom