Texas Tech University. Pure Mathematics Colloquium.
Current Advances in Mathematics.
Generic local rings

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ABSTRACT. Commutative Noetherian local rings are the abstract form of the ring of germs of regular functions at a point on an algebraic variety. Accordingly, textbooks organize local rings in I hierarchy according to the character of their singularity. However, this classification misses most rings: A generic local ring does not resemble a local ring of a point on any reasonable variety. In the talk I will describe recent progress in the understanding of generic local rings of codimension 3, in a way the smallest open case.