Generic Geometry of 3-manifolds in Euclidean space II

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We study the higher order geometry of 3-manifolds immersed in Euclidean n-space. This is done through the analysis of the singularities of their corresponding families of distance-squared and height functions. As a consequence we introduce the concepts of strong asymptotic direction, discriminant set of the foliations of strong asymptotic directions, ridges and flat ridges. We analyze the generic behavior of these geometrical objects..