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Geometrical extrinsic dynamics of Riemannian submanifolds

An n -dimensional submanifold M of a Riemannian m -dimensional manifold Q , $n < m$ endowed with the second fundamental form has associated a set of foliations with singularities depending on its normal fields. These foliations, defined by quadratic differentials on M , are closely related to the extrinsic geometry of the submanifold. We analyze some properties of them in this context: The index of certain types of its isolated singularities and the possibility to reduce the codimension of the submanifold keeping an optimal class of these foliations.