

# Some Applications of Singularity Theory to Differential Geometry

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## **Abstract**

Singular manifolds appear naturally in Differential Geometry, for example as focal sets or projections of manifolds in lower dimensional spaces. Besides studying singular manifolds, the techniques of Singularity Theory can be used to study contact of manifolds, singularities of line fields on surfaces, among other topics. In this talk we give some examples of applications of Singularity Theory to Differential Geometry, considering in more details Quadratic Points of Surfaces in  $\mathbb{R}^3$  and Improper Affine Spheres.