Conformally flat submanifolds with flat normal bundle

Christos-Raent Onti

Abstract

A Riemannian manifold M^n is said to be *conformally flat* if each point lies in an open neighborhood conformal to an open subset of Euclidean space $\mathbb{R}^n$. This is always the case for manifolds endowed with metrics of constant sectional curvature. In our talk we will present recent results on conformally flat submanifolds with flat normal bundle in $\mathbb{R}^N$. For instance, we will see that such submanifolds are always holonomic, that is, they admit a principal coordinate system. As one of the consequences of this fact, we will see that the Ribaucour transformation can be used to construct an associated large family of immersions with induced conformal metrics holonomic with respect to the same coordinate system. This is a joint work with M. Dajczer and Th. Vlachos.