

The First Variational Formula of Functionals of the Second Fundamental Form for Hypersurfaces in the Euclidean Space

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Abstract

In this Master's dissertation we consider hypersurfaces in the $(n+1)$ -dimensional Euclidean space. First we derive the variation of a functional of the second fundamental form in general setting. We then find sufficient conditions for a functional to be invariant under all conformal transformations of the $(n+1)$ -dimensional Euclidean space, and construct such functionals.

