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Bruno N De Oliveira*, University of Miami, Department of Mathematic, Ungar Building, Coral Gables, FL 33156. *Hyperbolicity and the geometry of submanifolds of \mathbb{P}^n via symmetric differentials.*

We show how the existence of twisted and regular symmetric differentials on subvarieties of \mathbb{P}^n of low codimension is reflected on their geometry. The results on the existence of symmetric differentials are then applied to the problem of the hyperbolicity of hypersurfaces in \mathbb{P}^3 . This is joint work with Fedor Bogomolov. (Received August 15, 2006)