

1037-32-357

Michael D. Bolt* (mbolt@calvin.edu), Department of Mathematics and Statistics, 1740 Knollcrest Circle SE, Calvin College, Grand Rapids, MI 49546-4403. *Differential invariants for real hypersurfaces and applications.*

Let M be a hypersurface in complex Euclidean space. Under biholomorphic transformations of open sets containing M , the Levi form is invariant. Under the smaller class of Möbius transformations (i.e., linear automorphisms of \mathbb{P}^n) there is an additional curvature form. This form vanishes if M is contained in an hermitian quadric. For convex domains, we consider the problem of estimating the norm of the Leray-Aizenberg integral operator using the additional curvatures of the boundary. This builds on previous work for the case of one complex variable. (Received February 05, 2008)