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Knollcrest Circle SE, Calvin College, Grand Rapids, MI 49546. *Möbius geometry of hypersurfaces.*

We identify the curvature invariants for a real hypersurface in \mathbb{C}^n under the action of the Möbius group, $SL_{n+1}(\mathbb{C})$. The Levi form captures that part of the second fundamental form that is invariant under biholomorphism. Under Möbius transformations, the skew-hermitian part of the second fundamental form is invariant as well, when restricted to the complex tangent space. The hypersurfaces for which this skew-hermitian part is zero are known to be the hermitian quadrics. Here we characterize the hypersurfaces in \mathbb{C}^2 for which (in a sense) the skew-hermitian part is constant. (Received February 02, 2009)