Explicit construction of stationary discs and its consequences for nondegenerate quadrics

FLORIAN BERTRAND AND FRANCINE MEYLAN

Abstract. We give an explicit construction of a key family of stationary discs attached to a nondegenerate model quadric in $\mathbb{C}^N$ and derive a necessary condition for which (each lift) of those stationary discs is uniquely determined by its 1-jet at a given point. This unique 1-jet determination is a crucial step to deduce 2-jet determination for CR automorphisms of generic real submanifolds in $\mathbb{C}^N$.

Mathematics Subject Classification (2020): 32V40 (primary); 32H02 (secondary).