1106-39-362   **E Cabral Balreira***, One Trinity Place, Department of Mathematics, San Antonio, TX 78212, and **Saber Elaydi** and **Rafael Luis**. *Geometry and Global Stability of Monotone Discrete Dynamical Systems.*

We develop a geometric generalization for the notion of competitive maps in higher dimensions. Namely, if $F : \Omega \to \mathbb{R}^+$ be a local diffeomorphism. We say that F is normally monotone at p if for any hypersurface γ of codimension one containing p with a positive normal vector $\eta_{\Gamma(p)}$ then its image under F is also positive. We call F normally monotone if it is so at every point. We show that this definitions is equivalent for known results for planar maps. The advantage is that using this geometric interpretation we are able to describe the basin of attraction for any orbit and a criteria for global stability whenever the map has an unique positive fixed point for higher dimensional maps. We provide analytic conditions to check for geometric monotonicity and illustrate our results with the Beverton-Holt and Ricker competition map. (Received August 25, 2014)