

Lyapunov Stability and Attraction Under Equivariant Maps

Carlos Braga Barros, Victor Rocha, and Josiney Souza

Abstract. Let M and N be admissible Hausdorff topological spaces endowed with admissible families of open coverings. Assume that \mathcal{S} is a semigroup acting on both M and N . In this paper we study the behavior of limit sets, prolongations, prolongational limit sets, attracting sets, attractors and Lyapunov stable sets (all concepts defined for the action of the semigroup \mathcal{S}) under equivariant maps and semiconjugations from M to N .