

Nuria Fagella | Universitat de Barcelona

Títol: Structural hyperbolicity in complex analytic systems

Abstract: We discuss the concept of structural stability in holomorphic families of meromorphic maps, in the spirit of the celebrated theorem of Mañé-Sad-Sullivan and Lyubich in the 1980's for rational maps. We show that, for functions with an essential singularity at infinity, a new type of bifurcation occurs which consists of periodic points disappearing to infinity. Nevertheless, under some finiteness conditions, we show that J-structurally stable maps are open and dense in the appropriate parameter space (of arbitrary dimension).