

Speaker: Sylvain Felix CROVISIER (University Paris-Saclay)

Title: Unicritical Surface Maps and Their Renormalizations

We discuss how the dynamics of dissipative surface maps can be analyzed through successive renormalizations. We focus on two closely related classes of infinitely renormalizable maps of the disc: unicritical diffeomorphisms (characterized by a single non-degenerate critical point) and Hénon-like maps. Under suitable regularity assumptions, we establish and prove a priori bounds for the renormalizations of these maps. These bounds provide uniform control over the small-scale geometric structure of the dynamics and guarantee the precompactness of the renormalization sequence. This is joint work with Mikhail Lyubich, Enrique Pujals and Jonguk Yang.