

New Trends in Onedimensional Dynamics

Celebrating the 70th anniversary of Welington de Melo

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Title: Ergodicity and Partial Hyperbolicity on Unit Tangent Bundles of Surfaces

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Abstract: A diffeomorphism is partially hyperbolic if the tangent bundle of the ambient manifold splits into three invariant sub-bundles, $TM = E^s \oplus E^c \oplus E^u$, in such a way that df contracts the vectors of E^s and expands the vectors of E^u while the vectors of E^c have an intermediate behavior. We will present some new advances in the study of the ergodicity of volume preserving partially hyperbolic diffeomorphisms acting on the unit tangent bundle of hyperbolic surfaces.