



Seminário de Sistemas Dinâmicos da UFF

THE TEICHMÜLLER SPACE OF THE HIRSCH FOLIATION

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IMPA

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Resumo

A natural generalization of compact Riemann surfaces are compact foliations (or laminations) by Riemann surfaces. When the leaves of such a foliation are of hyperbolic type, Candel proved that they can be simultaneously uniformized: there is a foliated hyperbolic metric, i.e., a family of hyperbolic metrics on the leaves, which varies continuously with the transverse parameter. It is then natural to try to build a theory of Teichmüller space of foliations by Riemann surface. This will be the study of equivalence classes of foliated hyperbolic metrics, where two metrics are equivalent if one is the image of the other by some diffeomorphism which sends leaf to leaf as a diffeomorphism isotopic to identity.

Sullivan developed this theory in the late 80's, for his study of Feigenbaum universality, and since then, very few is known about this topic. In this talk we will give the first description of Teichmüller space of a foliation by hyperbolic surface. The example is known as the Hirsch foliation, and is obtained as the quotient of the stable foliation of the attractor of Smale's solenoid. We prove that the Teichmüller space of this foliation is homeomorphic to the space of continuous closed curves of the plane.

This is a joint work with Pablo Lessa.