

Harmonic diffeomorphisms onto hyperbolic surfaces

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Resumo/Abstract:

Let Σ_1 and Σ_2 be two complete surfaces Σ_2 being hyperbolic and ϕ a harmonic diffeomorphism from Σ_1 to Σ_2 . In this talk we will study the link between the conformal type of Σ_1 and Σ_2 . We will prove that if Σ_2 has finite area then Σ_1 has parabolic conformal type. If Σ_2 has infinite area, we prove that there is such a $\phi : \Sigma_1 \rightarrow \Sigma_2$ where Σ_1 has parabolic conformal type. This last result generalizes the result of Collin and Rosenberg where Σ_2 is H^2 .

This is a joint work with M. M. Rodriguez and H. Rosenberg.