UFSCar

DEPARTAMENTO DE MATEMÁTICA

COLÓQUIO

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Falará sobre:

The geometric Neumann problem for the Liouville equation with boundary singularities

Resumo. The Liouville equation has a natural geometric Neumann problem attached to it, that comes from the following question:
Let U be a domain with smooth boundary. What are the conformal Riemannian metrics on U having constant curvature K, and constant geodesic curvature along each boundary component of the boundary of U? Here, we assume that the metric extends smoothly to the boundary.
We answer this question in two cases. 1.-When U is the upper half-plane. We also study the particular case when we impose a certain finite energy condition. As a result, we classify the conformal Riemannian metrics of constant curvature and finite area on a half-plane that have a finite number of boundary singularities, not assumed a priori to be conical, and constant geodesic curvature along each boundary arc. 2.- When U is an annulus A. We classify the metrics of constant curvature in A such that each component of is boundary has constant geodesic curvature.

DATA: 07/08/2012 HORÁRIO: 16:00 Hs
LOCAL: Sala 20 (DM - UFSCar)