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Oberseminar Dynamische Systeme

Unique ergodicity of the horocyclic flow on surfaces without conjugate points

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Abstract:

There are strong connections between the dynamics of the geodesic flow and the horocyclic flow defined on the unit tangent bundle of certain Riemannian surfaces. Furstenberg and Marcus proved in the 70s that the horocyclic flow of a negatively curved compact surface is uniquely ergodic, i.e. it admits a unique invariant probability measure. I will explain why this result still holds for a compact surface without conjugate points, genus greater than 1 and continuous Green bundles. The proof uses the construction of the measure of maximal entropy for the geodesic flow in a recent paper of Climenhaga-Knieper-War, and the semiconjugation of the geodesic flow with an expansive continuous flow with local product structure, established by Gelfert-Ruggiero.

Guests are very welcome!