RUHR-UNIVERSITÄT BOCHUM

FAKULTÄT FÜR MATHEMATIK

RUB

Alberto Abbondandolo, Luca Asselle, Barney Bramham
Gerhard Knieper, Stefan Suhr, Kai Zehmisch

Oberseminar Dynamische Systeme

Counting closed geodesics under intersection constraints

Dienstag, 10. Mai 2022
16:15 Uhr – Raum IA 1/181

Yann Chaubet
(Paris)

Abstract:

On a closed negatively curved surface, Margulis gave the asymptotic growth of the number of closed geodesics of bounded length, when the bound goes to infinity. A natural question is: can we obtain similar counting results for closed geodesics satisfying some (topological or geometrical) constraints? After a short state of the art on this issue, we will discuss some recent results concerning geometric intersection constraints. Namely, we will give the asymptotic growth of closed geodesics for which certain intersection numbers (with a given family of simple closed geodesics) are prescribed. The proof involves a dynamical scattering operator related to the surface (with boundary) obtained by cutting our original surface along the simple curves.

Guests are very welcome!