Seminarankündigung

Deformationsquantisierung

Am 23. 10. 2020 spricht um 14 Uhr c.t.

`https://bbb.durates.net/b/ste-2va-uez`

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Closed Geodesics and String Topology

Given a compact Riemannian manifold without boundary, it is natural to ask how many of the geodesics in the manifold are closed. It is conjectured that on all compact manifolds without boundary and for all Riemannian metrics on them there are infinitely many closed geodesics, however this has not been shown in full generality yet. The standard way to tackle this problem is via the free loop space of the manifold. Morse theory shows that the topology of the free loop space is related to the closed geodesics. In recent years, new algebraic structures on the homology of the free loop space were introduced and it is an interesting question to study the relation of these so-called string topology operations to the closed geodesic problem. This talk gives an introduction to the free loop space and to Morse theory with an outlook towards string topology.

gez. Stefan Waldmann