RUHR-UNIVERSITÄT BOCHUM

FAKULTÄT FÜR MATHEMATIK

RUB

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Oberseminar Dynamische Systeme

THIS TALK TAKES PLACE AS PART OF THE BACH SEMINAR

Curvature And Rotation In Convex Reeb Flows

Dienstag, 06. Juli 2021
17:15 Uhr – per Zoom

Julian Chaidez
(Berkeley)

Abstract:

The boundary Y of a 4-dimensional, smooth convex domain has the structure of a contact manifold with a natural Reeb flow. Many conjectures exist about the special dynamical properties of Reeb flows arising in this way. In this talk, I will discuss a relationship between the curvature of Y and various invariants of the Reeb flow that measure rotation. In recent work (joint with Oliver Edtmair), we used this relationship to show that convexity is not equivalent to dynamical convexity in dimension 3. I will then give an overview of potential applications of these ideas to questions of Reeb orbit knottedness and generalizations to higher dimensions.

Guests are very welcome!