Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 30. Januar 2024

17 Uhr, Geom H4

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What a real function knows about the manifold on which it is defined: a generalization of Morse theory

Abstract:

Given a generic real function f on a closed manifold X and its gradient V with respect to some generic metric, the classical Morse theory yields a complex which computes the singular homology of X. In a recent joint work with JF. Barraud, V. Humilière and A. Oancea we defined a more general complex using the Morse data (f,V): we call it Morse complex with differential graded coefficients. In this talk I will explain how we defined it, the significance of its homology in some particular cases, and the applications which motivated our work.

Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H4 Kaffee und Tee bereit.