Leibniz Universität Hannover

Oberseminar
Institut für Algebraische Geometrie

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Finite sets (containing zero) are mapping degree sets

Let M, N be two oriented closed connected manifolds of dimension n. We define the mapping degree set as $\deg(M,N) = \{\deg(f) | f : M \to N\}$. It is very relevant to construct inflexible manifolds M, i.e. $\deg(M,M)$ is bounded, and strongly inflexible manifolds M, i.e. for all N, $\deg(N,M)$ is bounded. They serve to produce functorial seminorms on n-manifolds.

On the other hand, one may ask which sets of integers can appear as $\deg(M,N)$ for some M, N. By cardinality reasons, not all sets can. Here we shall prove that any finite set of integers A, containing 0, is a mapping degree set for some choice. We extend this question to the rational homotopy theory setting, where an affirmative answer is also given, by using Sullivan models. (joint work with C.Costoya and A.Viruel)

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Alle Interessierten sind herzlich eingeladen.