

Cohomological obstructions for uniformly quasiregular maps

Ilmari Kangasniemi

University of Helsinki

A quasiregular self-map whose iterates admit a shared distortion constant is called uniformly quasiregular (UQR). While nontrivial examples of UQR maps exist on closed manifolds universally covered by the n -sphere, examples on other closed manifolds are very limited in comparison. In this talk, I discuss a recent cohomology-based method for finding obstructions for UQR maps on closed manifolds. The method yields restrictions for the topological degree and Julia set of UQR maps, and a sharp Bonk-Heinonen -type cohomology bound for closed manifolds admitting a non-constant non-injective UQR map. Includes joint work with Pekka Pankka.
