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TAME MAPS OF SURFACES OF INFINITE TYPE

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Abstract: A cornerstone of low-dimensional topology is the Nielsen-Thurston Classification Theorem, which gives a complete description of homeomorphisms of finite-type surfaces up to homotopy. However, extending this theory to surfaces of infinite type presents significant challenges. The key difficulty lies in the intricate behavior of curves under iteration—homeomorphisms can produce increasingly complex configurations, making classification far more subtle. To tackle some of these challenges, we introduce the notion of tame maps—a class of homeomorphisms exhibiting non-mixing dynamics. In this talk, I will discuss recent progress toward extending the Nielsen-Thurston classification theorem to such maps. This is joint work with Mladen Bestvina and Federica Fanoni.



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