

Transitivity of covering maps from the torus without resonance

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Given a covering map from the torus T^n we ask if the chaotic behavior from the linear action in the π_1 induces some dynamical properties in the original system. Recently, Martin Andersson proved that in dimension two, if the linear part is hyperbolic, the covering map has degree at least two and preserves area, then it is transitive. In a joint work with Andersson, we approach the problem for higher dimension. We start by reviewing the result in dimension two to see which are the difficulties in the general case. We also introduce the notion of endomorphisms without resonance and will prove the result for skew-products in dimension 3.