

# Dynamical obstruction on the existence of continuous sub-actions

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In ergodic optimization theory, the existence of sub-actions is an important tool in the study of the so-called optimizing measures. For transformations with regularly varying property, we highlight a class of moduli of continuity which is not compatible with the existence of continuous sub-actions. Our result relies fundamentally on the local behavior of the dynamics near a fixed point and applies to interval maps that are expanding outside an neutral fixed point, including Manneville-Pomeau and Farey maps. This is a joint work with Irene Inoquio Renteria (Universidad Austral de Chile).