



NICE WEAK KAM METHODS IN NICE

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The Mather problem for stationary Lagrangians

Abstract

We discuss the Mather problem for stationary Lagrangians, that is Lagrangians $L : \mathbb{R}^n \times \mathbb{R}^n \times \Omega \rightarrow \mathbb{R}$, where Ω is a compact metric space on which \mathbb{R}^n acts through an action which leaves L invariant. This setting allow us to generalize the standard Mather problem for quasi-periodic and almost-periodic Lagrangians. Our main result is the existence of stationary Mather measures invariant under the Euler-Lagrange flow which are supported in Lipschitz graphs.