Isolated periodic minima are unstable*

Antonio J. Ureña

Key words: instability, periodic minimizers, parabolic case.

Abstract

A classical result, studied, among others, by Carathéodory [1], says that, at least generically, periodic minimizers are hyperbolic, and consequently, unstable as solutions of the associated Euler-Lagrange equation. A new version of this fact, also valid in the nonhyperbolic case, is given.

References

[1] Carathéodory, C. *Calculus of variations and partial differential equations of the first order.* New York : Chelsea, 1989.

*oral communication.