NICE WEAK KAM METHODS IN NICE 2-7 FEBRUARY 2009

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Codimension 1 Fathi-Siconolfi theorem

Abstract

The theorem of Fathi and Siconolfi is a useful tool in the study of Aubry-Mather theory for curves. J. Moser has shown that there is a parallel Aubry-Mather theory which studies minimal, entire solutions of the elliptic equation $\Delta u = F_u(x, u)$, with F periodic in the variables (x_1, \ldots, x_n, u) . We prove a theorem like the one of Fathi and Siconolfi in this setting.