The common root of the geometric conditions in Serrin's lower semicontinuity theorem

M. Gori   F. Maggi

Abstract

In this paper we extend a classical lower semicontinuity theorem by J. Serrin. We achieve this result applying an approximation method for convex functions where, instead of supporting hyperplanes, certain maximal cones are considered. This allows also to give the characterization of the class of functions that can be written as the supremum of strictly convex ones.