

The role of nonlinear scalarization functions in characterizing generalized convex vector functions

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Abstract

The aim of this joint work with Christian Günther (University of Halle) is to present new characterizations of cone-convex and explicitly cone-quasiconvex vector functions with respect to a proper closed solid convex cone of a real linear topological space. These characterizations are given in terms of classical convexity and explicit quasiconvexity of certain real-valued functions, defined by means of the nonlinear scalarization function introduced by Gerstewitz (Tammer) in 1983.