

Dušan Pokorný

Nonconvex Lipschitz function in plane which is locally convex outside a discontinuum

Comment.Math.Univ.Carolin. 55,4 (2014) 509–521.

Abstract: We construct a Lipschitz function on \mathbb{R}^2 which is locally convex on the complement of some totally disconnected compact set but not convex. Existence of such function disproves a theorem that appeared in a paper by L. Pasqualini and was also cited by other authors.

Keywords: convex function; convex set; exceptional set

AMS Subject Classification: 26B25, 52A20

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