R. Goebel

3518 NE 42 Street, Seattle, WA 98105, U.S.A.
`rafal.k.goebel@gmail.com`

R. T. Rockafellar

Dept. of Mathematics, University of Washington, Seattle, WA 98195-4350, U.S.A.
`rtr@math.washington.edu`

Local Strong Convexity and Local Lipschitz Continuity of the Gradient of Convex Functions

Given a pair of convex conjugate functions f and f^*, we investigate the relationship between local Lipschitz continuity of ∇f and local strong convexity properties of f^*.

Keywords: Convex functions, Fenchel conjugate, differentiability, Lipschitz continuity, local strong convexity, duality.