Characterizations of Generalized Monotone Nonsmooth Continuous Maps using Approximate Jacobians

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Abstract: This paper presents necessary and/or sufficient conditions for a continuous map to be monotone, quasimonotone or pseudomonotone. The results are given in terms of approximate Jacobian matrices which reduce to convexificators for a real-valued map. The results extend corresponding results obtained using Clarke generalized Jacobian matrices.

Keywords: Monotone maps, quasimonotone maps, pseudomonotone maps, approximate Jacobians

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