



Calculus of Tangent Sets and Derivatives of Set Valued Maps under Metric Subregularity Conditions

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In this paper we intend to give some calculus rules for tangent sets in the sense of Bouligand and Ursescu, as well as for corresponding derivatives of set-valued maps. Both first and second order objects are envisaged and the assumptions we impose in order to get the calculus are in terms of metric subregularity of the assembly of the initial data. This approach is different from those used in alternative recent papers in literature and allows us to avoid compactness conditions. A special attention is paid for the case of perturbation set-valued maps which appear naturally in optimization problems.

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