

On primal regularity estimates for single-valued and set-valued mappings

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We survey some regularity statements in variational analysis. We focus on theorems guaranteeing the openness at a linear rate (metric regularity) of a mapping around the reference point.

In particular we are going to discuss techniques used in the proofs of such statements. We start with regularity criterion by A.D.Ioffe, which can be traced back to the work of M. Fabian and D. Preiss, that substitutes complicated iterative procedures.

The lecture is based on a forthcoming paper with M. Fabian, "On primal regularity estimates for set-valued mappings", and on a recent paper with M. Fabian and A.D.Ioffe, "On primal regularity estimates for single-valued mappings".