Regularization of Quasi Variational Inequalities

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Abstract

An ill-posed quasi variational inequality with contaminated data can be stabilized by employing the elliptic regularization. Under suitable conditions, a sequence of bounded regularized solutions converges strongly to a solution of the original quasi variational inequality. Moreover, the conditions that ensure the boundedness of regularized solutions, become sufficient solvability conditions. It turns out that the regularization theory is quite strong for quasi variational inequalities with set-valued monotone maps but restrictive for generalized monotone maps (see [2], [4]). The results are quite general and are applicable to ill-posed variational inequalities, hemi-variational inequalities, inverse problems, and split-feasibility problem (see [1], [3]), among others.

References

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