

A posteriori estimates for problems with monotone operators

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We propose a method of obtaining a posteriori estimates which are not based on the duality theory and which applies to variational inequalities with monotone operators, without assuming the potentiality of operators. We use this method in various problems driven by nonlinear operators of the p -Laplacian type, including the anisotropic p -Laplacian, polyharmonic p -Laplacian, and fractional p -Laplacian.

These results are joint with V.E. Bobkov (*Institute of Mathematics, Ufa Federal research Centre, RAS*), see [BP25].

[BP25] V.E. Bobkov and S.E. Pastukhova, *A posteriori estimates for problems with monotone operators*, 2025, arXiv: [2504.09931](#).