

Hölder Convergence rates of Tikhonov regularization for solving nonlinear ill-posed problems

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In this talk, we discuss the convergence rates of Tikhonov regularization for solving nonlinear ill-posed problems in Banach space settings. In particular, we consider the residual term with the exponent power p of a Banach space norm where $1 \leq p < \infty$. Unlike the previous analysis of Tikhonov regularization, we do not assume source and nonlinearity conditions, but this analysis relies on the Hölder type stability of the inverse mapping.