

A Conditional Stability Estimate for Solving Ill-posed Problems
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Abstract: Based on the conditional stability estimate for ill-posed problems, we propose a new simple method of the choice of regularization parameters in Tikhonov's regularization. We show that it has the same convergence rate as other method when the exact solution's second order derivative is a square integrable function, with much less computation. We also show that we can find out the discontinuous points when the exact solution is not smooth.