

THE COSE METHOD FOR THE REGULARIZATION OF LINEAR DISCRETE ILL-POSED PROBLEMS

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We propose a new technique for determining the value of a regularization parameter, that can be applied when the norm of the error in the data is not available. It is based on comparing computed solutions determined by Tikhonov regularization and truncated singular value decomposition. Analogous comparisons are proposed for large-scale problems. The technique for determining the regularization parameter implicitly provides an estimate for the norm of the error in the data.

This talk presents joint work with Michiel Hochstenbach and Lothar Reichel [1].

References

- [1] M. E. Hochstenbach, L. Reichel, and G. Rodriguez. *Regularization parameter determination for discrete ill-posed problems*. J. Comput. Appl. Math., 273 (2015), pp. 132–149.