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A modified algorithm for accurate inverse Cholesky factorization

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Abstract—In this paper, an algorithms for accurate matrix factorization based on Cholesky factorization for extremely ill-conditioned matrix is proposed. In 2012, Ogita and Oishi derived an iterative algorithm to calculate a good approximate inverse of the exact Cholesky factor for such matrices. We present a modified version of the algorithm. Moreover, we show the proposed algorithm gives more accurate results than the original algorithm by some numerical experiments.

References

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