

Notes on paper ‘*Accurate singular values for bidiagonal matrix, J Demmel et al.*’

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Here, I will add main points which I understand while reading the paper.

1. Page 2 ‘relative accuracy’ and ‘relative precision’ have been used interchangeably.
2. Claim: Accuracy of computed singular value(of A) will be same as that of individual matrix elements of A.
3. High relative accuracy for the singular elements of bidiagonal matrix is ‘guaranteed’.
4. Proposed algorithm is a variation over standard QR iteration approach.
5. Hybrid algorithm with *QR-iteration* with *zero-shifted* QR modified to provide *forward stability*.
6. *Iterative* QR approach iteratively applies QR decomposition to the transformed bidiagonal matrix until it becomes diagonal. But **convergence guarantee**???