

SVD using CUDA and MPI

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SVD(Singular Value Decomposition)

- In linear algebra, the singular value decomposition (SVD) is a factorization of a real or complex matrix, with many useful applications in signal processing and statistics.

Jacobi Rotation

- In numerical linear algebra, a Jacobi rotation is a rotation, $Q_{k\ell}$, of a 2-dimensional linear subspace of an n -dimensional inner product space, chosen to zero a symmetric pair of off-diagonal entries of an $n \times n$ real symmetric matrix
- It is the core operation in the Jacobi eigenvalue algorithm, which is numerically stable and well-suited to implementation on parallel processors.

Optimization

Platform

Execution Time

Discussion

References

- ✦ http://en.wikipedia.org/wiki/Singular_value_decomposition
- ✦ http://en.wikipedia.org/wiki/Jacobi_rotation