CALU : communication optimal algorithms for linear algebra

CALU solves linear systems of equations $Ax=b$ using Communication Avoiding LU.

CALU addresses a major challenge in HPC, the exponentially increasing cost of communication with respect to computation.

It attains lower bounds on communication and it employs novel lightweight scheduling techniques to be able to adapt to dynamic changes in the system.

Progressively different algorithms as QR, RRQR, will be integrated in the library.

**Application domains:** can be used to solve very ill-conditioned problems or as a building block of iterative methods.

**Programming language:** C and Pthreads

**Keywords:** linear algebra, communication avoiding

**Licence:** open source

Contact: ALPINES
Laura.Grigori@inria.fr
https://who.rocq.inria.fr/Laura.Grigori/