

setup phase: **GPU implementation is work in progress (as far as possible)**

- decoupled smoothed aggregation
- parallel coupled matching-based aggregation
- distributed or replicated coarsest matrix

solve phase: **GPU application implemented**

- cycles: V, W, K
- smoothers:  $l_1$ -Jacobi, hybrid (F/B) Gauss-Seidel, Chebychev polynomials, block-Jacobi / additive Schwarz with LU, ILU factorizations or sparse approximate inverses for the blocks
- coarsest-matrix solvers: sparse LU,  $l_1$ -Jacobi, hybrid (F/B) Gauss-Seidel, block-Jacobi with LU, ILU factorizations or sparse approximate inverses of the blocks, iterative PCG
- LU factorizations for smoothers & coarsest-level solvers: UMFPACK, MUMPS, SuperLU, SuperLU\_Dist