

$$-\Delta u = 1 \text{ on unit cube, with DBC}$$

### Solver/preconditioner settings

- AMG as preconditioner of CG, stopped when  $\|\mathbf{r}^k\|_2/\|\mathbf{b}\|_2 \leq 10^{-7}$ , or  $itmax = 500$   
**VSMATCH V-cycle** for matching-based coarsening with aggregates of max size 8, smoothed prolongators
- coarsest matrix size  $n_c \leq 200np$ , with  $np$  number of tasks (GPUs)
- $\ell_1$ -Jacobi iterations, quasi-opt. 4th-kind Cheb., approximate opt. 4th-kind Chebyshev and quasi opt. 1st-kind Cheb. accelerations; 30 iterations of  $\ell_1$ -Jacobi at the coarsest level.

Platform: Leonardo booster, ranked 6th in the last Top500 list (BullSequana XH2000, Xeon Platinum 8358 32C 2.6GHz, NVIDIA A100 SXM4 64 GB, Quad-rail NVIDIA HDR100 Infiniband)