## TER QDCS : High-performance task-based tiled matrix multiplication with StarPU runtime

- Prerequisites : HPC course, MPI course
- Maximum 20 students (no limit on QDCS, accepted by default)
- Work done in pairs (groups of 2)
- Evaluation : source code, oral defence, written report
- 10 + 1 weeks (4h) :
  - Introduction to StarPU
  - $\geq$  1D tiling of matrices
  - 2D tiling of matrices
  - GPU and CPU tasks
  - MPI tasks between nodes
  - 3D matrix multiplication implementations
  - Performance measurements
  - Optional extensions chosen freely

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