

# A two levels optimized Schwarz preconditioner in massively parallel computing

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The aim of this talk is to showcase recent advances in the construction of robust coarse spaces for optimised Schwarz domain decomposition methods. We formulate and analyse a two level preconditioner as well as the implementation inside a C++ open source framework (<https://www.github.org/hpddm/hpddm>). A broad spectrum of applications will be covered, such as incompressible linear elasticity and incompressible Stokes problems. Numerical results with hundreds of processes will be provided, clearly showing the effectiveness and the robustness of the proposed approach.

## Références

- [1] R.HAFERSSAS, P.JOLIVET AND F.NATAF, *A Robust Coarse Space for Optimized Schwarz methods SORAS-GenEO-2*, submitted, 2015.