Talk: Some new results on least-square Petrov-Galerkin projection for parametric PDEs.

Speakers: **Tommaso Taddei (Inria)**

Abstract: The aim of this talk is to review projection-based model order reduction (PMOR) for steady-state PDEs based on least-square Petrov Galerkin projection (LSPG). We discuss the influence of the choice of the norm; we propose a constructive way to build affine approximations that satisfy boundary conditions. We present extensive numerical investigations for both compressible and incompressible steady flow model problems; we also discuss the issue of snapping in PMOR, which refers to the fact that the predicted solution is nearly piecewise-constant with respect to the parameter. Work in collaboration with C Farhat, A Iollo and H Telib.