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Least-Squares and DPG approximation of eigenvalue associated to coupled problems

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Least-squares (LS) and discontinuous Petrov–Galerkin (DPG) finite element methods are a promising methodology in the computational partial differential equations with unconditional stability and built-in a posteriori error control. For a state of the art in those minimal residual methods see [1].

In this talk, least squares and discontinuous Petrov–Galerkin approximation of eigenvalue associated to coupled problems are discussed. In particular, we will focus on the convergence together with a priori error estimates, possible error estimators and the corresponding a posteriori error analysis. In fact, the Least-Squares method was proved only recently to be suitable for eigenvalue problems (see [3] and [2]) and the corresponding breakthrough can be extended to compute fluid-induced vibrations.

REFERENCES

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