

# LEAST-SQUARES FINITE ELEMENT METHODS FOR EIGENVALUE PROBLEMS

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ABSTRACT. Accurate flux approximations are of interest in many applications and this is particularly true for fluid-structure interaction problems. Considering the corresponding spectral problem, the Least-Squares method involves the flux and the stress as independent variables approximated in a suitable  $H(\text{div})$ -conforming finite element spaces. This talk will discuss the applicability of the Least-Squares method for the determination of the corresponding elastoacoustic vibrations, and show that the resulting scheme provides a correct spectral approximation. Quasi-optimal error estimates and numerical experiments to confirm those will be provided.

**Keywords:** LSFEM, eigenvalue problems, mixed FEM

**Mathematics Subject Classifications (2020) :** 65N30

## REFERENCES

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