

# Least-Squares approximations of eigenvalue problems

Fleurianne Bertrand<sup>1</sup>

Accurate flux approximations are of interest in many applications. Therefore, flux-based variational formulations involving the flux as an independent variable approximated in a suitable  $H(\text{div})$ -conforming finite element spaces are of paramount importance. Such approaches may either lead to a saddle-point problem or a symmetric positive definite system. This talk focuses on the second type and covers the Least-Squares Method and the discontinuous Petrov-Galerkin method.

## References:

- [1] <https://doi.org/10.1093/imanum/drab005>
- [2] <https://doi.org/10.1016/j.camwa.2020.12.013>

---

<sup>1</sup>University of Twente, Mathematics of Computational Science  
f.bertrand@utwente.nl