A Comparison of various Quasi-Newton Schemes for Partitioned Fluid-Structure Interaction

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ABSTRACT

During the last 5 years, quasi-Newton schemes have proven to be a robust and efficient way to couple partitioned fluid-structure interaction. We showed in previous work that they also allow to perform a parallel coupling [1]. Bogaers et al. introduced a new variant based on a multi-vector update [2]. This variant renders a tuning of the reuse of old information unnecessary as all old iterations are implicitly covered in a Jacobian update. In this work, we compare this multi-vector variant in an inverse formulation to the classical IQN-ILS algorithm for serial as well as parallel coupling

REFERENCES

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