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# A parallel-distributed approach for multi-physic problems with application to computational nonlinear aeroelasticity

Azzeddine Soulaïmani, Amine Ben Haj Ali, Zhengkun Feng

Department of Mechanical Engineering
École de Technologie Supérieure
University of Québec

## Abstract

This paper presents an efficient parallel-distributed methodology for solving multi-physic problems. This methodology is based on functional and geometrical decompositions. Several technical details are presented for more clarity and for easing its implementation. All the techniques discussed in this paper are illustrated for the case of CFD-based aeroelasticity. A thorough performance study is shown with simulation results for the Agrad 445.3 aeroelastic test case.