

EFFICIENCY AND RELIABILITY OF GOAL ORIENTED ERROR ESTIMATION

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ABSTRACT

In this talk, we derive two-sided a posteriori error estimates for the dual-weighted residual (DWR) method for both, higher order approximation and higher order interpolation techniques. For the proof of the efficiency, a saturation assumption is required. The presented results hold for linear as well as for nonlinear quantities of interest and partial differential equations. Our theoretical findings and algorithmic developments are substantiated with numerical tests.

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