

Some notes on the article [KRE 11] “Decay rates of adaptive finite elements with Dörfler marking”

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Abstract: The authors consider the decay rate of a finite element scheme of a second order linear, symmetric, elliptic partial differential equation. A large class of estimators is considered in which it is included hierarchical estimators, estimators based on the solution of local problems, etc. The adaptive method selects elements for refinement with Dörfler marking. Based on the local equivalence to the residual estimator, the authors prove an error reduction property. This with minimal Dörfler marking yields an optimal decay rate in terms of degrees of freedom.

Key words and phrases: Decay rates; Dörfler marking; adaptive finite elements.

Subject Classification : 65N30; 65N12; 65N50; 65N15

1 what i have learned....

1. *principle:* the adaptive finite element method is based on:

Solve → Estimate → Mark → Refine

References

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