AXIOMS OF ADAPTIVITY REVISITED: OPTIMAL ADAPTIVE IGAFEM

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Abstract. The axioms of adaptivity from [1] analyze under which assumptions on the a posteriori error estimator and the mesh-refinement strategy, a mesh-refining adaptive algorithm yields convergence with optimal algebraic rates. In our talk, which is based on the recent work [2], we now address the question which properties of the FEM are sufficient to ensure that the usual weighted-residual error estimator is well-defined and satisfies the axioms of adaptivity. In particular, our analysis covers conforming FEM in the framework of isogeometric analysis with hierarchical splines.

Keywords: isogeometric analysis, hierarchical splines, finite element method, adaptive mesh-refinement, optimal convergence rates.


References
