ADAPTATIVITY IN HIERARCHICAL SPLINES SPACES

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Abstract. The interest in numerically solving partial differential equations (PDE) using spaces of spline type has grown in the last years since the so called isogeometric analysis was introduced in the engineering community. Adaptive methods are an essential tool in science and engineering for the numerical solutions of PDE. However the bibliography about adaptive methods in spaces of the spline type is very scarce. In this work we present a theory of adaptive methods for elliptic problems using hierarchical spline spaces. The a posteriori estimators are based on local problems.

Keywords: hierarchical spline spaces, adaptive method, aposteriori estimators

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