

Error Estimation for Isogeometric Analysis of the Stokes equation

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In this article, we will develop and present suitable error estimators for adaptive mixed isogeometric methods for solving the Stokes and Navier-Stokes equations. We will compare the use of residual-based error estimators with recovery-based methods [1]. The adaptive refinement will be based on the use of LR B-splines [2], and the recently proposed methods using isogeometric Taylor-Hood, Sub-grid Taylor-Hood [3], and div-conforming elements [4]. The different estimators will be thoroughly tested on problems with (manufactured) analytical solutions.

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