ISOTROPIC AND ANISOTROPIC A POSTERIORI ERROR ESTIMATION OF THE MIXED FINITE ELEMENT METHOD FOR SECOND ORDER OPERATORS IN DIVERGENCE FORM[*]

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Abstract. This paper presents an a posteriori residual error estimator for the mixed FEM of second order operators using isotropic or anisotropic meshes in $\mathbb{R}^d$, $d = 2$ or 3. The reliability and efficiency of our estimator is established without any regularity assumptions on the solution of our problem.

Key words. error estimator, stretched elements, mixed FEM, anisotropic solution.

AMS subject classifications. 65N15, 65N30.

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