ON A POSTERIORI ERROR ESTIMATORS
IN THE FINITE ELEMENT METHOD
ON ANISOTROPIC MESHES[*]

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Abstract. On anisotropic finite element meshes, the standard residual based error indicator is derived and it is proved that it is not efficient if the aspect ratio deteriorates. For a nonlocal error indicator it is proved that it is reliable and efficient independent of the aspect ratio. This is also confirmed by some numerical calculations.

Key words. finite elements, a posteriori estimators, anisotropic meshes.

AMS subject classifications. 65N30, 65N15.

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