

ROBUSTNESS OF A-POSTERIORI ESTIMATORS WITH RESPECT TO VERY HIGH ORTHOTROPY

T. Strouboulis^{a,1}, D. Wang^{a,2}, and I. Babuska^b

^aDepartment of Aerospace Engineering
Texas A&M University
College Station, TX 77843-3141

1strouboulis@aero.tamu.edu, 2delinwang@neo.tamu.edu

^bTICAM

The University of Texas at Austin
Austin, TX 78712

babuska@brahma.ticam.utexas.edu

This paper addresses the robustness of a-posteriori estimators for problems with very high orthotropy. We reviewed three types of residual estimators, the *Neumann patch* or *element residual*, the *Dirichlet subdomain residual*, and the *Neumann subdomain residual*, and analyzed their performance in the context of carefully selected examples reflecting problems of industrial interest. The ZZ-SPR estimator was also analyzed.