Mathematics > Numerical Analysis

Robust equilibrated a posteriori error estimators for the Reissner-Mindlin system

Emmanuel Creusé (INRIA Lille - Nord Europe), Serge Nicaise (LAMAV), Emmanuel Verhille

(Submitted on 3 Nov 2010)

We consider a conforming finite element approximation of the Reissner-Mindlin system. We propose a new robust a posteriori error estimator based on H(div) conforming finite elements and equilibrated fluxes. It is shown that this estimator gives rise to an upper bound where the constant is one up to higher order terms. Lower bounds can also be established with constants depending on the shape regularity of the mesh. The reliability and efficiency of the proposed estimator are confirmed by some numerical tests.

Subjects: **Numerical Analysis (math.NA)**
Cite as: **arXiv:1011.0974v1 [math.NA]**

Submission history

From: Emmanuel Creuse [view email]
[v1] Wed, 3 Nov 2010 19:03:35 GMT (43kb)

Which authors of this paper are endorsers?