

MR1967416 (2004d:65144) 65N30 (65N15 74K20 74S05)**Liu, Qing [Liu, Qing⁵] (PRC-FUDAN); Li, Likang (PRC-FUDAN)****On mortar-type TRUNC element method for plate bending problem. (English summary)***Numer. Math. J. Chinese Univ. (English Ser.)* **11** (2002), no. 2, 235–240.

In this paper, a mortar-type TRUNC element method for the discretization of a plate bending problem is established. All the subdomains are triangulated independently. At the interfaces, three mortar conditions are given to ensure the convergence of the method: the first is a pointwise condition for the solution, while the other two are projection conditions for the normal and tangential derivatives of the solution. After some detailed analysis, an error estimate in the energy norm is obtained under the regularity assumptions that the exact solution $u^* \in H^3(\Omega) \cap H_0^2(\Omega)$ and $f \in L^2(\Omega)$. The error order is optimal as for the usual TRUNC element method. Finally, some numerical results are provided in order to show the validity of the theoretical results obtained.

Reviewed by *P. Rochus* (Liège)

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