

The coupling FEM and NBEM with non-matching grids for a class of nonlinear boundary value problems

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Summary

In this paper, based on the natural boundary reduction method advanced by Feng and Yu, we are concerned with a domain decomposition method with nonmatching grids for a certain nonlinear interface problem in unbounded domains. We first discuss a new coupling of finite element and boundary element by adding an auxiliary circle. Then we use a dual basis multiplier on the interface to provide the numerical analysis with nonmatching grids. Finally, we give some numerical examples further to confirm our theoretical results.

