

A PRECONDITIONER FOR A FETI-DP METHOD FOR MORTAR ELEMENT DISCRETIZATION OF A 4TH ORDER PROBLEM IN 2D*

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Abstract. In this paper a parallel preconditioner for a FETI-DP formulation for a mortar discretization of a fourth order problem is presented and analyzed. We show that the condition number of the preconditioned FETI-DP operator is proportional to $(1 + \log(H/h))^2$, where H and h are mesh sizes.

Key words. FETI-DP, mortar, nonmatching meshes, finite element, preconditioner

AMS subject classifications. 65N30, 65N55

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