PRECONDITIONING OF THE STIFFNESS MATRIX OF LOCAL REFINED TRIANGULATION

摘要
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PRECONDITIONING OF THE STIFFNESS MATRIX OF LOCAL REFINED TRIANGULATION

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Abstract A preconditioning method for the finite element stiffness matrix is given in this paper. The triangulation is refined in a subregion; the preconditioning process is composed of resolution of two regular subproblems; the condition number of the preconditioned matrix is $O(1+\log\frac{H}{h})$, where H and h are mesh sizes of the unrefined and local refined triangulations respectively.

Key words

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