SOLVING PROBLEMS WITH SOME PECULIAR MATRICES

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Abstrakt

This contribution deals with some systems of linear algebraic equations. These peculiar matrices arise from discretization of certain problems in elasticity. Although the matrices are symmetric, positive definite, well conditioned, and of order not greater than 10^2, they are dense and with entries ranged from 10^{-8} to 10^{+9}. Various methods tested are aimed to achieve higher accuracy of the solution of the problems considered.

Literatura

[1] P. Burda, M. Čertíková, A. Damašek, E. Neumanová, J. Novotný, J. Šístek. Application of the BDDC method to linear elasticity problems. In Sameš M., editor, *Proceedings of SAMO'06, Ostravice, Czech Republic, September 13-15*, pages 9-10,VŠB TU Ostrava, 2006.

[2] P. Burda, M. Čertíková, J. Novotný, J. Šístek. BDDC method with simplified coarse problem and its parallel implementation. In *Proceedings of MIS 2007, Josefov Dœul, Czech Republic, January 13- 20*, 2007.