

An iterative method for CVBEM systems. Part II: The unigrid method.

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Abstract. In the first part of this paper we presented an iterative two-step method, based on Kaczmarz relaxations for solving, in the least-squares sense, the overdetermined linear systems of equations generated by the application of the CVBEM method to Laplace equation. An improved accuracy of the CVBEM method was obtained by using the least-squares solution of such systems.

Unfortunately, this two-step iterative method sometime has slow convergence. The method of directional relaxations (unigrid method [4]), which will be presented in this second part of the paper, is a possible way to overcome this difficulty. Numerical examples are also included, in order to illustrate the efficiency of the unigrid method.

References for the Abstract

4. McCormick, Ruge - Math. of Comput., 41(1983), 43-62.