

Parallel domain decomposition methods for dam problem

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Abstract

© 2001 IEEE. Free boundary problem of fluid flow in the porous medium is considered. Finite difference scheme is constructed and written in the form of the inclusion for the sum of several multivalued operators. The study of this mesh scheme and iterative algorithms of its numerical solution is performed. Solution of the mesh problem by Gauss-Seidel and by Schwarz alternating methods was executed. The numerical result are reported which confirm the theoretical results.

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Keywords

Bibliographies, Cybernetics, Filtration, Finite difference methods, Finite element methods, Fluid flow, Gaussian processes, Iterative algorithms, Mathematical model, Mathematics