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Résolution de l'équation de la chaleur instationnaire en milieu confiné par une méthode particules-maillage. (Numerical solution of the heat equation in an enclosure using a particle mesh method). (French) [Zbl 0668.76121](#)

C. R. Acad. Sci., Paris, Sér. II 309, No. 5, 445-448 (1989).

This paper is devoted to present a deterministic grid-particle method for the approximation of convection-diffusion equations on a bounded area in two dimensions. Using a Clouds-in-Cells representation the method is applied to the heat equation with non-degenerate boundary conditions of the Dirichlet type.

MSC:

76R50 Diffusion

35K05 Heat equation

Cited in 1 Document

Keywords:

deterministic grid-particle method; convection-diffusion equations; Clouds-in-Cells representation; heat equation with non-degenerate boundary conditions of the Dirichlet type