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Solvability of the boundary-value problem for a partial quasilinear differential equation of the fourth order

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Abstract

We use a topological method implying the reduction of the initial problem to solving an operational equation in a Hilbert space and consequent calculation of the rotation of the corresponding vector field. We show that in a sphere of a sufficiently large radius the problem has at least one generalized solution. © Allerton Press, Inc., 2010.

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Keywords

Generalized solution, Hilbert space, Operational equation, Topological method, Vector field rotation