

A Nonhomogeneous Boundary-Valued Problem for the coupled KDV system

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March 13, 2021

Abstract

In this paper, we study the initial-boundary-value problem (IBVP) for coupled Korteweg-de Vries equations posed on a finite interval with nonhomogeneous boundary conditions. We overcome the requirement for stronger smooth boundary conditions in the traditional method via the Laplace transform. Our approach uses the strong Kato smoothing property and the contraction mapping principle.

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IBVP of coupled kdv.pdf available at <https://authorea.com/users/349689/articles/513462-a-nonhomogeneous-boundary-valued-problem-for-the-coupled-kdv-system>

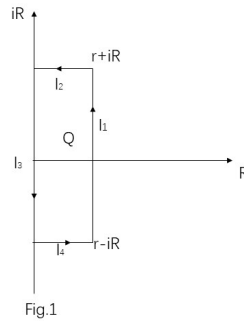


Fig.1