THE ADMB–KDV EQUATION IN ANISOTROPIC SOBOLEV SPACES

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Abstract. Considered herein is the anisotropic dissipation-modified Boussinesq-KdV equation which is a two-dimensional version of the KdV equation. It is established that the Cauchy problem associated to this equation is locally well-posed in anisotropic Sobolev spaces $H^{s_1,s_2}(\mathbb{R}^2)$, for all $s_1 > -1/2$ and $s_2 \geq 0$. A global existence result for this equation will be obtained under suitable conditions.


Keywords and phrases: Cauchy Problem, anisotropic Sobolev spaces, Boussinesq-KdV equation.

REFERENCES


