

THE L^1 STABILITY OF SOLUTIONS FOR THE DEGASPERIS-PROCESI EQUATION

Shaoyong Lai, Nan Li and Meng Wu

Department of Mathematics
Southwestern University of Finance and Economics, Chengdu, 610074, China
Corresponding Author: Laishaoy@swufe.edu.cn

Abstract. We establish the $L^1(R)$ stability for the solutions of the Degasperis-Procesi equation in the space $L^1(R)$ under the assumption that its initial value lies in $H^s(R)$ with $s > \frac{3}{2}$. The key element in our analysis is that the L^∞ norm of the solutions is finite for all finite time t .

Keywords. L^1 stability; Strong solutions; The Degasperis-Procesi model.

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