

1172-35-65

Xin Yang* (xiny@ucr.edu), Department of Mathematics, 900 University Ave., Riverside, CA 92521, and **Bing-Yu Zhang** (zhangb@ucmail.uc.edu), Department of Mathematics, University of Cincinnati, Cincinnati, OH 45221. *Well-Posedness for the Coupled KdV-KdV Systems.*

The KdV equation is a mathematical model for the waves on shallow water surfaces. The coupled KdV-KdV systems usually serve as models to describe the interaction of two long waves with different dispersion coefficients. The well-posedness of the Cauchy problem of both the single equation and the coupled systems are of fundamental importance. A particular question to ask is: what is the least regularity requirement for the initial data such that the Cauchy problem is well-posed? This task for the single KdV equation has been accomplished. We will report some progress on this issue for the coupled KdV-KdV systems. This talk is based on joint works with Bing-Yu Zhang. (Received August 16, 2021)