

Some well-posedness results for nonlinear wave equations

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ABSTRACT:

The talk will review some recent approaches to the uniqueness and continuous dependence for the Camassa-Holm and other first or second order nonlinear wave equations. Specifically, I shall discuss

- i. changes of variable, which transform the nonlinear equations into a semilinear hyperbolic system, and
- ii. a metric defined in terms of optimal transportation, such that the flow generated by the equation becomes Lipschitz continuous w.r.t. this new distance.