

Analysis and Applied Mathematics Seminar

On special regularity properties of solutions to a class of dispersive equations

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Abstract: In a joint work with P. Isaza and F. Linares we show that solutions of the IVP for the k-generalized KdV equation
$$\begin{cases} \begin{aligned} &\partial_t u + \partial_x^3 u + u^k \partial_x u = 0, \\ &t, x \in \mathbb{R}, k \in \mathbb{Z}^+, \\ &u(x, 0) = u_0(x) \end{aligned} \end{cases}$$
 preserve some smoothness of the initial data u_0 and that this regularity moves with infinite speed to its left as time evolves.

Monday, March 28 at 4:00 PM in SEO 636