ON THE WELL-POSEDNESS FOR THE GENERALIZED OSTROVSKY, STEPANYAMS AND TSIMRING EQUATION

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In this talk we consider the initial value problem (IVP) associated to equation

$$u_t + u_{xxx} - \eta(\mathcal{H}u_x + \mathcal{H}u_{xxx}) + u^k u_x = 0, \quad x \in \mathbb{R},\, t \geq 0,$$

where $\eta > 0$, and $\mathcal{H}$ denotes the usual Hilbert transform. We will describe the local results obtained for the IVP in Sobolev spaces $H^s(\mathbb{R})$ for $s \geq 0$ and $k = 1, 2, 3$ and the global ones in $L^2(\mathbb{R})$.

References

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