

On the well-posedness for the generalized
Ostrovsky-Stepanyams-Tsimring equation.

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Abstract. 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 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 $L^2(\mathbb{R})$.