

SEMINARIO

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Discretization of Ostrovsky equation and related PDEs

Abstract: Recently, the Ostrovsky equation and its various variants have drawn much attention in nonlinear wave community. They can be obtained by generalizing existing typical wave models such as the KdV equation, and give more precise modeling on, for example, ultrashort optical pulses, internal waves, and so on. One strong feature of such PDEs is that they come with the term u_{tx} , which we call here a mixed derivative. PDEs with a mixed derivative requires a treatment compared to standard evolution equations when we consider their numerics. In this talk, we report some of our new findings on this topic, and then point out several new aspects of the solutions of the generalized Ostrovsky equation.

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