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Kadomtsev-Petviashvili models: Temporal dynamics and special solutions.

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Abstract

In this talk we will give an introduction to the Kadomtsev-Petviashvili equations posed on $\mathbb{R}^2$ and some special solutions. For both models, we will provide sequential in time asymptotic descriptions of solutions obtained from arbitrarily large initial data, inside and far regions of the plane not containing lumps or line solitons, and under minimal regularity assumptions. Also a geometrical description of the dynamics will be given in terms of parabolic regions.

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