Nonlinear Sciences > Exactly Solvable and Integrable Systems

On the construction of the KP line-solitons and their interactions

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The line-soliton solutions of the Kadomtsev--Petviashvili (KP) equation are investigated in this article using the tau-function formalism. In particular, the Wronskian and the Grammian forms of the tau-function are discussed, and the equivalence of these two forms are established. Furthermore, the interaction properties of two special types of 2-soliton solutions of the KP equation are studied in details.

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