

Wei, Hanyu; Tong, Yanchun; Xu, Ran

The Darboux transformation of the derivative Manakov equation and its explicit solution.

(English) [Zbl 1363.35305](#)

J. Math., Wuhan Univ. 36, No. 1, 6-16 (2016).

Summary: In this paper, we present a new Darboux transformation for the derivative Manakov equation. By applying the Darboux transformation, we obtain new soliton solutions of the derivative Manakov soliton equation. Finally, the figures of the soliton solution are obtained by choosing the suitable parameters.

MSC:

[35Q51](#) Soliton equations

[37K35](#) Lie-Bäcklund and other transformations for infinite-dimensional Hamiltonian and Lagrangian systems

[37K40](#) Soliton theory, asymptotic behavior of solutions of infinite-dimensional Hamiltonian systems

Keywords:

spectral problem; Darboux transformation; darboux matrix; explicit solution