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Auto-Bäcklund transformation and exact analytical solutions for the Kupershmidt equation.

(English) [Zbl 1038.35087](#)

Appl. Math. E-Notes 3, 171-177 (2003).

Summary: The homogeneous balance method [*M. L. Wang*, *Phys. Lett. A* 199, 169–172 (1995; [Zbl 1020.35528](#))] is improved and applied to the Kupershmidt equation. As a result, some families of exact analytical solutions are derived.

MSC:

[35Q51](#) Soliton equations

[35C05](#) Solutions to PDEs in closed form

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

Full Text: [EuDML](#) [EMIS](#)