

## Two Kinds of New Lie Algebras for Producing Integrable Couplings

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Abstract: Two types of Lie algebras are constructed, which are directly used to deduce the two resulting integrable coupling systems with multi-component potential functions. Many other integrable couplings of the known integrable systems may be obtained by the approach.

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Key words: KN hierarchy, integrable couplings, Lie algebra, loop algebra

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