

General Symmetry Approach to Solve Variable-Coefficient Nonlinear Equations

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Abstract: After considering the variable coefficient of a nonlinear equation as a new dependent variable, some special types of variable-coefficient equation can be solved from the corresponding constant-coefficient equations by using the general classical Lie approach. Taking the nonlinear Schrödinger equation as a concrete example, the method is recommended in detail.

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Key words: symmetry approach, variable coefficient equation

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