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Generation of new exactly solvable potentials of a nonstationary Schrödinger equation.

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Summary: A method for generating integrable potentials of a nonstationary Schrödinger equation (i.e., with time-dependent potential) is developed on the basis of the method of “dressing” of linear differential operators. Potentials that admit separation of variables generate classes of nonseparating potentials for which the Schrödinger equation has nonlocal symmetry operators.

MSC:

[35Q40](#) PDEs in connection with quantum mechanics

[35R30](#) Inverse problems for PDEs

[35P25](#) Scattering theory for PDEs

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Keywords:

generating integrable potentials; time-dependent potential; dressing of linear differential operators

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