

## Analytic Solution of Strongly Coupling Schrödinger Equations

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Abstract: A recently developed expansion method for analytically solving the ground states of strongly coupling Schrödinger equations by Friedberg, Lee, and Zhao is extended to excited states and applied to power-law central forces for which scaling properties are proposed. As examples for application of the extended method, the Hydrogen atom problem is resolved and the low-lying states of Yukawa potential are approximately obtained.

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Key words: strong coupling, Schrödinger equation, Yukawa potential

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