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New Exact Envelope Traveling Wave Solutions of High-Order Dispersive Cubic-Quintic Nonlinear Schrödinger Equation

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Abstract: Using trial equation method, abundant exact envelope traveling wave solutions of high-order dispersive cubic-quintic nonlinear Schrödinger equation, which include envelope soliton solutions, triangular function envelope solutions, and Jacobian elliptic function envelope solutions, are obtained. To our knowledge, all of these results are new. In particular, our proposed method is very simple and can be applied to a lot of similar equations.

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Key words: trial equation method, exact solution, nonlinear Schrödinger equation