Rogue Wave Solutions of a Three-Component Coupled Nonlinear Schrödinger Equation

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Abstract:

In this talk, we investigate rogue wave solutions in a three-component coupled nonlinear Schrödinger equation. With the certain requirements on the backgrounds of components, we construct a new multi-rogue wave solution that exhibits a structure like a four-petaled flower in temporal-spatial distribution, in contrast to the eye-shaped structure in one-component or two-component systems. The results could be of interest in such diverse fields as Bose-Einstein condensate, nonlinear fibers and super fluid.

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