



Application of Lie Symmetry Analysis to the Generalized Rosenau and Davey–Stewartson Equations

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Lie symmetry analysis is a highly effective mathematical method for understanding the structure of differential equations and obtaining exact solutions. This technique provides a systematic way to reveal the underlying symmetries of an equation, transform it into more manageable forms, and classify equations based on their invariance properties. In this talk, we will discuss Lie symmetry analysis and its application to some nonlinear partial differential equations. Specifically, we will examine the symmetry classes and analytical solutions for a generalized Rosenau equation, and also investigate the symmetry structures of some Davey–Stewartson systems.

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