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Embed-Solitons and Their Evolutional Behaviors of (3+1)-Dimensional Burgers System

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Abstract: With the help of an extended mapping approach and a linear variable separation method, new families of variable separation solutions with arbitrary functions for the (3+1)-dimensional Burgers system are derived. Based on the derived exact solutions, some novel and interesting localized coherent excitations such as embed-solitons are revealed by selecting appropriate boundary conditions and/or initial qualifications. The time evolutional properties of the novel localized excitation are also briefly investigated.

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