

Dear Editor,

Our paper titled “Novel nonlinear wave transitions and interactions for $(2 + 1)$ -dimensional generalized fifth-order KdV equation” wants to be your consideration for publication in your journal *Nonlinear Dynamics*. We would like to declare that the manuscript has not been submitted else-where for publication, in whole or in part, and all the authors listed have approved the manuscript that is enclosed.

In this paper, we investigate nonlinear waves and interactional structures under constant wave background for the $(2 + 1)$ -dimensional generalized fifth-order KdV (2GKdV) equation. Through the Hirota perturbation expansion method, we construct the N -solitary wave of the 2GKdV equation. By introducing the velocity resonance mechanism and transformed wave conditions for the multi-soliton solutions, we derive abundant nonlinear wave structures including the X/Y -Shaped soliton, the W -Shaped soliton, the Space-Curved soliton and the Oscillation M -Shaped soliton, etc. In addition, various nonlinear wave molecules and interactional structures involving the WS soliton, the XS/YS soliton, the SC soliton, breathers, and lump are derived. We also analyze the dynamic properties of new nonlinear wave structures from the perspective of phase shift and trajectory equation. Moreover, we find that the research results obtained in this article may contribute to reveal the nonlinear phenomena of nonlinear models.

We are looking forward to hearing from you soon. Correspondence could be addressed to Ruoxia Yao at the following address and Email addresses.

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Sincerely yours,

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