Construction of Recursion Formulas for Lax Pairs of (2+1)-Dimensional Equation: Modified Generalized Dispersive Long Wave Equation

TIAN Yong-Bo,[1] CHENG Yi,[1] and SHAO Nan[2]

[1] Department of Mathematics, University of Science and Technology of China, Hefei 230026, China
[2] Department of Chemistry, University of Science and Technology of China, Hefei 230026, China
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Abstract: In this article, we study the Lax pairs of (2+1)-dimensional equation: the modified generalized dispersive long wave (MGDLW) equation. Based on the well-known binary Darboux transformation, we dig out the recursion formulas of the first part of the Lax pairs. Then by further discussion and doing some revisional work, we make the recursion formulas fit for the second part of Lax pairs. At last, some solutions to the MGDLW equation are worked out by using the recursion formula.

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