A General Mapping Approach and New Travelling Wave Solutions to (2+1)-Dimensional Boussinesq Equation

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Abstract: A general mapping deformation method is presented and applied to a (2+1)-dimensional Boussinesq system. Many new types of explicit and exact travelling wave solutions, which contain solitary wave solutions, periodic wave solutions, Jacobian and Weierstrass doubly periodic wave solutions, and other exact excitations like polynomial solutions, exponential solutions, and rational solutions, etc., are obtained by a simple algebraic transformation relation between the (2+1)-dimensional Boussinesq equation and a generalized cubic nonlinear Klein-Gordon equation.

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