

# Existence and Blow up of Solutions of the Cauchy Problem of the Generalized Damped Multidimensional Improved Modified Boussinesq Equation

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We consider the existence, both locally and globally in time, and the blow up of solutions of the Cauchy problem of the generalized damped multidimensional improved modified Boussinesq equation in  $W^{s,p}(\mathbb{R}^n)$ .

*Key words:* Damped Improved Modified Boussinesq Equation; Cauchy Problem; Local Solution; Global Solution; Blow up of Solution.