

论文

# GLOBAL CLASSICAL SOLUTIONS AND EXPLICIT EXACT SOLUTIONS TO A KIND OF QUASILINEAR PARTIAL DIFFERENTIAL EQUATIONS

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**摘要** In this paper the authors give a complete result on the global existence and the lifespan of classical solutions to the Cauchy problem for a kind of quasilinear partial differential equations of physical interest. The equation concerned is a quasilinear hyperbolic equation with higher order dissipative term. The method presented here offers an approach which can be used to look for some explicit exact solutions of physical interest.

**关键词** [Quasilinear equation, the Cauchy problem](#)

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**Abstract** In this paper the authors give a complete result on the global existence and the lifespan of classical solutions to the Cauchy problem for a kind of quasilinear partial differential equations of physical interest. The equation concerned is a quasilinear hyperbolic equation with higher order dissipative term. The method presented here offers an approach which can be used to look for some explicit exact solutions of physical interest.

**Key words** [Quasilinear equation](#) [the Cauchy problem](#) [the life-span](#) [the global existence](#)

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