

论文

拟线性抛物方程的弱解

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摘要:

该文给出了拟线性退化抛物方程 $\partial_t u + \partial_x f(u) = \partial_{xx} A(u(x,t)) \in \mathbb{R}^2_{+ \times (0, +\infty)}$, $u(x,0) = u_0(x), x \in \mathbb{R}$ 一种弱解的新定义, 利用 Div Curl 引理证明了解的存在性.

关键词: 拟线性退化抛物方程; 弱解; Div Curl 引理; 存在性.

分类号:

35L65; 35L85; 35R35

On Solutions of Quasilinear Degenerate Parabolic Equations

ZHAN Hua-Shui

Abstract:

In this paper, the author gives the definition of a new general solution for quasilinear degenerate parabolic equation $\partial_t u + \partial_x f(u) = \partial_{xx} A(u(x,t)) \in \mathbb{R}^2_{+ \times (0, +\infty)}$, $u(x,0) = u_0(x), x \in \mathbb{R}$ and get its existence by DivCurl Lemma.

Keywords: Quasilinear degenerate parabolic equation; General solution; Div Curl Lemma

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- ▶ 拟线性退化抛物方程; 弱解; Div Curl 引理; 存在性.

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