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论文

非线性变换和守恒律方程的非自相似解

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摘要：

该文提出了一种非线性变换把一类n维单守恒律方程和初值同时降维为一维, 得到非自相似形式的全局解和基本波的表达式，并发现了非自相似解和相似解之间的本质性差别和联系

关键词： 非自相似解;高维守恒律方程;激波;稀疏波

分类号:

35L65;35L67

Nonlinear Transformation and Non selfsimilar Solution of Conservation Laws

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Abstract:

The author proposes a kind of nonlinear transformation, u nder which the n dimensional scalar conservation laws and its initial value are transformed into one dimensional situation at the same time. The non selfsimilar global solution and the expression of elementary wave are obtained. The author also discovers the essential difference and connection between non selfsimilar and selfsimilar solutions.

Keywords: Non selfsimilar solution Multi dimensional conservati on laws Shock wave Rarefaction wave

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