

**RATE OF CONVERGENCE OF SOLUTIONS TO TRAVELING
FRONTS FOR SOME QUASI-LINEAR RELAXATION SYSTEMS
WITH DIFFUSION**

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Abstract

This paper is concerned with the exponential convergence rates of solutions to non-degenerate traveling fronts in some exponentially weighted spaces and the algebraic convergence rates of solutions to non-degenerate and degenerate traveling fronts in some algebraically weighted spaces for 2×2 quasi-linear relaxation systems with small diffusion rate by weighted energy method, where the small initial perturbations of the traveling fronts are in some appropriate weighted spaces and the wave strengths are small.