Asymptotic behavior of some nonlocal convection-diffusion equations

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We consider an initial value problem for a nonlinear and nonlocal conservation law, supplemented with a bounded and increasing initial condition. We show that the solution of such a problem converges as $t \to \infty$ towards a rarefaction wave, that is, a weak solution of the conservation law $w_t + f(w)_x = 0$ with a step-like initial condition.

References

[1] *G. Karch, Ch. Miao, X. Xu*: On convergence of solutions of fractal Burgers equation toward rarefaction wave. SIAM J. Math. Anal. *39* (2008), 1536–1549.