

TRAVELING WAVES AND ASYMPTOTICAL BEHAVIOR OF SOLUTIONS OF A REACTION-DIFFUSION EQUATION

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The aim of this talk is to present some results on the asymptotical behavior of the solutions $u(x, t)$ of the equation

$$u_t = u_{xx} + f(u),$$

where $f : [0, 1] \rightarrow \mathbb{R}$ is a C^1 -function with at least two zeroes, $f(0) = f(1) = 0$.

We are interested on the behavior of the solution when the initial data $u(x, 0) := u_0(x)$, $0 \leq u_0(x) \leq 1$, is a given function with compact support. This asymptotical behavior is closed related to the existence of traveling waves connecting the different equilibrium states of the equation.

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