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**Title:** Some recent results about traveling waves for reaction-diffusion equations with saturating diffusion

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**Abstract:**

We present some recent results, in collaboration with L. Sanchez and M. Strani, about existence of heteroclinic traveling waves for the 1-dimensional reaction-diffusion equation

$$u_t = \left( \frac{u_x}{\sqrt{1 + u_x^2}} \right)_x + h'(u)u_x + f(u).$$

Here we assume the diffusion to be of mean-curvature type, embodying an effect of saturation for large gradients, and 0 and 1 to be equilibria (for instance,  $u(t, x)$  can be thought about as the relative concentration of a gene inside a population). We examine the features of the set of the admissible speeds (i.e., the values  $c \in \mathbb{R}$  for which a solution  $u(t, x) = v(x + ct)$  connecting 0 and 1 exists) in dependence of the shape of the reaction term  $f$ , and underline analogies and differences with the linear diffusion case.