

LARGE SOLUTIONS FOR SOME PARABOLIC EQUATIONS WITHOUT ABSORPTION

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In this talk I will present some new results obtained in a joint work with F. Petitta about existence and uniqueness of entropy/renormalized large solutions for the parabolic p -laplacian problem without absorption for the case $1 < p < 2$; i.e.

$$(P)_p \begin{cases} u_t = \operatorname{div}(|\nabla u|^{p-2} \nabla u) & \text{in } \Omega \times [0, T) \\ u = +\infty & \text{in } \partial\Omega \times [0, T) \end{cases}$$

as well as existence and uniqueness of entropy solutions of large solutions for the total variation flow:

$$(P)_1 \begin{cases} u_t = \operatorname{div} \left(\frac{Du}{|Du|} \right) & \text{in } \Omega \times [0, T) \\ u = +\infty & \text{in } \partial\Omega \times [0, T) \end{cases}$$

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