Stability of solutions to the filtration equation

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In the talk we will establish lipschitz stability of mild solutions to porous medium equation $\partial_t u = \Delta(u^\gamma)$ in $\mathbb{R}^d$ with respect to nonlinearity exponent $\gamma > 1$. This result is a consequence of more general study conducted in [1], where the filtration equation is considered. Firstly, we will recall the solvability results for the filtration equation in $\mathbb{R}^d$ in the nonlinear semigroup framework. Secondly, we will sketch the proof of the stability result.
This is a joint work with T. Dębiec, P. Gwiazda, B. Miasojedow, Z. Szymańska and A. Wróblewska-Kamińska.

[1] Cockburn, B., Gripenberg, G. (1999). Continuous dependence on the nonlinearities of solutions of degenerate parabolic equations. Journal of differential equations, 151(2), 231-251.