Einladung zum Oberseminar

Threshold phenomena for symmetric decreasing solutions of reaction-diffusion equation

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Zeit: **Donnerstag, 21. Juni 2012**
              11:00 Uhr

Ort: **SG 11** (Seminargebäude, Wüllnerstr. 5b)

Inhalt/Abstract:

We study the Cauchy problem for the nonlinear reaction-diffusion equation

$$u_t = u_{xx} + f(u), x \in \mathbb{R}, t > 0,$$
$$u, (x, 0) = \phi(x), x \in \mathbb{R},$$

with different nonlinearities $f(u)$. By using proper energy functional and exponentially weighted functional, for symmetric decreasing initial conditions, we can prove a one-to-one relation between the long time behavior of solution and the limit value of energy. Then, for a monotone increasing family of initial conditions, there exists a sharp transition between extinction and propagation. This is a joint work with Cyrill B. Muratov.

Interessierte sind herzlich eingeladen.