

Parabolic Problems in thin Domains

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Abstract. We study semilinear reaction-diffusion problems of the type

$$\begin{aligned} u_t(x, t) &= \Delta u(x, t) + f(u(x, t)), & \Omega \times (0, \infty) \\ \frac{\partial u}{\partial \nu}(x, t) &= 0, & \partial\Omega \times (0, \infty). \end{aligned} \tag{P}$$

We develop a abstract theory to obtain the continuity of the asymptotic dynamics of (P) under singular perturbations of the spatial domain Ω and we apply that to examples in *thin domains*.

¹Partially supported by grant # 03/12611-2 FAPESP, Brazil