

## The parabolic thin obstacle problem for the weighted bi-Laplacian

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**Abstract.** In this paper, we are concerned with a parabolic thin obstacle problem for the weighted biLaplace operator. Such problems are in connection with various physical applications such as the travelling waves phenomenon, pattern formation in spatially homogeneous systems, phase separation in isothermal binary systems, etc. We establish the well-posedness of the problem, and we analyze the regularity of the solution depending on the dimension of the domain in consideration. Our methods are based on an implicit time-discretization approach

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