

## **The first exit problem of scalar reaction-diffusion equations with small multiplicative regularly varying Lévy noise**

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In this talk we will present the problem of the first exit from a domain of attraction of a generic class of strongly dissipative reaction diffusion equations perturbed by multiplicative regularly varying Lévy noise in the regime of small noise intensity. This problem has a long history for Gaussian (Lévy) perturbations which is typically solved by large deviation techniques, which are no longer available in case of heavy-tailed Lévy noise. The case of additive regularly varying Lévy noise perturbations was addressed recently by Debussche, H. and Imkeller based on a noise decomposition technique, which allows the construction of a well-understood "model" of the exit times. We will explain the exponential convergence of the exit times towards such a model in the case of multiplicative noise and how this allows to construct the asymptotic exit distributions.