On the obstruction and propagation of entire solutions to a non-local reaction diffusion equation with a gap

In this talk I will discuss the propagation properties of a bistable spatially heterogeneous reaction-diffusion equation where the diffusion is generated by a jump process. Here the spatial heterogeneity is due to a small region with decay. First, I will focus on the existence of a “generalized transition front”. Then I will give some partial results about propagation and obstruction of the transition front. Throughout the talk I will point out many interesting differences between the non-local and local reaction-diffusion equations.