Nonlocal Heterogeneous KPP Equation in $\mathbb{R}^N$.

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I will present a joint work with Henri Berestycki and Hoang Vo, on the nonlocal niche model:

$$\partial_t u = J * u - u + f(x, u) \quad \text{in} \quad \mathbb{R}^N$$

where $J > 0$ and $f(x, u)$ is a nonlinearity of KPP type describing the ecological niche of the species. After a short introduction to the model, I will present the survival criteria that we obtained. Then I will focus on the behaviour of this criteria and the corresponding stationnary solution under some scaling of the kernel.