A Harnack Inequality and the Non-local Fisher-KPP Equation

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Résumé

Recently, non-local reaction diffusion equations have been of interest to mathematicians and biologists alike. From a mathematical perspective, these equations come with serious technical challenges due to the fact that they do not enjoy a maximum principle, which is the main tool for understanding propagation in the classical theory. I will describe a new "in-the-moment" parabolic Harnack inequality and its applications to non-local FKPP. Time permitting, I will discuss, also, the limitations of this method.

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