

"The influence of fractional diffusion in Allen-Cahn and KPP type equations"

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In this talk I will start explaining basic ideas concerning fractional Laplacians as well as the essential tools to treat nonlinear equations involving these operators (such as their Hamiltonian structure). The main part of the course will present results on stationary solutions of fractional equations (mainly of bistable or Allen-Cahn type) and on front propagation with fractional diffusion for Fisher-KPP, combustion, and bistable reactions.