

# A FRAMEWORK FOR A NONLINEAR NONLOCAL DIFFUSION EQUATION

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In the talk, I will describe an abstract framework for non-local non-linear diffusion, by which we mean a phenomenon with properties strongly associated to diffusive processes such as the conservation of mass, the maximum principle, and the comparison principle. This framework encompasses some of the known examples of equations like the fractional porous medium equation or the equation with the fractional  $p$ -Laplacian, but it also opens up the space for new examples to be constructed and studied.

*This is a joint work with Mitosz Krupski and Moritz Kassmann.*