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Recent progress in tug-of-war games and normalized equations

In this talk, we consider stochastic zero sum games and related PDEs. A particular example of such a stochastic game is the tug-of-war with noise. Passing to the limit with the step size in this game gives rise to the normalized or game theoretic p-Laplace equation and p-parabolic equation.

First we discuss new regularity methods for tug-of-war with noise and a more general class of games. We also discuss the normalized equations from the PDE point of view, and review recent results. This is part of the research activity initiated with J.J. Manfredi and J.D. Rossi back in 2008.