

EXTINCTION TIME FOR CONTINUOUS STATE BRANCHING PROCESSES WITH COMPETITION IN A LEVY RANDOM ENVIRONMENT

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Abstract: In this talk, we present some distributional properties of the extinction time of continuous state branching processes with competition in a Levy random environment. In particular, we will show that, under some assumptions on the competition mechanism, the extinction time has finite expectation. In the case when the random environment is driven by a Brownian motion, the distribution of the extinction time is determined by its Laplace transform. In this case, a Lamperti-type transform is explicitly given.

This is a joint work with Helene Leman (CIMAT) and Jose Luis Perez (CIMAT).