

An introduction to Individual Path Uniqueness

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In this talk I will introduce the notion of Individual Path Uniqueness for SDEs, which is stronger notion than pathwise uniqueness and is comparable to uniqueness for random ODEs. Furthermore, I will outline how to prove such uniqueness results for SDEs of the type

$$dX_t = b(t, X_t) dt + dW_t,$$

where W is finite-dimensional Brownian motion and b is a bounded, measurable drift. Note that we do not assume any regularity on b .