UNIQUENESS FOR VOLTERRA-TYPE STOCHASTIC EQUATION

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Abstract: Let σ be a Hölder continuous function with index $\gamma \leq 1$ and set $\alpha \in (0, 1/2)$. Consider the following Volterra-type stochastic equation driven by Brownian motion B

$$X_t = X_0 + \int_0^t (t-s)^{-\alpha} \sigma(X_s) \mathrm{d}B_s$$

This equation can also be interpreted as a degenerate SPDE. We are interested in the set of parameters α , γ for which the pathwise uniqueness holds for the above equation. This is a joint work with Tom Salisbury.