Mild solutions for Rough Evolution Equations

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In this talk we introduce a pathwise approach to investigate mild solutions for parabolic stochastic evolution equations (SEEs) driven by multiplicative rough noise. To this aim we combine techniques from M. Gubinelli and S. Tindel (2010) together with arguments employed by M. Garrido, K. Lu and B. Schmalfuß (2015). Regarding the general algebraic framework developed by M. Gubinelli, we derive a Sewing Lemma which ensures the existence of the pathwise integral together with appropriate algebraic and analytic properties. Based on this, we obtain via a fixed-point argument existence and uniqueness of a local mild solution. Finally, we receive a global solution by concatenation.
This talk is based on a joint work with Alexandra Neamţu (TU Munich).