Some recent progress on quasilinear SPDEs

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We give an overview of the solution theory for singular SPDEs in case of a quasi-linear equation, following the recent approach of Otto, Sauer, Smith and Weber. The basic idea is to parametrize the model, which captures the local solution behaviour, by partial derivatives w.r.t. the nonlinearity. This allows for an efficient bookkeeping and an inductive construction of the model. Malliavin calculus plays a prominent role, on the one hand to obtain convergence of renormalized models based on a spectral gap assumption of the driving noise, on the other hand to obtain a characterization of models establishing a universality-type result. Based on joint work with Pablo Linares, Felix Otto and Pavlos Tsatsoulis.