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Schauder Estimates for Germs via Scaling

The notion of a germ in regularity structures is a generalization of the standard Taylor polynomials. I will present a method for obtaining Schauder estimates for germs which correspond to solutions of hypoelliptic equations in anisotropic settings. The method does not use kernel estimates, but is based on a scaling argument originally introduced by Simon in the classical case. In particular, these estimates can be applied to show a priori estimates in Hölder spaces for renormalized, classically ill-defined quasilinear equations in the subcritical regime.

The talk is based on ongoing work with Scott Smith.