Maximal L_p regularity for degenerate parabolic problems

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Maximal regularity for linear parabolic problems plays an essential role for the treatment of nonlinear applications.

The aim is to present a method to prove maximal regularity for *degenerate* parabolic problems in $X = L_p((0,T),E)$ with $p \in (1,\infty)$, where E denotes a UMD Banach space. The abstract approach combines Dore-Venni type theorems on operator sums with results on products of non-commuting sectorial operators which possess bounded imaginary powers in X.