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*Classes of solutions to quasilinear elliptic equations with sub-natural growth terms*

This talk is concerned with various classes of solutions ( $BMO$ ,  $W^{1,r}$ ,  $L^r$ , etc., along with their local counterparts) to quasilinear elliptic equations of the type  $-\Delta_p u = \sigma u^q + \mu$  for  $0 < q < p - 1$  in  $\mathbf{R}^n$ . Here  $\sigma, \mu$  are nonnegative functions (or measures), and  $\Delta_p$  ( $1 < p < \infty$ ) is the  $p$ -Laplacian. We will discuss necessary and sufficient conditions for the existence of solutions, in both capacity and nonlinear potential theory terms, as well as related weighted norm inequalities. Based in part on joint work with Adisak Seesanea (Hokkaido University, Japan).