1071-35-51 **Nguyen Hoang Loc** and **Klaus Schmitt*** (schmitt@math.utah.edu). *A Bernstein condition for nonlinear elliptic PDEs.*

In the early 1900s S. Bernstein introduced a growth condition with respect to u' on the nonlinear term of the ordinary differential equation $u'' + f(t, u, u') = 0, \quad 0 \leq t \leq 1$, which guaranteed a $C^1[0,1]$ bound on solutions depending on a $C[0,1]$ bound. We extend this result to nonlinear elliptic PDEs showing that a $W^{1,p}$ bound for solutions may be deduced from an L^∞ bound. (Received February 02, 2011)