

# **P-CONCAVITY FOR SOLUTIONS TO NONLINEAR ELLIPTIC PROBLEMS IN CONVEX DOMAINS**

ABSTRACT. We investigate convexity properties of solutions to elliptic Dirichlet problems in convex domains. In particular we give conditions on the operator  $F$  such that a suitable power of the absolute value  $|u|$  of a nonpositive solution  $u$  of a fully nonlinear equation  $F(x, u, Du, D^2u) = 0$  in a convex domain  $\Omega$ , vanishing on  $\partial\Omega$ , is concave.