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Nam Q. Le* (nqle@indiana.edu), Department of Mathematics, Indiana University, Bloomington, 831 E 3rd St, Bloomington, IN 47405. *Global second derivative estimates for the second boundary value problem of the prescribed affine mean curvature equation.*

The second boundary value problem of the prescribed affine mean curvature equation is a nonlinear, fourth order, geometric partial differential equation. It was introduced by N. S. Trudinger and X. J. Wang in 2005 (The affine plateau problem, *J. Amer. Math. Soc.* **18**(2005), 253-289) in their investigation of the affine Plateau problem in affine geometry. In this talk, we discuss recent developments in obtaining global second derivative estimates for this equation when the affine mean curvature is not necessarily bounded and does not have a fixed sign. A key ingredient in these developments is the boundary regularity for the linearized Monge-Ampere equation. (Received January 30, 2015)