

We construct a family of solutions to the Monge-Ampère equation in two dimensions with a fixed modulus of strict convexity that shows that $C^{2,\alpha}$ estimates for the Monge-Ampère equation depend in a nonlinear way both on the right-hand side and on $1/\alpha$. Furthermore, time permitting, we will discuss a positive result demonstrating polynomial dependence on the right-hand side in $C^{2,\alpha}$ estimates for solutions with a polynomial modulus of strict convexity. This is joint work with Alessio Figalli and Connor Mooney.