HESSIAN ESTIMATES FOR SPECIAL LAGRANGIAN EQUATIONS

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We survey some recent results on Hessian estimates for special Lagrangian equations, including the $\sigma_2$ equation in dimension three. The gradient graph of the solutions are minimal Lagrangian surfaces. An Hessian estimate for the $\sigma_2$ (Monge-Ampere) equation in dimension two was obtained by Heinz in the 1950’s, and irregular solutions to the $\sigma_3$ (Monge-Ampere) equation in dimension three were constructed by Pogorelov in the 1970’s. This is joint work with Micah Warren.