

Regularity theory of elliptic equations

Lihe Wang (Iowa)

Abstract:

The first lecture will start out with the maximum principle and their gradient estimates. Most importantly we will introduce the idea of geometrical interpretation of the estimate and its scaling. We will talk about the weak formulation of the elliptic equation. Second lecture is about Schauder estimate. Both maximum principle approach and the regularity of weak solution will be represented. We will present the DeGiorgi and Nash theory in the last lecture. We will discuss the geometrical interpretation along each of the computations.