

New regularity results on the regularity of semi-convex supersolutions and convex envelope of supersolutions to fully nonlinear Elliptic PDEs

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In this talk, I will briefly discuss some new developments on the regularity of semi-convex supersolutions of fully nonlinear PDEs and well as the convex envelope of supersolutions. This extends the $C^{1,1}$ regularity of L. Caffarelli (for the convex envelope) as well as the apriori estimate obtained by Caffarelli, Kohn, Nirenberg, and Spruck (for semi-convex supersolutions) in the 80's.