RECENT PROGRESS ON ISOLATED SINGULARITIES FOR NONLINEAR ELLIPTIC EQUATIONS

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We present recent results which completely classify the behaviour of all positive solutions near an isolated singularity for nonlinear elliptic equations. As a main feature, our approach is developed based on regular variation theory and has wide applicability to elliptic equations incorporating inverse square potentials and weighted nonlinearities. As a by-product, we obtain optimal conditions for the removability of all singularities, thus resolving an open question of Vázquez and Véron (1985).