

Symmetry, quantitative Liouville theorems and analysis of large solutions of conformally invariant fully nonlinear elliptic equations

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We establish blow-up profiles for any blowing-up sequence of solutions of general conformally invariant fully nonlinear elliptic equations on Euclidean domains. We prove that (i) the distance between blow-up points is bounded from below by a universal positive number, (ii) the solutions are very close to a single standard bubble in a universal positive distance around each blow-up point, and (iii) the heights of these bubbles are comparable by a universal factor. As an application of this result, we establish a quantitative Liouville theorem. This is a joint work with Luc Nguyen.