ASYMPTOTIC ANALYSIS IN THE BALL FOR ALMOST CRITICAL FULLY NONLINEAR ELLIPTIC EQUATIONS

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We will present recent results about the asymptotic behavior as $\epsilon \to 0$ of the solutions $u_\epsilon \geq 0$ of the Dirichlet problems

$$\begin{cases}
-M^\pm (D^2 u_\epsilon) = u_\epsilon^{p^*_\pm - \epsilon} & \text{in } B_1, \\
u_\epsilon = 0 & \text{on } \partial B_1,
\end{cases}$$

where $p^*_\pm$ are the critical (radial) exponents for the Pucci’s operators $M^\pm$.

We will show how the solutions $u_\epsilon$ concentrate around their maximum point (the origin), while a suitably defined energy associated to the system remains invariant.

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