A variational problem in L^∞ involving the Laplacian

Suppose that $\Omega \subseteq \mathbb{R}^n$ and $F\colon \Omega \times \mathbb{R} \to \mathbb{R}$ is a given function. Consider functions $u\colon \Omega \to \mathbb{R}$ and suppose that we want to minimise a functional of the form $E(u) = \operatorname{ess\,sup} |F(\,\cdot\,, \Delta u)|$ under given boundary data, prescribing u and its first derivative on $\partial\Omega$. Under quite natural assumptions on F and Ω, it turns out that we have a unique minimiser (which is quite unexpected for a variational problem of this sort) and we have a lot of information about its structure. This is joint work with Nikos Katzourakis.