

An interpolation approach to L^∞ a-priori estimates for elliptic problems with nonlinearity on the boundary

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In this talk, we present an explicit L^∞ a-priori estimate for weak solutions to semilinear elliptic equations with nonlinearity on the boundary, in terms of the powers of their $H^1(\Omega)$ norms. We combine an appropriate version of a Moser iteration argument along with elliptic regularity and Gagliardo–Nirenberg interpolation inequality to prove our result. We illustrate our result with an application to subcritical problems satisfying Ambrosetti–Rabinowitz condition.

In Special Session 28 on Recent Trends in Nonlinear Elliptic PDEs at the Mathematical Congress of the Americas 2025.