

# Results of Ambrosetti-Prodi type for non-selfadjoint elliptic operators

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## **Resumo/Abstract:**

The well-known Ambrosetti-Prodi theorem considers perturbations of the Dirichlet Laplacian by a nonlinear function whose derivative jumps over the principal eigenvalue of the operator. Various extensions of this landmark result were obtained for self-adjoint operators, in particular by Berger and Podolak, who gave a geometrical description of the solution set. In this text we show that similar theorems are valid for non self-adjoint operators. In particular, we prove that the semilinear operator is a global fold. As a consequence, we obtain what appears to be the first exact multiplicity result for elliptic equations in non-divergence form. We employ techniques based on the maximum principle.