

Local existence results for some elliptic problems with a parameter

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We will present several elliptic problems in which local conditions on the nonlinearities provide either local existence results or local estimates on the set of solutions. We will also pay attention to cases in which local estimates require conditions of global nature on the nonlinearity.

Variational techniques will be applied to discuss some sub-critical problems (see [1]). Other cases will be treated with Bifurcation techniques (see [2]).

References

- [1] D. ARCOYA, J.L. GÁMEZ, L. ORSINA, I. PERAL: *Local existence results for sub-super-critical elliptic problems*, Comm. in Appl. Math., 2001 (5), 557-569.
- [2] J.L. GÁMEZ, J.F. RUIZ-HIDALGO: *A detailed analysis on local bifurcation from infinity for non-linear elliptic problems*, Preprint.