

EXISTENCE OF SOLUTIONS FOR A CLASS OF INTEGRAL EQUATIONS

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ABSTRACT. In the present work, the variational and the dual methods were used to show the existence of solutions to the following problems

$$L_K u = \rho(x)|u|^{p-1}u, \text{ in } \mathbb{R}^N, \quad (P)$$

and

$$L_K u = \varepsilon a(x)|u|^{p-1}u + \rho(x)|u|^{q-1}u, \text{ in } \mathbb{R}^N, \quad (Q)$$

where $0 < p < 1 < q$, $a \in L^{\frac{q+1}{q-p}}(\mathbb{R}^N)$, $\rho(x)$ is a continuous positive function, $\varepsilon > 0$ and L_K is a non-local dispersion operator.

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