

Multivalued Elliptic Equation with Exponential Critical Growth in \mathbb{R}^2 .

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RESUMO

In this work we study the existence of nontrivial solutions for the following class of multivalued elliptic problems

$$-\Delta u + V(x)u - \epsilon h(x) = \partial_t F(x, u) \quad \text{in } \mathbb{R}^2, \quad (P)$$

where $\epsilon > 0$, V is a continuous function verifying some conditions, $h \in (H^1(\mathbb{R}^2))^*$ and $\partial_t F(x, u)$ is the generalized gradient of $F(x, t)$ with respect to t and $F(x, t) = \int_0^t f(x, s) ds$. Assuming that f is a discontinuous function with exponential critical growth, we have applied variational methods for locally Lipschitz functional to get two solutions for (P) when ϵ is small enough.

Joint work with Claudianor O. Alves (UAMat/UFCG)