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# JUMPING NONLINEARITIES OUTSIDE THE SCHECHTER SQUARE

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We investigate the existence of a solution to a nonlinear problem

$$\begin{aligned}u''(x) + \lambda_+ u^+(x) - \lambda_- u^-(x) + g(x, u(x)) &= f(x), \quad x \in (0, 2\pi), \\u(0) = u(2\pi) &= 0,\end{aligned}$$

where the point  $[\lambda_+, \lambda_-] \in \Sigma_2$  is the point of the Fučík spectrum  $\Sigma = \bigcup_{m=0}^{\infty} \Sigma_m$  and  $\lambda_+ > \lambda_-$ . The solution is obtained for  $\lambda_+ > 9$ , outside the Schechter square. We investigate the problem at resonance and the nonlinearity  $g(x, u(x))$  satisfies ALP-type condition. We use a variational method based on a generalization of the Saddle Point Theorem.

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