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Michail E Filippakis* (mfilip@unipi.gr), University of Piraeus Research Center, 122 Gr,
18532 Piraeus, Greece, Greece. *Resonant (p, q) -equations with Robin boundary condition.*

In this paper we consider a nonlinear nonhomogeneous Robin problem. We consider the sum of a p -Laplacian and of q -Laplacian (a (p, q) -equation). The reaction term is a Caratheodory function which is resonant at $\pm\infty$ with respect to any nonprincipal variational eigenvalue of the Robin p -Laplacian. We use Morse theory (critical groups) and variational methods, in order to prove the existence of nontrivial smooth solutions.

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