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Kirchhoff-type problems involving variable exponent, nonlocal effects, and logarithmic nonlinearities

Communication Info

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- (1) Non-local terms
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Abstract

We study a nonlinear Kirchhoff type problems under Dirichlet boundary condition with nonlocal terms and logarithmic nonlinearity, in the setting of "variable exponents" Sobolev spaces in compact Riemannian manifolds. Using the Mountain pass Theorem, the Fountain and Dual Fountain Theorem, we discuss the existence and multiplicity of three notions of solutions: nontrivial weak solutions, large energy solutions and small negative energy solutions. One of the main difficulties and innovations of the present paper is the presence of nonlocal terms and logarithmic nonlinearity.

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