Multiple solutions for critical nonhomogeneous elliptic systems in non-contractible domain

Xueliang Duan[1], Gongming Wei[2], and Haitao Yang[1]

[1]Zhejiang University
[2]University of Shanghai for Science and Technology

August 14, 2020

Abstract

The paper is concerned with the multiple solutions of a nonhomogeneous elliptic system with critical exponent over a non-contractible domain, precisely, a smooth bounded annular domain. We prove the existence of four solutions using variational methods and Lusternik-Schnirelmann theorey, when the inner hole of the annulus is sufficiently small.

Hosted file

wileyNJD-AMA.pdf available at https://authorea.com/users/350884/articles/475601-multiple-solutions-for-critical-nonhomogeneous-elliptic-systems-in-non-contractible-domain

1