Existence and multiplicity of average-positive solutions to periodic boundary value problem with sign-changing Green's function

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April 7, 2022

Abstract

This paper deals with the periodic boundary value problem u^"+ρ^2 u=g(t)f(u),0 0 is a constant satisfying ρ[?]2nπ/T,n=1,2,... and the associated Green's function changes sign when ρ>π/T. The existence and multiplicity results for average-positive solutions are established by using the fixed point index theory of cone mapping.

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