Analele **Univ**ersităţii **Bucureşti**, **Mat**ematică
Anul LVII(2008), pp. 169–174

Unique Solution for a Semilinear Periodic Problem

Dinu TEODORESCU

Abstract - In this paper we use a contractive method in the study of the semilinear periodic problem

$$-u''(t) + \lambda u(t) + f(u(t)) = g(t); \quad t \in (0,1); \quad u(0) = u(1) = 0,$$

where f satisfies a Lipschitz condition, λ is a positive parameter and the free term g is in $L^2(0,1)$.

Key words and phrases : semilinear periodic problem, maximal monotone operator, strongly positive operator, Lipschitz operator, Banach fixed point theorem
Mathematics Subject Classification (2000) **:** 34A12, 34A34, 47J05