

Third Order Nonlocal Multipoint Boundary Value Problems

Benbouziane, ZN; Boucherif, A; Bouguima, SM

DYNAMIC PUBLISHERS, INC, DYNAMIC SYSTEMS AND APPLICATIONS; pp: 41-48;

Vol: 13

King Fahd University of Petroleum & Minerals

<http://www.kfupm.edu.sa>

Summary

We are concerned with the existence of solutions of third order problems with multipoint boundary conditions of the form $-y'' = f(t, y, y', y'')$ $0 < t < 1$, $y(0) = \gamma$, $y(\eta) = \sum_{i=1}^n a_i y(\theta_i)$, $y(1) = \sum_{j=1}^m b_j y'(\xi_j)$. Our approach is based on the method of upper and lower solutions and some arguments from the topological transversality theory of Granas.

References:

1. AFTABIZADEH A, 1991, DIFFERENTIAL INTEGRAL, V4, P189
2. AFTABIZADEH AR, 1989, SIAM J MATH ANAL, V20, P716
3. BOUCHERIF A, 2001, NONLINEAR STUDIES, V8, P395
4. CONSTANTIN A, 1996, NONLINEAR ANAL-THEOR, V27, P13
5. DECOSTER C, 1996, NONLINEAR ANAL BOUND, P1
6. DUNGUNDJI J, 1982, FIXED POINT THEORY
7. ELOE PW, 1984, SIAM J MATH ANAL, V15, P642
8. GUPTA CP, 1991, NONLINEAR ANAL-THEOR, V16, P949
9. HAI DD, 1993, NONL ANAL T M A, V21, P293
10. HENDERSON J, 1983, NONL ANAL T M A, V7, P411
11. MARANO SA, 1994, B AUST MATH SOC, V49, P1
12. MURTY KN, 1993, B I MATH ACAD SINICA, V21, P263
13. NIETO JJ, 1991, COMMENT MATH U CAROL, V32, P495
14. OREGAN D, 1987, SIAM J MATH ANAL, V18, P716
15. OREGAN D, 1990, P ROYAL IRIS ACAD A, V90, P29
16. RACHUNKOVA I, 1989, ACTA U PALACK OLOM F, V94, P43
17. RACHUNKOVA I, 1992, MATH BOHEM, P98
18. RAO DRK, 1989, NONL ANAL T M A, V5, P669
19. SENKYRIK M, 1994, MATH BOHEMICA, V119, P113
20. SENKYRK M, 1992, ACTA U PALACKI OLOMU, V31, P60

For pre-prints please write to: aboucher@kfupm.edu.sa; SM_Bouguima@mall.univ-tlemcen.dz

© Copyright: King Fahd University of Petroleum & Minerals; <http://www.kfupm.edu.sa>

