

Faculty Research 2011

1. **John R. Graef, Lingju Kong, Qingkai Kong, and Bo Yang**, Positive solutions to a fourth order boundary value problem, *Result. Math.* 59 (2011), 141-155.
2. **Jeremy Chamberlain, , Lingju Kong, and Qingkai Kong**, Nodal solutions of boundary value problems with boundary conditions involving Riemann-Stieltjes integrals, *Nonlinear Anal.* 74 (2011), 2380-2387.
3. **John R. Graef, Lingju Kong, and F. M. Minhos**, Higher order boundary value problems with φ -Laplacian and functional boundary conditions, *Comput. Math. Appl.* (2011), 236-249.
4. **John R. Graef, Lingju Kong, and Qingkai Kong**, Higher order multi-point boundary value problems, *Math. Nachr.* 284 (2011), 39-52.
5. **John R. Graef, J. Henderson, and A. Ouahab**, Differential inclusions with non-local conditions: existence results and topological properties of solution sets, *Topological Methods in Nonlinear Analysis* 37 (2011), 117–145.
6. **John R. Graef, Lingju Kong, F. M. Minhos, and J. Fialho**, On the lower and upper solution method for higher order functional boundary value problems, *Applicable Analysis and Discrete Mathematics* 5 (2011), 133--146.
7. **A. Dogan, John R. Graef, and Lingju Kong**, Higher order singular multi-point boundary value problems on time scales, *Proceedings of the Edinburgh Mathematical Society* 54 (2011), 345--361.
8. **John R. Graef and B. Yang**, Positive solutions of a higher order boundary value problem, *Journal of Applied Mathematics and Computing* 36 (2011), 319--331.
9. **John R. Graef and Lingju Kong**, First order singular boundary value problems with P -Laplacian on time scales, *Journal of Difference Equations and Applications* 17 (2011), 831--839.
10. **John R. Graef, Lingju Kong, and F. M. Minhos**, Higher order functional boundary value problems: existence and location results, *Acta Scientiarum Mathematicarum (Szeged)* 77 (2011), 87--100.
11. **John R. Graef, V. Muthulakshmi, and E. Thandapani**, Oscillation criteria for second order nonlinear neutral delay differential equations with positive and negative coefficients, *International Journal of Pure and Applied Mathematics* 70 (2011), 261—274.
12. **John R. Graef and M. Remili**, Oscillation criteria for third order nonlinear differential equations, *Communications on Applied Nonlinear Analysis* 18 (2011), 21-28.
13. **John R. Graef and Lingju Kong**, Periodic solutions of first order functional differential equations, *Applied Mathematics Letters* 24 (2011), 1981--1985.
14. **Francesco Barioli and Lucas Van der Merwe**, On the maximum degree of $3t$ - critical graphs, submitted (January 2011), *Journal of Computing and Combinatorial Mathematics*.
15. **Johannes Hattingh, Ossama Saleh, Terry Walters and Lucas Van der Merwe**, A Nordhaus-Gaddum-type result for the induced path number, *Journal of Combinatorial Optimization*, (2011, online).
16. **Teresa Haynes, Mike Henning, Lucas Van der Merwe and Anders Yeo**, On a conjecture of Murty and Simon on diameter two critical graphs, *Discrete Mathematics*, 311 (2011) 1918-1924.
17. **Teresa Haynes, Mike Henning, Lucas Van der Merwe and Anders Yeo**, On the existence of k -partite or K_p -free total domination edge-critical graphs, *Discrete Mathematics*, 311 (2011) 1142-1149.
18. **Daniel A. Goldston and Andrew H. Ledoan**, Jumping champions and gaps between consecutive primes, *International Journal of Number Theory*, Vol. 7, No. 6 (2011), 1--9.
19. **Aniekan Ebiefung**, On the Choice of Technology Model, *Proceedings of the Southeast Decision Sciences Institute*, p. 602—607, 2011

20. **Aniekan Ebiefung**, Choice of Technology, Industrial Pollution Model, and the Vertical Linear Complementarity Problem. *Global Journal of Mathematical Sciences*. Vol. 9, No. 2, 113 – 120, 2011.
21. **John R. Graef and Lingju Kong**, Existence of multiple periodic solutions of first order functional differential equations, *Math. Comput. Modelling* 54 (2011), 2962--2968.
22. **Abdelhamid Benmezai, John R. Graef, and Lingju Kong**, Positive solutions to a two point singular boundary value problem, *Differ. Equ. Appl.* 3 (2011), 347--373.
23. **Qingkai Kong and Min Wang**, Positive solutions of even order periodic boundary value problems, *Rocky Mountain J. Math.*, 41 (2011), 1907-1931.
24. **Sproule, S.** (2011). It's amazing what you can do with mathematics. In H.Venkat and A.A. Essien (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa* (Vol. 1, pp. 14-24). Johannesburg: South Africa.
25. **Sproule, S.** (2011). Assigning cognitive levels to exam questions. In H.Venkat and A.A. Essien (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa* (Vol. 2, pp. 84-87). Johannesburg: South Africa.
26. **Andrew H. Ledoan, Marco Merkli, and Shannon L. Starr**, A universality property of Gaussian analytic functions, published Online First on April 7, 2011, DOI No: 10.1007/S10959-011-0356-5.
27. **M. Benchohra, John R. Graef, and F-Z. Mostefai**, Weak solutions for boundary-value problems with nonlinear fractional differential inclusions, *Nonlinear Dynamics and Systems Theory* 11 (2011), 227--237.
28. **John R. Graef and Lingju Kong**, Existence of multiple periodic solutions for first order functional differential equations, *Mathematical and Computer Modelling* 54 (2011), 2962--2968.
29. **John R. Graef, Lingju Kong, Q. Kong, and B. Yang**, Higher order boundary value problems with two point separated nonhomogeneous boundary conditions, *Communications in Applied Analysis* 15 (2011), 435--456.
30. **M. Bartusek and John R. Graef**, Limit-point/limit-circle properties for delay equations of the second order, *PanAmerican Mathematical Journal* 21 (2011), 1--17.
31. **M. Bartusek and John R. Graef**, Limit-point/limit-circle problem for sub-half-linear second order delay differential equations, *Dynamic Systems and Applications* 20 (2011), 261--278.
32. **John R. Graef, S. Heidarkhani, and Lingju Kong**, A critical points approach to multiplicity results for multi-point boundary value problems, *Applicable Analysis* 90 (2011), 1909--1925.
33. **John R. Graef, Lingju Kong, and B. Yang**, Existence, nonexistence, and uniqueness of positive solutions to a three point fourth order boundary value problem, *Nonlinear Studies* 18 (2011), 565--575.
34. **John R. Graef, Lingju Kong, Q. Kong, and B. Yang**, Second order boundary value problems with sign-changing nonlinearities and nonhomogeneous boundary conditions, *Mathematica Bohemica* 136 (2011), 337--356.
35. **S. R. Grace and John R. Graef**, Oscillation Criteria for Fourth Order Nonlinear Neutral Delay Dynamic Equations on Time Scales, *Global Journal of Pure and Applied Mathematics* 7 (2011), 439--447.
36. **John R. Graef and Lingju Kong**, Uniqueness and parameter dependence of positive solutions of third order boundary value problems with p-Laplacian, *Discrete and Continuous Dynamical Systems, Supplement* (2011), 515--522.

37. **Andrew H. Ledoan and Alexandru Zaharescu**, Explicit formulas for the pair correlation of vertical shifts of the zeros of Riemann's zeta-function, *Commentarii Mathematici Universitatis Sancti Pauli*, Vol. 60, No. 1, 2 (2011), 1-18.
38. **S.A. Avdonin, Boris Belinskiy and J.V. Matthews**, Dynamical Inverse Problem on a Metric Tree, *Inverse Problems* 27, No. 7, (2011) <http://iopscience.iop.org/0266-5611/27/7/075011/>
39. **S.A. Avdonin, Boris Belinskiy and J.V. Matthews**, Inverse Problem on the Semi-axis: Local Approach, 42, 3 (2011)
40. **Charles R. Johnson and Ronald L. Smith**, Inverse M-matrices, II, *Linear Algebra and Its Applications*, **388** (2011) 953-983.
41. **Ossama A. Saleh and Ronald L. Smith**, The Elliptic Matrix Completion Problem, *Linear Algebra and Its Applications*, **434** (2011) 1824-1835.
42. **Boris Belinskiy and H. Shurz**, Undamped Nonlinear Beam Excited by Additive L^2 -Regular Random Noise, *J. of Computational and Applied Mathematics* 235, Issue 17, 5284–5306 (2011)