

## Faculty Research 2014

1. **J.R. Graef, L. Kong, and M. Wang**, Existence and uniqueness of solutions for a fractional boundary value problem on a graph, *Fract. Calc. Appl. Anal.* 17 (2014), 499–510.
2. **J.R. Graef, L. Kong, and M. Wang**, Uniqueness and parameter dependence of positive doubly periodic solutions of nonlinear telegraph equations, *Opuscula Math.* 34 (2014), 363–373.
3. **J.R. Graef** and S. Saker, A new class of dynamic inequalities of Hardy’s type on time scales, *Dyn. Syst. Appl.* 23 (2014), 83–100.
4. **J.R. Graef, S. Panigrahi, and P. R. Reddy**, On oscillatory and asymptotic behavior of fourth order nonlinear neutral delay dynamic equations with positive and negative coefficients, *Math. Slovaca* 64 (2014), 347–366.
5. **J.R. Graef** and E. Tunç, Oscillation criteria for second-order functional dynamic equations on time-scales, *International Electronic Journal of Pure and Applied Mathematics* 8 (2014), 17–31.
6. **J.R. Graef, L. Kong, and M. Wang**, A Chebyshev spectral method for solving Riemann-Liouville fractional boundary value problems, *Appl. Math. Comput.* 241 (2014), 140–150.
7. **J.R. Graef, L. Kong, and S. Heidarkhani**, Nontrivial solutions for systems of Sturm-Liouville boundary value problems, *Differ. Equ. Appl.* 6 (2014), 255–265.
8. **J.R. Graef and X. Liu**, Existence of positive solutions of fractional boundary value problems involving bounded linear operators, *J. Nonlinear Funct. Anal.* 2014 (2014), Article ID 13, p. 1–23.
9. **J.R. Graef, L. Kong, and M. Wang**, Stationary solution of a stochastic nosocomial epidemic model in hospital intensive care units, *Stoch. Anal. Appl.* 32 (2014), 840–850.
10. **J.R. Graef** and E. Tunç, Oscillation results for second-order neutral dynamic equations with distributed deviating arguments, *Dynam. Systems and Appl.* 23 (2014), 289–304.
11. **J.R. Graef** and B. Yang, Positive solutions to a three point fourth order focal boundary value problem, *Rocky Mountain J. Math.* 44 (2014), 937–951.
12. **J.R. Graef, L. Kong, and S. Heidarkhani**, Infinitely many solutions for systems of Sturm-Liouville boundary value problems, *Results Math.* 66 (2014), 327–341.
13. C. Obikwere and **A. Ebiefung** The Leontief input-output production model and its application to inventory control, *Asian J. Math. Appl.*, Vol. 2014, Article ID ama0183, 2014.
14. L. Landis, M. Brzeinski, and **C. Gao**, The effect of progressive-tension closure on donor site seroma formation in delayed latissimus dorsi flaps for breast reconstruction, *Ann. Plast. Surg.*, 76 (2) (2014), 170–173.
15. **L. Kong**, On a fourth order elliptic problem with a  $p(x)$ -biharmonic operator, *Appl. Math. Lett.* 27 (2014), 21–25.
16. **L. Kong**, Homoclinic solutions for a second order difference equation with  $p$ -Laplacian, *Appl. Math. Comput.* 247 (2014), 1113–1121.
17. J.S. W. Wong and **L. Kong**, Solvability of second order nonlinear multi-point boundary value problems, *Dynam. Syst. Appl.* 23 (2014), 145–154.
18. **L. Kong, Q. Kong, and M. Wang**, Existence and Uniqueness of solutions for a fractional boundary value problem with a separated boundary condition, *Dynam. Syst. Appl.* 23 (2014), 691–698.
19. J.D. Johnson, **L. Kong, M.G. Ruddy, and A.M. Ruys de Perez**, Existence of positive periodic solutions for higher order functional difference equations, *Electron. J. Qual. Theory Diff. Equ.*, No. 3 (2014), 1–8.
20. A. Benmezai, **J.R. Graef, and L. Kong**, Positive solutions for abstract Hammerstein equations and applications, *Commun. Math. Anal.* 16 (2014), 47–65.

21. **A. Ledoan**, A. Roy and A. Zaharescu, Zeros of partial sums of the Dedekind zeta function of a cyclotomic field, *J. Number Theory* 136 (2014), 118–133.
22. **A. Ledoan**, P. Spiegelhalter and A. Zaharescu, Eigenvalues and arithmetic functions on  $PSL_2(\mathbb{Z})$ , *Integers* 14 (2014), #A14, 1–8.
23. **A. Ledoan** and A. Zaharescu, A divisibility obstruction for certain walks on Gaussian integers, *Integers* 14 (2014), #A56, 1–8.
24. J. Eckhardt, F. Gesztesy, **R. Nichols**, and G. Teschl, Supersymmetry and Schrodinger-type operators with distributional matrix-valued potentials, *J. Spectr. Theory* 4 (2014), No. 4, 715–768.
25. F. Gesztesy, M. Mireia, and **R. Nichols**, Heat kernel bounds for elliptic partial differential operators in divergence form with Robin-type boundary conditions, *J. Anal. Math.* 122 (2014), 229–287.
26. S. Clark, F. Gesztesy, **R. Nichols**, and M. Zinchenko, Boundary data maps and Krein’s resolvent formula for Sturm-Liouville operators on a finite interval, *Oper. Matrices* 8 (2014), No. 1, 1–71.
27. Johannes Hattingh, **Ossama Saleh**, **Lucas Van der Merwe**, **Terry Walters**, Product Nordhaus-Gaddum-type results for the induced path number involving complements with respect to  $K_n$  or  $K_{n,n}$ , *Util. Math.* 94 (2014) 275–285.
28. D. Posny and **J. Wang**, Computing basic reproductive numbers for epidemiological models in nonhomogeneous environments, *Appl. Math. Comput.*, vol. 242 (2014), 473–490.
29. D. Posny and **J. Wang**, Modeling cholera in periodic environments, *J. Biol. Dyn.*, vol. 8(1) (2014), 1–19.
30. C. Modnak, **J. Wang**, and Z. Mukandavire, Simulating optimal vaccination times during cholera outbreaks, *Int. J. Biomath.*, vol. 7(2), 1450014, 2014.
31. G. Yan, S. Olariu, **J. Wang**, and S. Arif, Towards providing robust and scalable privacy in vehicular networks, *IEEE Trans. Parallel Distrib. Syst.*, vol. 25, pp. 1896–1906, 2014.
32. Clare Obikwere, **Aniekan A. Ebiefung**. The Leontief Input-Output Production Model and its Application to Inventory Control. *Asian Journal of Mathematics and Applications*. Vol. 2014, <http://scienceasia.asia>