

CURRICULUM VITAE

Ferhan Merdivenci ATICI

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UNIVERSITY EDUCATION

- Ph.D (Mathematics) University of Nebraska at Lincoln, 1995
- M.S (Mathematics) University of Nebraska at Lincoln, 1993
- B.S (Mathematics) Ege University, 1989

ACADEMIC EXPERIENCE

- Associate Professor, Department of Mathematics, Western Kentucky University, 2005-present.
- Assistant Professor, Department of Mathematics, Western Kentucky University, 2003-2005.
- Visiting Assistant Professor, Department of Mathematics, Western Kentucky University, 2001-2003.
- Associate Professor, Department of Mathematics, Ege University, 1999-2002.
- Assistant Professor, Department of Mathematics, Ege University, 1996-1999.
- Visiting one year position, Department of Mathematics and Statistics, University of Nebraska at Lincoln, 1995-1996.
- Teaching Assistant, Department of Mathematics and Statistics, University of Nebraska at Lincoln, 1991-1995.
- Teaching training, University of Nebraska, 1990-1991.
- Teaching Assistant, Department of Mathematics, Ege University 1989-1990.

DISSERTATION TITLE

Fixed Points Techniques in Cone Theory with Applications to Difference Equations.
Supervisor: Dr. Allan C. Peterson

CURRENT FIELDS OF INTEREST

Difference Equations, Differential Equations, Calculus on Time Scales, Dynamic Equations and Their Applications to Economics.

SUPERVISED THESIS

- Master Thesis: “Fractional Calculus: Definitions and Applications”, Joseph Kimeu, 2009.
- Master Thesis: “Calculus of Variations on Time Scales and its Applications to Economics”, Christopher S. McMahan, 2008.
- Master Thesis: “Lebesgue Nabla Measure and Riemann Nabla Integration”, Heather Bjorum, 2005.
- Master Thesis: “Analysis of Economic Models Through Calculus of Variations”, Raman Arora, 2005.
- Master Thesis: “Bounds of eigenvalues which guarantee the existence of positive solutions”, Sibel Delibalci, 1999.
- Ph.D Thesis: “Calculus and Dynamic Equations on Time Scales”, Serap Gulsan Topal, 2001.

DIRECTED SENIOR PROJECTS

- “A Quasilinearization Method and Its Applications in Physics”, by Britney Barrow, WKU, Spring 2009.
- “Math and Dance: Contra and Square Dancing”, by Emily Hartman, WKU, Spring 2008.
- “Government Funded Market Manipulations”, by Nathan Russell, WKU, Spring 2007.
- “Quantum Calculus: A beginning of a closer look at one type of calculus”, April Williams, WKU, Fall 2006.
- “Fractional Calculus”, Nicole Zirkelbach, WKU, Fall 2006.

AWARDS

- 2006 Recognition of superior achievement in the field of mathematics, Pi Mu Epsilon, Kentucky Beta Chapter.
- 1995 Graduate award winner (Emeritus Faculty Fellowships) Department of Mathematics and Statistics, University of Nebraska at Lincoln.
- 1991-1995 Teaching Assistantship, Department of Mathematics and Statistics, University of Nebraska at Lincoln.
- 1990 Teaching Assistantship, Department of Mathematics, Ege University.
- 1989 Honorary BS degree, Department of Mathematics, Ege University.

INTERNAL AND EXTERNAL GRANTS

Internal Grants

- Summer Faculty Scholarship Award, May 2009- Sept. 2009. (6000 dollars)

Travel Grants

- AWM-NSF Travel Grant, March 2007. (543 dollars)
- Ogden College of Science Travel Fund, Jan. 2004. (500 dollars)

UNIVERSITY SERVICE

DEPARTMENTAL COMMITTEES (2008-2009)

- Graduate Studies Committee, Chair.
- Colloquium/Symposium Committee
- Math 126- Math 227 Curriculum Committee, Chair.

UNIVERSITY COMMITTEES

- Graduate Council Representative from Ogden College of Science and Engineering (alternative member) May 2008- May 2009.
- Executive Committee, The Bio-informatics and Information Science Center, May 2006 - present.
- University Senate, May 2004- May 2006.
- The Faculty Welfare and Professional Responsibilities Committee (from the Senate), May 2004- May 2006.

PROFESSIONAL ACTIVITIES

- Organizer of the session “Time Scales: Theory and Applications,” AMS Sectional Meeting at Miami University-Ohio, March 16-17, 2007.
- Organizer and Coordinator in the “Practical Problem Solving” event for High School students, The Kentucky Science Olympiad State Tournament, April 2006.
- Reviewer for Mathematical Reviews (Jan 2005 - present)
- Associate Editor of the Journal “The International Journal of Applied Mathematics Statistics” (IJAMAS).
- Member of the Editorial Board of the Journal: “Abstract and Applied Analysis” (AAA).
- Member of the Editorial Board of the Journal: International Journal of Mathematics and Computation.

- One of the organizer of the special session in AMS sectional meeting which was at WKU on March 18-19, 2005.
- The Kentucky Science Olympiad State Tournament, Organizer of "Data Gathering Event", March 2004.
- Organizer of 24th Annual Mathematics Symposium at WKU, 2004.
- The Kentucky Science Olympiad State Tournament, Organizer of "Data Gathering Event", March 2003.
- 2002 Intel International Science and Engineering Fair, Grand Awards Judge for Mathematics.

CONTRIBUTED TALKS AT CONFERENCES

- AMS Sectional Meeting at Baylor University, Waco-Texas, Oct. 16-18, 2009.
- Symposium on Biomathematics and Ecology Research and Education, Izmir - Turkey, June 13-17, 2009.
- 14th International Conference on Difference Equations and Applications, Istanbul-Turkey, July 21-25, 2008.
- The 27th Southeastern-Atlantic Regional Conference on Differential Equations, Oct 2007, Murray, Kentucky.
- International Conference: 2007-Dynamic Systems and Applications, July 2007, Kusadasi-Izmir, Turkey.
- AMS Sectional Meeting at Miami University-Ohio, March 16-17, 2007.
- 2006 Annual Meeting of KYMAA, March 2006, Centre College, Danville, Kentucky.
- The 25th Southeastern-Atlantic Regional Conference on Differential Equations, Oct 2005, Dayton, Ohio.
- AMS National Meeting, Jan 2005, Atlanta, Georgia.
- International Conference: 2004-Dynamic Systems and Applications, July 2004, Antalya-Turkey.
- AMS National Meeting, Jan 2004, Phoenix- Arizona.
- AMS Section Meeting, Bloomington-Indiana, April 2003.
- Workshop on Time Scales, Dayton-Ohio, (Session Organizer and Presenter) September 2002.
- International Conference on Dynamic Systems and Applications, Atlanta-Georgia, May 1999.
- XI. National Mathematics Symposium, Isparta - Turkey, September 1998.
- Fourth International Conference on Difference Equations and Applications, Poznan - Poland, August 1998.
- International Conference Functional Differential-Difference Equations and Applications, Antalya - Turkey, August 1997.
- Rocky Mountain Mathematics Consortium Summer Conference Difference Equations and Their Applications, Laramie-Wyoming, July 1997.
- 24. Midwest Differential Equations Conference, October 1995 Lincoln-Nebraska, October 1995.
- 23. Midwest Differential Equations Conference, Oklahoma - USA. October 1994.

PUBLICATIONS

- 1) F. Merdivenci Atici and P. W. Eloe, Discrete Fractional Calculus with the Nabla Operator, *Electronic Journal of Qualitative Theory of Differential Equations*, Spec. Ed I, 2009, No.3, pp.1-12.
- 2) F. Merdivenci Atici and P. W. Eloe, Two-Point Boundary Value Problems for Finite Fractional Difference Equations, *J. Difference Equations and Applications*, (to appear).
- 3) F. Merdivenci Atici and C. S. McMahan, A comparison in the theory of calculus of variations on time scales with an application to the Ramsey model, *Nonlinear Dynamics and Systems Theory*, Vol. 9, 1(2009), pp. 1-10.
- 4) F. Merdivenci Atici and P. W. Eloe, Initial value problems in discrete fractional calculus, *Proceedings of the American Mathematical Society*, Vol. 137, 3(2009), pp 981-989.
- 5) F. Merdivenci Atici and F. Uysal, The production-inventory model of HMMS on time scales, *Applied Mathematics Letters*, Vol. 21, 3(2008), pp 236-243.
- 6) F. Merdivenci Atici and P. W. Eloe, A transform method in discrete fractional calculus, *International Journal of Difference Equations*, Vol. 2, 2((2007), pp 165-176.
- 7) F. Merdivenci Atici and P. W. Eloe, Fractional q-Calculus on a Time Scale, *J. Nonlinear Mathematical Physics*, Vol.14, 3(2007), pp 333-344.
- 8) F. Merdivenci Atici, A. Cabada and J. Ferreiro, First order difference equations with maxima and nonlinear functional boundary value conditions, *J. Difference Equations and Applications*, 12(2006), no. 6, pp 565-576.
- 9) F. Merdivenci Atici, D. C. Biles and A. Lebedinsky, An Application of Time Scales to Economics, *Mathematical and Computer Modelling*, 43(2006), pp 718-726.
- 10) F. Merdivenci Atici and D. C. Biles, First and second order dynamic equations with impulse, *Journal of Advances in Difference Equations*, 2(2005), pp 119-132.
- 11) F. Merdivenci Atici, A. Cabada, C. J. Chyan, B. Kaymakcalan, Nagumo type existence results for second order nonlinear dynamic BVPs, *Nonlinear Analysis*, (2004), Vol.60, no.2, pp 209-220.
- 12) F. Merdivenci Atici and S. Gulsan Topal, The generalized quasilinearization method and three-point boundary value problems on time scales, *Applied Math. Letters*, (2005), Vol. 18/5, pp. 577-585.
- 13) F. Merdivenci Atici and S. Gulsan Topal, Nonlinear three-point boundary value problems on time scales, *Dynamic Systems and Applications*, 13 (2004), pp 327-337.
- 14) F. Merdivenci Atici and D. C. Biles, First order dynamic inclusions on time scales, *J. Mathematical Analysis and Applications*, (2004), Vol. 292/1 pp 222-237.

- 15)** F. Merdivenci Atici, E. Akin-Bohner and B. Kaymakcalan, Lower and upper solutions for two point boundary value problems on time scales, *Chapter for a book on time scales edited by M. Bohner and A. C. Peterson* Advances in dynamic equations on time scales, 165-188, Birkhauser Boston, Boston, MA, 2003.
- 16)** F. Merdivenci Atici, A. Cabada and V. Otero-Espinar, Multiplicity and nonexistence of positive solutions to a discrete periodic boundary value problem, *J. Difference Equations and Applications*, (2003) Vol. 9, no. 9, pp. 765-775.
- 17)** F. Merdivenci Atici and A. Cabada, Existence and uniqueness results for discrete second order periodic boundary value problems, *Computers Math. Applic.*, 45 (2003), pp. 1417-1427.
- 18)** F. Merdivenci Atici and E. Akin-Bohner, A quasilinearization approach for two point nonlinear boundary value problems on time scales, *The Rocky Mountain Journal of Mathematics*, 35(2005) Number:1, pp. 19-46.
- 19)** F. Merdivenci Atici, A. Cabada and J. B. Ferreira, Existence and comparison results for first order periodic implicit difference equations with maxima, *J. Differ. Equations Appl.*, 8(4), (2002), pp:357-369.
- 20)** F. Merdivenci Atici, P. W. Eløe and B. Kaymakcalan, The quasilinearization method for boundary value problems on time scales, *J. Mathematical Analysis and Applications*, 276, 2002, pp:357-372.
- 21)** F. Merdivenci Atici and G. Sh. Guseinov, On Green's functions and positive solutions for boundary value problems on time scales, *J. Comput. Appl. Math.*, 141(1-2), (2002), pp: 75-99 .
- 22)** F. Merdivenci Atici and G. Sh. Guseinov, Positive solutions for nonlinear differential equations with periodic boundary conditions, In *Conference Proceeding of the Third International Conference On Dynamic Systems and Applications*, Atlanta, 1999. Dynamic Publishers.
- 23)** F. Merdivenci Atici, G. Sh. Guseinov and B. Kaymakcalan, Stability criteria for dynamic equations on time scales with periodic coefficients, In *Conference Proceeding of the Third International Conference On Dynamic Systems and Applications*, Atlanta, 1999. Dynamic Publishers.
- 24)** F. Merdivenci Atici and G. Sh. Guseinov, On the existence of positive solutions for nonlinear differential equations with periodic boundary conditions, *J. Comput. Appl. Math.*, **132** (2001), pp:341-356.
- 25)** F. Merdivenci Atici , G. Sh. Guseinov and B. Kaymakcalan, On Lyapunov inequality in stability theory for Hill's equation on time scales, *J. Inequal. Appl.*, **5** (2000), pp: 603-620.
- 26)** F. Merdivenci Atici, Existence of positive solutions of nonlinear discrete Sturm-Liouville problems, *Math. Comput. Modelling.*, **32** (2000), pp: 599-607.

- 27)** F. Merdivenci Atici and G. Sh. Guseinov, Positive periodic solutions for nonlinear difference equations with periodic coefficients, *J. Math. Anal. Appl.*, **232** (1999), pp: 166-182.
- 28)** F. Merdivenci Atici and G. Sh. Guseinov, Criteria for the stability of second order difference equations with periodic coefficients, *Comm. in Appl. Anal.*, **3** (1999), pp: 166-182.
- 29)** F. Atici and A. C. Peterson, Inequality for a $2n^{th}$ order difference equation, *PanAmer. Math. J.*, **6** (1996) No: 3, pp: 41-49.
- 30)** F. Atici and A. C. Peterson, Bounds for positive solutions for a focal boundary value problem, *Computers Math. Applic.*, **36** (1998), No: 10-12, pp: 99-107.
- 31)** F. Merdivenci, Positive solutions for focal point problems for $2n^{th}$ order difference equations, *Panamerican Mathematical Journal*, **5** (1995), Number 2, pp: 71-82.
- 32)** F. Merdivenci, Green's matrices and positive solutions of a discrete boundary value problem, *Panamerican Mathematical Journal*, **5** (1995), Number 1, pp: 25-42.
- 33)** F. Merdivenci, Two positive solutions of a boundary value problem for difference equations, *Journal of Difference Equations and Applications*, **1** (1995), pp: 263-270.