

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

- Professor, Department of Mathematics and Computer Science, Western Kentucky University, 2011-present.
- Associate Professor, Department of Mathematics, Western Kentucky University, 2005-2011.
- 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 Assistant, Department of Mathematics, Ege University 1989-1990.

CERTIFICATES

- Certificate to teach at High School. (A Certificate was earned after completing 12 months of training at Ege University) 1989.
- Certificate to teach at College Level. (A Certificate was earned after completing 9 months of training at University of Nebraska) 1991.

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, Fractional Calculus and Their Applications to Medical Sciences.

SUPERVISED THESIS

- Master Thesis: “Cagan Type Rational Expectation Models on Time Scales with Their Applications to Economics”, Funda Ekiz, 2011.
- Master Thesis: “Development of Fractional Trigonometry and An Application of Fractional Calculus to Pharmacokinetic Model”, Amera Almusharff, 2011.
- Master Thesis: “Deterministic and Stochastic Bellman’s Optimality Principles on Isolated Time Domains and Their Applications in Finance”, Nezihe Turhan, 2011.
- Master Thesis: “Discrete Fractional Calculus and Its Applications to Tumor Growth”, Sevgi Şengül, 2010.
- 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

- “The best way to shoot a free throw”, by Blake Martin, WKU, Spring 2010.
- “Fractional q-Fourier Transform: A Fresh Look at a Staple Integral Transform”, by Landon Oakes, WKU, Spring 2010.
- “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

- 2011 University Faculty Award, Research/Creativity.
- 2011 Ogden College Faculty Award, Research/Creativity.
- 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, First Place in the Science College and in the Mathematics Department, Ege University.

INTERNAL AND EXTERNAL GRANTS

External Grants

- ”Parameter Estimations of Sigmoidal Models of Cancer”, KSEF-2488-RDE-014, (60,000.00 Dollars)

Internal Grants

- ” Sigmoidal Models of Tumor Growths: The Gompertz Model”, BISC Graduate Student Research Assistantship, January 2011-May 2011. (2,750.00 Dollars)
- Summer Faculty Scholarship Award, May 2009- Sept. 2009. (6,000.00 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 (2010-2011)

- Graduate Studies Committee
- Colloquium/Symposium Committee
- Scholarship/Award Committee

COLLEGE COMMITTEES (2010-2011)

- Ogden Research Committee, Chair, March, 2011- present.
- Ogden College Curriculum Committee August 2009 - May 2011.
- BISC Committee for Graduate Assistantship, Nov. 2010 - Jan. 2011.
- Ogden College Faculty Awards Committee, 2010.

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

- Helper in “Wind Power” class at the event “Girls in Science Day ”, April 16, 2011.
- Judge in the paper presentation sessions of “The 41st Annual WKU Student Research Conference,” March, 2011.
- Judge in the paper presentation sessions of “The 40th Annual WKU Student Research Conference,” February 27, 2010.
- 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.
- 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.

EDITORIAL BOARD MEMBER

- Reviewer for Mathematical Reviews (Jan 2005 - present)
- Associate Editor of the Journal “The International Journal of Applied Mathematics Statistics”(IJAMAS). (Sept 2006-present)

- Member of the Editorial Board of the Journal: “Abstract and Applied Analysis” (AAA). (Jan 2007-present)
- Member of the Editorial Board of the Journal: International Journal of Mathematics and Computation. (Sept 2009- present)
- Member of the Editorial Board of the Journal: Journal of Black Sea Science and Engineering. (Feb 2011- present)

CONTRIBUTED TALKS AT CONFERENCES

- AMS Sectional Meeting at University of Nebraska, Lincoln-Nebraska, Oct. 14-16, 2011. (**Invited**)
- Second International Symposium on Computing in Science and Engineering, Kusadasi, Izmir-Turkey, June 1-4, 2011.
- The 6th International Conference: 2010 Dynamical Systems and Applications, Antalya-Turkey, July 10-14, 2010. (**Key Note Speaker**)
- AMS Sectional Meeting at Baylor University, Waco-Texas, Oct. 16-18, 2009. (**Invited**)
- 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. (**Invited**)
- 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. (**Session Organizer and Presenter**)
- 2006 Annual Meeting of KYMAA, March 2006, Centre College, Danville, Kentucky.
- The 25th Southeastern-Atlantic Regional Conference on Differential Equations, Oct 2005, Dayton, Ohio.
- Spring Southeastern Sectional Meeting of AMS at WKU, Bowling Green, KY, March 18-19, 2005. (**Session Organizer**)
- AMS National Meeting, Jan 2005, Atlanta, Georgia. (**Invited**)
- International Conference: 2004-Dynamic Systems and Applications, July 2004, Antalya-Turkey.
- AMS National Meeting, Jan 2004, Phoenix- Arizona. (**Invited**)
- AMS Section Meeting, Bloomington-Indiana, April 2003.
- Workshop on Time Scales, University of Dayton, Dayton-Ohio, September 2002. (**Session Organizer and Presenter**)
- 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, University of Wyoming, Laramie-Wyoming, July 1997.
- 24. Midwest Differential Equations Conference, University of Nebraska-Lincoln, Nebraska, October 1995.
- 23. Midwest Differential Equations Conference, University of Oklahoma, Oklahoma, October 1994.

LIST OF PUBLICATIONS

- 1) F. Merdivenci Atici and P. W. Elloe, Gronwall's Inequality in Discrete Fractional Calculus, *J. Computers and Mathematics with Applications*, doi: 10.1016/j.camwa.2011.11.029 (in press).
- 2) F. Merdivenci Atici and N. Turhan, Sequential Decision Problems on Isolated Time Domains, *J. Mathematical Analysis and Applications*, 388(2012), pp. 753–759.
- 3) F. Merdivenci Atici and P. W. Elloe, Two-Point Boundary Value Problems for Finite Fractional Difference Equations, *J. Difference Equations and Applications*, Vol. 17, 4(2011), pp. 445–456.
- 4) F. Merdivenci Atici, D. C. Biles and A. Lebedinsky, A Utility Maximization Problem on Multiple Time Scales, *International Journal of Dynamical Systems and Differential Equations*, Special issue on Dynamic Equations on Time Scales, Vol. 3, 1-2(2011), pp. 38–47.
- 5) F. Merdivenci Atici and Paul W. Elloe, Linear Systems of Fractional Nabla Difference Equations, *The Rocky Mountain Journal of Mathematics*, Special issue honoring Prof. Lloyd Jackson, Vol. 41, 2(2011), pp. 353–370.
- 6) F. Merdivenci Atici, D. C. Biles, The Stochastic Ito Integral on Time Scales, *PanAmerican Mathematical Journal*, 20(2010), No.4, pp. 45-56.
- 7) F. Merdivenci Atici and Sevgi Şengül, Modeling with Fractional Difference Equations, *Journal of Mathematical Analysis and Applications*, 369(2010), pp. 1–9.
- 8) F. Merdivenci Atici and P. W. Elloe, Discrete Fractional Calculus with the Nabla Operator, *Electronic Journal of Qualitative Theory of Differential Equations*, Spec. Ed I, 2009, No.3, pp.1-12.
- 9) 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.
- 10) F. Merdivenci Atici and P. W. Elloe, Initial value problems in discrete fractional calculus, *Proceedings of the American Mathematical Society*, Vol. 137, 3(2009), pp 981-989.

- 11) 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.
- 12) F. Merdivenci Atici and P. W. Elloe, A transform method in discrete fractional calculus, *International Journal of Difference Equations*, Vol. 2, 2((2007), pp 165-176.
- 13) F. Merdivenci Atici and P. W. Elloe, Fractional q-Calculus on a Time Scale, *J. Nonlinear Mathematical Physics*, Vol.14, 3(2007), pp 333-344.
- 14) F. Merdivenci Atici, A. Cabada and J. Ferreira, First order difference equations with maxima and nonlinear functional boundary value conditions, *J. Difference Equations and Applications*, 12(2006), no. 6, pp 565-576.
- 15) 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.
- 16) 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.
- 17) 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.
- 18) 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.
- 19) 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.
- 20) 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.
- 21) 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.
- 22) 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.
- 23) 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.
- 24) 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.

- 25) 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.
- 26) F. Merdivenci Atici, P. W. Eloe and B. Kaymakcalan, The quasilinearization method for boundary value problems on time scales, *J. Mathematical Analysis and Applications*, 276, 2002, pp:357-372.
- 27) 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 .
- 28) 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.
- 29) 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.
- 30) 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.
- 31) 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.
- 32) F. Merdivenci Atici, Existence of positive solutions of nonlinear discrete Sturm-Liouville problems, *Math. Comput. Modelling.*, **32** (2000), pp: 599-607.
- 33) 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.
- 34) 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.
- 35) F. Atici and A. C. Peterson, Inequality for a $2n^{th}$ order difference equation, *PanAmer. Math. J.*, **6** (1996) No: 3, pp: 41-49.
- 36) 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.
- 37) F. Merdivenci, Positive solutions for focal point problems for $2n^{th}$ order difference equations, *Panamerican Mathematical Journal*, **5** (1995), Number 2, pp: 71-82.

- 38)** F. Merdivenci, Green's matrices and positive solutions of a discrete boundary value problem, *Panamerican Mathematical Journal*, **5** (1995), Number 1, pp: 25-42.
- 39)** F. Merdivenci, Two positive solutions of a boundary value problem for difference equations, *Journal of Difference Equations and Applications*, **1** (1995), pp: 263-270.