Jay Lawrence Adams

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Education

Ph.D.	Electrical and Computer Engineering
	The University of Akron, August 2009
	Dissertation: Hankel Operators for Fractional-Order Systems
	Co-Advisor: Tom T. Hartley
	Co-Advisor: Robert J. Veillette
M.S.	Electrical Engineering
	Youngstown State University, December 2004
B.S.E.E	Electrical Engineering
	Grove City College, May 2002

Employment

08/2016 - present	Associate Professor of Instruction, University of Akron
08/2010 - 05/2016	Visiting University Lecturer, University of Akron
	Digital Logic Design, Embedded Systems Interfacing,
	Programming for Engineers,
	Tools Lab for Electrical and Computer Engineering
01/2009 - 05/2010	Associate Lecturer, University of Akron
	Digital Communication, Digital Logic Design Lab,
	Embedded Systems Interfacing, Nonlinear Control,
	Programming for Engineers
09/2004-12/2008	Teaching Assistant, University of Akron
	Control Systems I Lab, Control Systems II Lab,
	Control System Theory grader
05/2007-08/2007	Research Assistant, University of Akron
	Applied Mathematics
01/2007-05/2007	Classroom Teacher, University of Akron
	Active Circuits
09/2003-05/2004	Teaching Assistant, Youngstown State University
	Digital Logic Design Lab, Electronics I Lab

Book Chapters

1. Adams, JL, RJ Veillette, and TT Hartley, "Using the Hankel Operator to Initialize Fractional-Order Systems," *Fractional Calculus: Theory*, Nova Science, 2014

2. Wang, Y, TT Hartley, CF Lorenzo, JL Adams, JE Carletta, and RJ Veillette, "Modeling Ultracapacitors and Fractional-Order Systems," *New Trends in Nanotechnology and Fractional Calculus Applications*, Springer 2010

3. Adams, JL, TT Hartley, and CF Lorenzo, "Complex Order-Distributions Using Conjugated-Order Differintegrals," *Advances in Fractional Calculus*, Springer 2007

Refereed Journal Articles

1. Adams JL, RJ Veillette, and TT Hartley, "A Method for the Hankel-Norm Approximation of Fractional-Order Systems," *Journal of Applied Nonlinear Dynamics*, June 2017.

2. Hartley TT, RJ Veillette, JL Adams, and CF Lorenzo, "Energy storage and loss in fractional-order circuit elements," *Circuits, Devices & Systems, IET*, April 2015.

3. Adams, JL, A Madanayake, and LT Bruton, "Approximate realization of fractional-order 2-D IIR frequency-planar filter," *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, September 2013.

4. Adams, JL, RJ Veillette, and TT Hartley, " Conjugate-order systems for signal processing: stability, causality, boundedness, compactness," *Signal, Image, and Video Processing*, March 2012.

5. Adams, JL, TT Hartley, and RJ Veillette, " Hankel-Norm Estimation for Fractional-Order Systems Using the RayleighRitz Method ," *Computers and Mathematics with Applications*, March 2010

6. Adams, JL, TT Hartley, and LI Adams, "A Solution to the Fundamental Linear Complex-Order Differential Equation," *Advances in Engineering Software*, January 2010

7. Lorenzo, CF, TT Hartley, and JL Adams, "The Inverted Initialization Problem for Fractional-Order Derivatives," *Physica Scripta*, October 2009

8. Adams JL, TT Hartley, and CF Lorenzo, "Identification of Complex Order-Distributions," *Journal of Vibrational Control*, Volume 14, Number 9-10, September 2008

9. Adams, JL and TT Hartley, "Hankel Operators for Fractional-Order Systems," *Journal Européen des Systèmes Automatisés*, September 2008

10. Adams, JL and TT Hartley, "Finite-Time Controllability of Fractional-Order Systems," *Journal of Computational and Nonlinear Dynamics*, Volume 3, Number 2, April 2008

Conference Papers

1. Hartley, TT, RJ Veillette, CF Lorenzo, and JL Adams, "On the Energy Stored in Fractional-Order Electrical Elements" *Proc of DETC 2015*, Boston, MA, August 2015.

2. Adams, JL, RJ Veillette, TT Hartley, and LI Adams, "Restrictions on the Inverse Laplace Transform for Fractional-Order Systems" *Proc of ICFDA 2014*, Catania, Italy, June 2014

3. Lorenzo, CF, TT Hartley and JL Adams, "Time-Varying Initialization and Corrected Laplace Transform of the Caputo Derivative," *Proc of IFAC FDA 2010*, Grenoble, France, February 2013

4. Madanayake A, C Wijenayake, RM Joshi, JL Adams, J Grover, J Carletta, TT Hartley, and T Ogunfunmi, "Teaching Freshmen VHDL-Based Digital Design", *Proc of IEEE Intl. Symp. on Circuits and Systems (ISCAS2012)*, Soul, Korea, 2012.

5. Adams JL, RJ Veillette, and TT Hartley, "Initialization of Fractional-Order Systems Using the Hankel Operator," *Proc of ASME DETC*, Washington DC, August 2011

6. Gambone, T, TT Hartley, CF Lorenzo, JL Adams, and RJ Veillette, "An Experimental Validation of the Time-Varying Initialization Response in Fractional-Order Systems," *Proc of ASME DETC*, Washington DC, August 2011

7. Adams JL, RJ Veillette, and TT Hartley, "Estimates of Conjugate-Order Hankel Norms," *Proc of IFAC FDA 2010*, Badajoz, Spain, October 2010

8. Adams JL, RJ Veillette, and TT Hartley, "Compactness of Hankel Operators for a Class of Fractional-Order Systems," *Proc of IFAC FDA 2010*, Badajoz, Spain, October 2010

9. Adams JL, RJ Veillette, and TT Hartley, "Conditions for Stable and Causal Conjugate-Order Systems," *Proc of IEEE International Symposium on Industrial Electronics*, Bari, Italy, July 2010

10. Adams JL, RJ Veillette, and TT Hartley, "Estimation of the Hankel Singular Values for Fractional-Order Systems," *Proc of ASME DETC*, San Diego, CA, September 2009

11. Adams JL, TT Hartley and RJ Veillette, "Estimation of Eigenvalues for Fractional-Order Systems," *Proc of IFAC FDA*, Ankara, Turkey, November 2008

12. Lorenzo CF, TT Hartley, and JL Adams, "Inverted Initialization of Fractional-Order Derivatives," *Proc of IFAC FDA*, Ankara, Turkey, November 2008

13. Wang Y, TT Hartley, CF Lorenzo, JL Adams, JC Carletta, and RJ Veillette "A Fractional-Order Model for Ultracapacitor Long-Term Behavior," *Proc of IFAC FDA*, Ankara, Turkey, November 2008

14. Adams, JL and TT Hartley, "Finite-Time Controllability of Fractional-Order Systems"', *Proc of ASME DETC*, Las Vegas, NV, September 2007

15. Adams, JL and TT Hartley, "Chaos in a System of "Order" Less Than Two," *Proc of IASTED Modern Nonlinear Theory*, Montreal, Canada, May 2007

16. Adams, JL, TT Hartley, LI Adams, and CF Lorenzo, "A Fundamental Solution to the Complex-Order Differential Equation," *Proc of ECT*, Tenerife, September 2006

17. Adams, JL, TT Hartley, and CF Lorenzo, "System Identification Using Complex Order-Distributions," *Proc of IFAC FDA*, Porto, Portugal, July 2006

18. Jiang, CX, JL Adams, TT Hartley, and JC Carletta, "Hardware Implementation of Fractional-Order Systems as Infinite Impulse Response Filters," *Proc of IFAC FDA*, Porto, Portugal, July 2006

19. Hartley, TT, JL Adams, and CF Lorenzo, "Conjugated Order-Distributions," *Proc of ASME DETC*, Long Beach, CA, September 2005

20. Hartley, TT, CF Lorenzo, and Jay Adams, "Complex Conjugate-Order Differintegrals," *Proc of ASME DETC*, Long Beach, CA, September 2005