

# 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

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 Di erintegrals," *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 lter," *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 Di erential 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 Europeen des Systemes Automatises*, 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

