AMAN BEHAL

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Education

- **Ph.D., Electrical Engineering,** December 2001
  Clemson University, Clemson, SC 29634-0915, USA
  Dissertation Title: Lyapunov Based Nonlinear Control of Electrical and Mechanical Systems
  Advisor: Darren M. Dawson

- **5-year Integrated M.Tech., Electrical Engineering,** June 1996
  Indian Institute of Technology, Bombay, Mumbai, India
  Thesis Title: Design of an Energy Management System
  Advisor: M.C. Srisailam

Work Experience

- **Associate Professor,** 2012 – present
  Dept. of Electrical Engineering & Computer Science (EECS), and
  NanoScience Technology Center (NSTC), University of Central Florida

- **Tenure Track Assistant Professor,** 2006 – 2012
  Dept. of Electrical Engineering & Computer Science (EECS), and
  NanoScience Technology Center (NSTC), University of Central Florida

- **Tenure Track Assistant Professor,** Fall 2003 – Summer 2006
  Dept. of Electrical & Computer Engineering, Clarkson University

- **Post Doctoral Fellow,** Spring 2002 – Summer 2003
  Department of Bioengineering, Clemson University

- **Graduate Research Assistant,** Fall 1997 – Fall 2001
  Controls & Robotics, ECE, Clemson University, Clemson, SC 29634-0915, USA

- **Research Assistant,** Fall 1996 – Summer 1997
  Robotics Lab, ME, Indian Institute of Technology, Bombay, Mumbai, India

- **Graduate Teaching Assistant,** Fall 1995 – Spring 1996
  EE, Indian Institute of Technology, Bombay, Mumbai, India

- **Co-op Electrical Engineer,** Summer 1995
  Punjab Wireless Systems Pvt. Ltd., Punjab, India

- **Co-op Electrical Engineer,** Summer 1994
  Bradma of India, Bombay, India

- **Co-op Electrical Engineer,** Summer 1993
  Ess Ess Kay Engineering Company Ltd., Punjab, India

List of Funded Projects

- *Development of an Intelligent Assistive Robotic System for Individuals with Multiple Sclerosis*, US Dept of Education, National Institute of Disability and Rehabilitation Research (NIDRR), 2012-2015, $604,622 ($598,636 + $5,986 MFFA), PI: Aman Behal.

- *Image-Based Motion Estimation and Tracking for Collaborative Space Assets*, Florida Space Institute (FSI), 2012-2013, $30,000, PI: Aman Behal.

- Diversity Supplement for *Non-linear Characterization of the Stretch Reflex Arc and its Neuromodulation*, National Institutes of Health (NIH), National Institute of Neurological Disorders and Stroke (NINDS), 2011- 2012, $38,437, PI: Aman Behal.

- *Non-linear Characterization of the Stretch Reflex Arc and its Neuromodulation*, National Institutes of Health (NIH), National Institute of Neurological Disorders and Stroke (NINDS), 2009- 2012, $245,500 ($217,500 + $28K MFFA), PI: Aman Behal.

- *Modeling and Identification of the Mammalian Stretch Reflex Arc*, Office of Research and Commercialization, UCF, 2008-2009, $7,488, PI: Aman Behal.

- *Collaborative Research: A Novel User Interface for Operating an Assistive Robot Arm in Unstructured Environments*, National Science Foundation (NSF), 2006-2011, $314,000, PI: Aman Behal.

- REU Supplement for *Collaborative Research: A Novel User Interface for Operating an Assistive Robot Arm in Unstructured Environments*, NSF, 2008-2009, $12,000, PI: Aman Behal.

- REU Supplement for *Collaborative Research: A Novel User Interface for Operating an Assistive Robot Arm in Unstructured Environments*, NSF, 2007-2008, $12,000, PI: Aman Behal.

- REU Supplement for *Collaborative Research: A Novel User Interface for Operating an Assistive Robot Arm in Unstructured Environments*, NSF, 2006-2007, $12,000, PI: Aman Behal.

- *Intelligent Control via Wireless Sensor Networks for Advanced Coal Combustion Systems*, U.S. Department of Energy (DOE), 2006- 2007, $60K ($50K +$10K internal match), PI: Aman Behal.

- *Fuel Specific Solid Oxide Fuel Cells*, Nanodynamics, Inc., Buffalo, NY, 2005-2007, $280,000, co-PI: P. Pillay, R. Rengaswamy, A. Behal (18%).

- *Evaluation of a Wheelchair Mounted Robot to Improve Function for Persons with MS*, 2005-2006, National Multiple Sclerosis Society, $44,000, PI: Aman Behal.

Service

- **Professional Service**

  - Associate Editor, IEEE Transactions on Systems, Man, and Cybernetics – Part B: Cybernetics

- Associate Editor, IEEE Transactions on Control Systems Technology (Approved July 2011)
- Associate Editor, Journal of Aerospace Engineering (July 2013 – present)
- Associate Editor, International Journal of Aeronautical and Space Science (Approved May 2011)
- Associate Editor, Conference Editorial Board, IEEE Control Systems Society (2005 – present)
- Organizing Chair, 2013 IEEE Workshop on Robot Vision (WoRV), January 16-17, 2013, Sheraton Sand Key, Clearwater, Florida, USA
- Member, Track 7 Program Committee, 2013 IEEE Emerging Technologies and Factory Automation Conference, Cagliari, Italy
- Associate Editor, 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems, Vilamoura, Algarve, Portugal
- Member, Program Committee, 2012 5th International Conference on BioMedical Engineering and Informatics (BMEI), Chongqing, China
- Member, International Program Committee, 11th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP), July 2013, Caen, France
- Member, Program Committee, 2010 IEEE Conference on Decision and Control
- Member, International Program Committee, 2010 IEEE International Symposium on Intelligent Control, part of the CSS Multi-conference on Systems and Control (MSC), Yokohoma, Japan
- Member, Florida Conference on Recent Advances in Robotics (FCRAR) Advisory Committee (2009 – present)
- Member, IEEE-CSS Technical Committee on System Identification and Adaptive Control (June 2011– present)
- Member, ASME DSCD Robotics Technical Committee (April 2008 – present)
- Organizer and Session Chair at the *International Conference on Robotics and Automation* (Human Robot Interaction for Assistive Technology), Anchorage, AK, May 2010
- Session Chair at the *International Conference on Robotics and Automation* (Rehabilitation Robotics II), Kobe, Japan, May 2009
- Chair for Session, "Output Feedback Control Methods", at the *American Control Conference*, June 2006, Minneapolis, MN.
- Session Chair at the *IEEE Conference on Decision and Control* (Robotics: Tracking Control), Sydney, Australia, December 2000
- Assistant to Associate Editor, Dr. Darren Dawson, *IEEE Transactions on Control Systems Technology* (Fall 1999 – Spring 2001)

- **Review Panels**

  - NASA EPSCoR online reviewer, Fall 2012
  - NASA EPSCoR online reviewer, Spring 2011
  - NIH Internet Assisted Reviewer, NINDS SBIR Phase I, Spring 2011
  - NSF panel reviewer, Division of Information and Intelligent Systems, Spring 2010
  - NSF *ad hoc* reviewer, Division of Information and Intelligent Systems, Summer 2008
  - NSF panel reviewer, Division of Information and Intelligent Systems, Spring 2008
  - National Multiple Sclerosis Society (NMSS) *ad hoc* reviewer, 2008
  - NSF panel reviewer, Division of Information and Intelligent Systems, Spring 2007

- **Publication Review Work**

- **Journals:** *Automatica, IEEE Transactions on Automatic Control, IEEE Transactions on Control Systems Technology, International Journal of Adaptive Control and Signal Processing, Journal of Robotic Systems, Mechatronics - An International Journal, IEEE Transactions on Industrial Electronics, IEEE Transactions on Systems, Man, and Cybernetics, IEEE/ASME Transactions on Mechatronics, ASME Journal on Vibrations and Acoustics, International Journal of Robotics and Automation, AIAA Journal of Guidance, Control, and Dynamics, Systems and Control Letters, Asian Journal of Control, ASME Journal of Dynamic Systems, Measurement, and Control, IFAC Control Engineering Practice, IEEE Transactions on Biomedical Engineering, International Journal of Control, International Journal of Robust and Nonlinear Control, Journal of Aerospace Engineering.*
- **Conferences:** *IEEE Conference on Decision and Control, American Control Conference, Conference on Advanced Intelligent Mechatronics, IEEE Conference on Control Applications, Industrial Electronics Society Annual Conference (IECON), AIAA Guidance, Navigation, and Control Exhibit, IEEE Multi-Conference on Systems and Control, IEEE/RSJ International Conference on Intelligent Robots and Systems, ASME Dynamic Systems and Control Conference, IEEE International Conference on Rehabilitation Robotics, World Conference on Intelligent Control and Automation.*
- **Books:**
  - Marketing Review for *Mobile Intelligent Autonomous Systems*, CRC Press, June 2012.
  - Pre-publication Review for *Automatic Control of Atmospheric and Space Flight Vehicles* (part of the *Control Engineering* series from Birkhauser), August 2010.
  - Book Proposal Review for CRC Press, July 2010
  - Revision Review for *Modern Control Engineering*, 5th edition by K. Ogata, Prentice Hall, April 2009.
  - Revision Review for *Modeling and Analysis of Dynamic Systems*, 3rd edition by C. Close, D. Frederick and J. Newel, John Wiley & Sons Inc., March 2006.

- **University Service**

  - Member, CECS Promotion Committee for Instructors and Lecturers (2012 – present)
  - Member, Graduate Committee, ECE (Fall 2011 – present)
  - Organizer, NSTC/AMPAC K-12/Undergrad/RET Summer Research Showcase (Aug 2011)
  - Chair, NSTC Seminar Committee (March 2011 – present)
  - Member, NSTC Computer Committee (Spring 2007 – present)
  - Interim Chair, NSTC Seminar Committee (October 2008 – March 2011)
  - Member, NSTC Lab Manager & Safety Officer Search Committee (2010)
  - Chair, NSTC IT Search Committee (2009)
  - Member, NSTC Faculty Search Committee (Summer 2008 – 2009)
  - Member, NSTC Seminar Committee (Summer 2008 – September 2008)
  - Member, NSTC Building Committee (Fall 2006 – Spring 2008)
  - Member, NSTC Education Committee (Fall 2006 – Spring 2008)
  - Member, Curriculum Committee, Bioinformatics and Systems Biology program (Spring 2007 – 2008)
  - Chair, NSTC Associate Director Search Committee (Fall 2007)
  - Member, NSTC Visiting Professor Search Committee (Fall 2007)
  - Post-ABET outcomes assessment related material development for EEL 3123 (Spring 2009 – reporting to Dr. Sundaram)

- ABET outcomes assessment related material development for EEL 3123 (Spring 2008 –reporting to Dr. Sundaram)
- ABET outcomes assessment related material development for EEL 3657 (Fall 2007 – reporting to Dr. Sundaram)
- ABET outcomes assessment related material development for EEL 3123 (Spring 2007 –reporting to Drs. Sundaram/Wahid)
- Member, Graduate Admissions Committee, ECE, Clarkson University (Fall 2003 – 2006)
- ECE Representative, School of Engineering Web Committee, Clarkson University (2006)
- Coordinator, Graduate Seminar Series in ECE at Clarkson University (Spring 2005)
- Webmaster, Clemson University Controls and Robotics group (1999 – 2001)
- Webmaster, Clemson University ECE Department Website (1997 – 1999)

Teaching Experience

Number	Title	Credits	Class	Semester	# of students	Evaluations
EEL 4612	Intro to Modern & Robust Control	4	Senior	Spring 2014	7	-
EEL 5185	System Identification	3	Graduate	Spring 2014	8	-
EEL 5669	Autonomous Robotic Systems	3	Graduate	Fall 2013	17	-
EEL 3657	Linear Control Systems	3	Senior	Summer 2013	26	3.56/5
EEL 4612	Intro to Modern & Robust Control	4	Senior	Spring 2013	14	3.75/5
EEL 5185	System Identification	3	Graduate	Spring 2013	17	4.33/5
EEL 5669	Autonomous Robotic Systems	3	Graduate	Fall 2012	19	3.75/5
EEL 3657	Linear Control Systems	3	Senior	Fall 2012	65	3.6/5
EEL 5185	System Identification	3	Graduate	Spring 2012	12	4.75/5
EEL 3657	Linear Control Systems	3	Senior	Spring 2012	58	3.06/5
EEL 3123	Networks & Systems	4	Junior	Fall 2011	61	3.94/5
EEL 5937	System Identification	3	Graduate	Spring 2011	11	4.75/5
EEL 3657	Linear	3	Senior	Spring 2011	44	3.92/5

	Control Systems					
EEL 3123	Networks & Systems	4	Junior	Fall 2010	65	3.81/5
EEL 3657	Linear Control Systems	3	Senior	Spring 2010	40	3.5/5
EEL 3004	Electrical Networks	3	Sophomore	Fall 2009	64	3.04/5
EEL 3123	Networks & Systems	4	Junior	Spring 2009	78	3.71/5
EEL 3657	Linear Control Systems	3	Senior	Fall 2008	38	3.66/5
EEL 3123	Networks & Systems	4	Junior	Spring 2008	62	3.92/5
EEL 3123	Networks & Systems	4	Junior	Fall 2007	N/A	3.64/5
EEL 3657	Linear Control Systems	3	Senior	Spring 2007	59	4.00/5
EEL 3123	Networks & Systems	4	Junior	Fall 2006	27	4.30/5

List of Publications

[1]UCF graduate student
[2] UCF post-doctoral research associate
[3]UCF undergraduate student
[4]Non-UCF student
[5]Clinical collaborators
[6]Industrial collaborators

- **Books**

Research Monographs

1. A. Behal, P. Marzocca, and Z. Wang[1], *Adaptive and Robust Control of Aeroelasticity*, Birkhauser, under contract, to appear, 2014.

2. A. Behal, W. E. Dixon, D. M. Dawson, and B. Xian, *Lyapunov-Based Control of Robotic Systems*, CRC Press, December 17, 2009, ISBN 0-8493-7025-6. (reviewed in *Journal of Intelligent & Robotic Systems* by A. Pouliezos, July 2010)

3. W. E. Dixon, A. Behal, D. M. Dawson, and S. Nagarkatti, *Nonlinear Control of Engineering Systems*, Birkhauser, May 2003, ISBN 0-8176-4265-5. (reviewed in *IEEE Control Systems Magazine* by N. Harris McClamroch, April 2005)

4. W. E. Dixon, D. M. Dawson, E. Zergeroglu, and A. Behal, *Nonlinear Control of Wheeled Mobile Robots*, Prentice-Hall, 2001, ISBN 1-85233-414-2.

Edited Collections

5. Y. Sun, A. Behal, and C.-K. R. Chung (Eds), *New Developments in Robot Vision*, Springer Verlag GmbH, under contract, to appear, 2014.

- **Journal Papers**

6. K. Zhang and A. Behal, "Continuous Robust Control for Active Vibration Suppression of 2D Airfoils under Unsteady Flow," *AIAA Journal of Guidance, Control, and Dynamics*, in preparation.

7. N. Paperno[1], Z. Wang[1], D.-J. Kim[2], and A. Behal, "Robust Visual Tracking for UCF-MANUS – An Intelligent Assistive Robotic Manipulator," submitted to the *IEEE/ASME Trans. on Mechatronics*.

8. M. Cassaro, M. Battipede, P. Marzocca, E. Cestino, and A. Behal, "$\mathcal{L}_1$ Adaptive Flutter Suppression Control Strategy for Highly Flexible Structure," SAE Int. J. Aerosp., vol. 6, no. 2, December 2013.

9. K. Zhang[1], Z. Wang[1], P. Marzocca, and A. Behal, "A Novel Adaptive Controller for Aeroelastic Vibration Control of a 2D Airfoil under Unsteady Flow," *AIAA Journal of Guidance, Control, and Dynamics*, vol. 36, no. 6, pp. 1681-1694, Nov. 2013. (doi: 10.2514/1.61132).

10. D.-J. Kim[2], Z. Wang[1], N. Paperno[1], and A. Behal, "System Design and Implementation of UCF-MANUS – An Intelligent Assistive Robotic Manipulator," *IEEE/ASME Trans. on Mechatronics*, vol. 19, no. 1, pp. 225-237, February 2014.

11. S.A. Khan[1], V. Thakore[1], A. Behal, L. Bölöni, and J.J. Hickman, "Comparative Analysis of System Identification Techniques for Nonlinear Modeling of the Neuron-Microelectrode Junction," *Journal of Computational and Theoretical Nanoscience*, vol. 10, no. 3, pp. 573-580, March 2013.

12. D.-J. Kim[2], Z. Wang[1], and A. Behal, "Motion Segmentation and Control Design for UCF-MANUS – An Intelligent Assistive Robotic Manipulator," *IEEE/ASME Trans. on Mechatronics*, vol. 17, no. 5, pp. 936-948, October 2012.

13. Z. Wang[1], D.-J. Kim[2], and A. Behal, "Design of Stable Visual Servoing under Sensor and Actuator Constraints via a Lyapunov-based Approach," *IEEE Transactions on Control Systems Technology*, vol. 20, no. 6, pp. 1575-1582, November 2012.

14. K. Zhang[1], Z. Wang[1], A. Behal, and P. Marzocca, "A Continuous Robust Control Strategy for the Active Aeroelastic Vibration Suppression of Supersonic Lifting Surfaces," *International Journal of Aeronautical and Space Science*, vol. 13, no. 2, pp. 210-220, June 2012.

15. Lingfei Zhi[1], Jun Chen[1], P. Molnar, and A. Behal, "Weighted Least Squares Approach for Identification of a Reduced-Order Adaptive Neuronal Model," *IEEE Transactions on Neural Networks and Learning Systems,* vol. 23, no. 5, pp. 834-840, May 2012.

16. Z. Wang[1], A. Behal, and P. Marzocca, "Continuous Robust Control for Two-Dimensional Airfoils with Leading- and Trailing-Edge Flaps," *AIAA Journal of Guidance, Control, and Dynamics*, vol. 35, no. 2, pp. 510-519, March-April 2012.

17. D.-J. Kim[2], R. Hazlett[1], H. Godfrey[5], G. Rucks[5], T. Cunningham[5], D. Portee[5], J. Bricout, Z. Wang[1], and A. Behal, "How Autonomy Impacts Performance and Satisfaction: Results from a Study with Spinal Cord Injured Subjects using an Assistive Robot," *IEEE Trans. on Systems, Man, and Cybernetics – Part A: Systems and Humans*, vol. 42, no. 1, pp. 2-14, January 2012.

18. Z. Wang[1], A. Behal, and P. Marzocca, "Robust Adaptive Output Feedback Control Design for a MIMO Aeroelastic System," *International Journal of Aeronautical and Space Science*, vol. 12, no. 2, pp. 157-167, June 2011.

19. K. Tsui, D.-J. Kim[2], A. Behal, D. Kontak[5], and H. Yanco, ""I Want That": Human-in-the-Loop Control of a Wheelchair-Mounted Robotic Arm," *Applied Bionics and Biomechanics: Special Issue on Assistive and Rehabilitation Robotics*, vol. 8, no. 1, pp. 127-147, 2011.

20. Z. Wang[1], A. Behal, and P. Marzocca, "Model-Free Control Design for MIMO Aeroelastic System Subject to External Disturbance," *AIAA Journal of Guidance, Control, and Dynamics*, vol. 34, no. 2, pp. 446-458, March-April 2011.

21. Z. Wang[1], A. Behal, and P. Marzocca, "Adaptive and Robust Aeroelastic Control of Nonlinear Lifting Surfaces with Single/Multiple Control Surfaces: A Review," *International Journal of Aeronautical and Space Science*, vol. 11, no. 4, pp. 285-302, December 2010.

22. G. Hu, W. MacKunis, N. Gans, W. E. Dixon, J. Chen, A. Behal, and D.M. Dawson, "Homography-Based Visual Servo Control with Imperfect Camera Calibration," *IEEE Transactions on Automatic Control*, vol. 54, no. 6, pp. 1318-1324, June 2009.

23. V. Thakore[1], A. Behal, P. Molnar, D.C. Leistritz, and J.J. Hickman, "Nanoscale Nonlinear Dynamic Characterization of the Neuron-Electrode Junction," *Journal of Computational and Theoretical Nanoscience*, vol. 5, no. 11, pp. 2164-2169, November 2008.

24. V.M. Rao[4], A.K. Jain[6], K.K. Reddy[1], and A. Behal, "Nonlinear Control of a Single Phase Unity Power Factor Rectifier: Design, Analysis, and Experimental Results", *IEEE Transactions on Control Systems Technology*, vol. 16, no. 6, pp. 1301-1307, November 2008.

25. A. Behal, J. Chen[6], and D. Dawson, "A Novel Path Planning and Control Framework for Passive Resistance Therapy with a Robot Manipulator", *International Journal of Systems Science*, vol. 39, no. 6, pp. 639-653, June 2008.

26. J. Chen[6], A. Behal, and D.M. Dawson, "Robust Feedback Control for a Class of Uncertain MIMO Nonlinear Systems", *IEEE Transactions on Automatic Control*, vol. 53, no. 2, pp. 591-596, March 2008.

27. V.M. Rao[4], A. Behal, A. K. Jain[6], and K.K. Reddy[1], "Experimental Comparison of Digital Control Techniques for Single Phase Power Factor Correction," *IEEE Transactions on Industrial Electronics*, vol. 67, no. 1, pp. 67-78, January 2008.

28. V.K. Chitrakaran, A. Behal, D.M. Dawson, and I.D. Walker, "Setpoint Regulation of Continuum Robots Using a Fixed Camera", *Robotica*, vol. 25, no. 5, pp. 581-586, September 2007.

29. K.K. Reddy[1], J. Chen[6], A. Behal, and P. Marzocca, "Multi-Input/Multi-Output Adaptive Output Feedback Control Design for Aeroelastic Vibration Suppression", *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 4, pp. 1040-1048, July-August 2007.

30. A. Behal, A. K. Jain[6], and K. Joshi[4], "Observers for a Special Class of Bilinear Systems: Design and Application", *IEEE Transactions on Automatic Control*, vol. 51, no. 11, pp. 1854-1858, November 2006.

31. A. Behal, V. M. Rao[4], P. Marzocca, and M. Kamaludeen[4], "Adaptive Control for a Nonlinear Wing Section with Multiple Flaps", *AIAA Journal of Guidance, Control, and Dynamics*, vol. 29, no. 3, pp. 744-749, May-June 2006.

32. V. M. Rao[4], A. Behal, P. Marzocca, and C.M. Rubillo[4], "Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap", *Aerospace Science and Technology*, vol. 10, no. 4, pp. 309-315, May 2006.

33. A. K. Jain[6], K. Joshi[4], A. Behal, and N. Mohan, "Voltage Regulation with STATCOMs: Modeling, Control and Results", *IEEE Transactions on Power Delivery*, vol. 21, no. 2, pp. 726-735, April 2006.

34. A. Behal, P. Marzocca, V. M. Rao[4], and A. Gnann[4], "Nonlinear Adaptive Model Free Control of an Aeroelastic 2-D Lifting Surface", *AIAA Journal of Guidance, Control, and Dynamics*, vol. 29, no. 2, pp. 382-390, March-April 2006.

35. A. Behal, P. Setlur, W. Dixon, and D. M. Dawson, "Adaptive Position and Orientation Regulation for the Camera-in-Hand Problem", *Journal of Robotic Systems*, vol. 22, no. 9, pp. 457-473, Sept. 2005.

36. J. Chen, D. M. Dawson, W. E. Dixon, and A. Behal, "Adaptive Homography-Based Visual Servo Tracking for a Fixed Camera Configuration with a Camera-in-Hand Extension", *IEEE Transactions on Control Systems Technology*, vol. 13, no. 5, pp. 814-825, Sept. 2005.

37. A. K. Jain, A. Behal, X. Zhang[4], D. M. Dawson, and N. Mohan, "Nonlinear Controllers for Fast Voltage Regulation using STATCOMs", *IEEE Transactions on Control Systems Technology*, vol. 12, no. 6, pp. 827-842, Nov. 2004.

38. A. Behal, M. Feemster, D.M. Dawson, and D. Haste, "An Improved Indirect Field Oriented Controller for the Induction Motor", *IEEE Transactions on Control Systems Technology*, vol. 11, no. 2, pp. 248-252, March 2003.

39. A. Behal, D. M. Dawson, E. Zergeroglu, and Y. Fang, "Nonlinear Tracking Control of an Underactuated Spacecraft", *AIAA Journal of Guidance, Control and Dynamics*, Vol. 25, No. 5, pp. 979-985, Sep-Oct 2002.

40. A. Behal, W. Dixon, D.M. Dawson, and Y. Fang, "Tracking and Regulation Control of an Underactuated Surface Vessel with Nonintegrable Dynamics", *IEEE Transactions on Automatic Control*, vol. 47, no. 3, pp. 495-500, March 2002.

41. A. Behal, M. Feemster, D. M. Dawson, and A. Mangal, "Partial State Feedback Control of Induction Motors with Magnetic Saturation: Elimination of Flux Measurements", *Automatica*, vol. 38, no. 2, pp. 191-203, February 2002.

42. E. Zergeroglu, D. M. Dawson, M. de Queiroz, and A. Behal, "Vision-based Nonlinear Tracking Controllers with uncertain robot-camera parameters", *IEEE/ASME Transactions on Mechatronics*, vol. 6, no. 3, pp. 322-337, Sept. 2001.

43. M. Feemster, P. Aquino, D. M. Dawson, and A. Behal, "Sensorless Rotor Velocity Tracking Control for Induction Motors", *IEEE Transactions on Control Systems Technology*, vol. 9, no. 4, pp. 645-653, July 2001.

44. W. E. Dixon, D. M. Dawson, E. Zergeroglu, and A. Behal, "Adaptive Tracking Control of a Wheeled Mobile Robot via an Uncalibrated Camera System", *IEEE Transactions on Systems, Man, and Cybernetics - Part B: Cybernetics*, vol. 31, no. 3, pp. 341-352, 2001.

45. M. Feemster, D. M. Dawson, P. Aquino, and A. Behal, "A Global Exponential Output-Feedback Controller for Induction Motors", *Asian Journal of Control*, vol. 2, no. 4, pp. 230-242, December 2000.

46. E. Zergeroglu, W. E. Dixon, A. Behal, and D. M. Dawson, "Adaptive Set-Point Control of Robotic Manipulators with Amplitude-Limited Control Inputs", *Robotica*, vol. 18, no. 2, pp. 171-181, 2000.

47. P. Aquino, M. Feemster, D. M. Dawson and A. Behal, "Adaptive Partial State Feedback Control of the Induction Motor: Elimination of Rotor Flux and Rotor Velocity Measurements", *International Journal of Adaptive Control and Signal Processing*, vol. 14, pp. 83-108, 2000.

48. M. Feemster, D. Dawson, A. Behal, and W. Dixon, "Tracking Control in the Presence of Nonlinear Dynamic Frictional Effects: Robot Extension," *Asian Journal of Control*, vol. 1, no. 3, pp. 153-168, 1999.

49. E. Zergeroglu, W. E. Dixon, D. M. Dawson, and A. Behal, "Lyapunov-Based Set-Point Control of the Acrobot", *International Journal of Robotics and Automation*, vol. 14, no. 4, pp. 161-170, 1999.

- **Invited Conference Papers**

50. D.-J. Kim[2], R. Hazlett[1], H. Godfrey[5], G. Rucks[5], D. Portee[5], J. Bricout, T. Cunningham[5], and A. Behal, "On the Relationship between Autonomy, Performance, and Satisfaction: Lessons from a Three-Week User Study with post-SCI Patients using a Smart 6DOF Assistive Robotic Manipulator," *2010 IEEE International Conference on Robotics and Automation*, Anchorage, AK, USA, pp. 217-222, May 3-8, 2010.

51. P. Setlur, A. Behal, W. Dixon, and D. M. Dawson, "Adaptive Position and Orientation Regulation for the Camera-in-Hand Problem", *2001 International Symposium on Adaptive and Intelligent Systems and Control,* Arlington, VA, June 2001.

52. M. Feemster, D. M. Dawson, A. Behal, and W. Dixon, "Tracking Control in the Presence of Nonlinear Dynamic Frictional Effects: Robot Extension", *Proc. of the IEEE Conference on Control Applications*, Kohala, HI, pp. 1169-1174, August 1999.

- **Regular Conference Papers**

53. Z. Wang[1] and A. Behal, "Continuous Robust Control for a Class of Uncertain MIMO Nonlinear Systems", *2011 IEEE Conference on Decision and Control,* Orlando, FL, pp. 7561-7566, December 2011.

54. Z. Wang[1], A. Behal, B. Xian, and J. Chen[6], "Lyapunov-Based Adaptive Control Design for a Class of Uncertain MIMO Nonlinear Systems," *IEEE Multi-Conference on Systems and Control,* Denver, CO, pp. 1510-1515, September 2011.

55. R. Hazlett[1], M. Smith[3], and A. Behal, "Knowledge Based Design of User Interface for Operating an Assistive Robot," *14th International Conference on Human Computer Interaction*, Orlando, FL, pp. 304-312, July 2011.

56. Jun Chen[1], J. Suarez[1], P. Molnar, and A. Behal, "Maximum Likelihood Parameter Estimation in a Stochastic Resonate-and-Fire Neuronal Model," *1st IEEE International Conference on Computational Advances in Bio and Medical Sciences,* Orlando, FL, pp. 57-62, February 2011.

57. Z. Wang[1], D.-J. Kim[2], and A. Behal, "An Optimization-based Approach for Design and Analysis of Stable 2.5D Visual Servoing under Sensor and Actuator Constraints", *2010 IEEE Conference on Decision and Control,* Atlanta, GA, pp. 1650-1655, Dec 2010.

58. R. Hazlett[1], D.-J. Kim[2], H. Godfrey[5], J. Bricout, and A. Behal, "Exploring Learning Heuristics for Adopting New Technology to Assist with Activities of Daily Living (ADL): Results of Qualitative Analysis using Nvivo 8 Software," *2010 Florida Conference on Recent Advances in Robotics*, Jacksonville, FL, May 20-21, 2010.

59. Z. Wang[1], J. Chen[6], and A. Behal, "Robust Adaptive Control Design for a Class of Uncertain MIMO Nonlinear Systems," *IEEE Multi-Conference on Systems and Control,* Yokohama, Japan, Sep. 2010, pp. 2284-2289.

60. D.-J. Kim[2], R. Lovelett[3], Z. Wang[1], and A. Behal, "A Region-Based Switching Scheme for Practical Visual Servoing under Limited FOV and Dynamically Changing Features", *2009 IASTED 14th International Conference on Robotics and Applications*, Nov 4-6, 2009, Cambridge, MA, USA, CD ISBN: 978-0-88986-813-7.

61. Z. Wang[1], D.-J. Kim[2], and A. Behal, "A Two-level Particle Filter Approach to Range Estimation using an Eye-in-Hand Configured Single Camera", *2009 IASTED 14th International Conference on Robotics and Applications*, Oct 11-15, 2009, Cambridge, MA, USA, CD ISBN: 978-0-88986-813-7.

62. D.-J. Kim[2], R. Lovelett[3], and A. Behal, "An Empirical Study with Simulated ADL Tasks using a Vision-Guided Assistive Robot Arm", *2009 IEEE 11th International Conference on Rehabilitation Robotics*, Kyoto, Japan , June 23-26, 2009, pp. 504-509.

63. D.-J. Kim[2], A. Behal, and R. Lovelett[3], "Eye-in-Hand Stereo Visual Servoing of an Assistive Robot Arm in Unstructured Environments", *2009 IEEE International Conference on Robotics and Automation*, Kobe, Japan, May 12 - 17, 2009, pp. 2326-2331.

64. D.-J. Kim[2] and A. Behal, "Human-in-the-Loop Control of an Assistive Robotic Arm in Unstructured Environments for Spinal Cord Injured Users", late-breaking abstract presented at the *4th ACM/IEEE International Conference on Human Robot Interaction*, San Diego, CA, USA, pp. 285-286, March 11-13 2009.

65. G.D. Fulk, M.J. Frick, A. Behal, and M. Ludwig, "A Wheelchair Mounted Robotic Arm for Individuals with Multiple Sclerosis: A Pilot Study", presented at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas, NV, Feb 9-12 2009, abstract list available in vol. 32, no. 4, Journal of Neurologic Physical Therapy, Dec 2008, pp. 216.

66. M. Hernandez[3], S. Echeverry[3], R. Guerra[3], D.-J. Kim[2], C. Hamilton[3], and A. Behal, "User-Guided Vision-Based Control of a Wheelchair Mounted Assistive Robotic Arm in an Unstructured Environment", the *RESNA 2008 Annual Conference*, Arlington, VA, PSUN23(RESNA-CP-051-2008), June 26-30, 2008.

67. V.M. Rao[4], K.K. Reddy[1], A. Behal, and A.K. Jain, "Modeling, Control, and Experimental Results for a Single Phase One Quadrant Unity Power Factor Rectifier", *Proc. of the IEEE Conference on Decision and Control*, San Diego, CA, pp. 6223-6228, December 2006.

68. V.M. Rao[4], R. Sadagopan[4], A.K. Jain[6], and A. Behal, "Digital Implementation of a Nonlinear Controller for a Unity Power Factor Rectifier: Simulation and Experiments", *Proc. of the American Control Conference*, Minneapolis, MN, pp. 3457-3462, June 2006.

69. J. Chen, A. Behal, and D.M. Dawson, "Adaptive Output Feedback Control for a Class of MIMO Nonlinear Systems" *Proc. of the American Control Conference*, Minneapolis, MN, pp. 5300-5305, June 2006.

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71. V.M. Rao[4], A. Behal, and P. Marzocca, "Hierarchical Adaptive Controller for a Nonlinear Aeroelastic Wing Section with Multiple Control Surfaces", *Proc. of the IEEE Conference on Decision and Control*, Seville, Spain, pp. 2487-2492, December 2005.

72. V. M. Rao[4], A. Behal, and P. Marzocca, "Adaptive Aeroelastic Control of a Supersonic Wing Section with Flap", *AIAA Guidance, Navigation, and Control Conference and Exhibit*, San Francisco, CA, AIAA 2005-6250, pp. 1-26, Aug. 2005.

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77. A. Behal, P. Marzocca, D.M. Dawson, and A. Lonkar[4], "Nonlinear Adaptive Model Free Control of an Aeroelastic 2-D Lifting Surface", *AIAA Guidance, Navigation, and Control Conference and Exhibit*, Providence, RI, CD-ROM 15, AIAA 2004-5227, pp. 1-16, Aug. 2004.

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79. A. K. Jain, A. Behal, and N. Mohan, "Nonlinear Controller for a Single Phase One Quadrant Unity Power Factor Rectifier", *Proc. of the IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 3876-3881, December 2003.

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93. E. Zergeroglu, D. M. Dawson, I. Walker, and A. Behal, "Nonlinear Tracking Control of Kinematically Redundant Robot Manipulators", *Proc. of the American Control Conference*, Chicago, IL, pp. 2513-2517, June 2000.

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- **Unrefereed Conference Papers**

99. P. Marzocca, G. Coppotelli, and A. Behal, "Comparison Among Structural Health Monitoring Techniques", 46th AIAA*/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference*, Austin, Texas, AIAA paper 2005-2227, pp. 1-13, April 18-21, 2005.

100. P. Marzocca, A. Behal, and A. Gnann[4], "Adaptive Control Based Structural Health Monitoring Technique", *CANSMART 2004, 7th International Workshop on Smart Materials and Structures*, Montreal, Quebec, Canada, pp. 75-84, October 2004.

- **Advised Student Poster and Paper Presentations**

1. C. Echanique[3] and A. Behal, "Data Fitting To Izhikevich's Quadratic Spiking Neuron Model," at the *NSTC/AMPAC K-12/Undergraduate/RET Summer Research Showcase,* July 2012.

2. C. Echanique[3] and L. Zhi[1], "Characterization of an Advanced Neuronal Model," poster presentation at the *UCF Showcase for Undergraduate Research Excellence (SURE),* April 5, 2012. (Advisor: A. Behal)

3. Andrea Solano[3], "Audience Response Solution: Recording Patient's Progress," poster presentation at the *UCF Showcase for Undergraduate Research Excellence (SURE),* April 5, 2012. (Advisor: A. Behal)

4. T. Stigliano[3] and S. Sheldon[3], "Integration of Simultaneous Localization and Mapping for the UCF MANUS Assistive Robot System," poster presentation at the *UCF Showcase for Undergraduate Research Excellence (SURE),* April 5, 2012. (Advisor: A. Behal)

5. L. Zhi[1], Z. Wang[1] and A. Behal, "*Parameter Estimation for a Reduced Order Neuronal Spiking Model with Relevance to In Vitro Embryonic Rat Motoneuronal Data,"* poster presentation at the *2nd IEEE International Conference on Computational Advances in Bio and Medical Sciences*, Las Vegas, NV, February 2012.

6. Y. Patel[4] and Z. Wang[1], "Design of a Motorized Ramp to enable ease of access for disabled individuals", at the *NSTC/AMPAC K-12/Undergraduate/RET Summer Research Showcase,* August 2011. (Advisor: A. Behal)

7. C. Echanique[3] and J. Suarez[1], "Characterization of an Advanced Neuronal Model," at the *NSTC/AMPAC K-12/Undergraduate/RET Summer Research Showcase,* August 2011. (Advisor: A. Behal)

8. J.N. Suarez[1], "Maximum Likelihood Parameter Estimation in a Stochastic Resonate-and-Fire Neuronal Model," at the *NanoScience Technology Center External Advisory Board Meeting, Univ. Central Florida*, Orlando, February 2011. (Advisor: A. Behal)

9. M. Smith[3] and D.-J. Kim[2], "Applying Human Factors Psychology Principles to Design Graphical User Interface of an Assistive Robot", poster presentation at the *UCF Showcase for Undergraduate Research Excellence (SURE),* April 1, 2010, available online at http://eecs.ucf.edu/~abehal/AssistiveRobotics/presentation/MelissaSmith_SUREposter.pdf. (Advisor: A. Behal)

10. K.K. Reddy[1] and V. Thakore[1], "Nonlinear dynamic characterization of the neuron-electrode interface," poster presentation at the *UCF EECS Industry Day*, April 2008. (Advisors: J. Hickman and A. Behal)

11. M.K. Kamaludeen[4], "Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap" *14th Annual Journey Beyond Excellence CSTEP State Wide Student Conference*, 3rd place poster presentation, Science and Technology category, Lake George, Sagamore, NY, April 21-23, 2006 (Advisors: P. Marzocca and A. Behal).

12. C. McBee[4], C. Libordi[4], and V.M. Rao[4], "Damage Detection Based on Structural Dynamic Characteristics," poster presentation at the *7th Annual SURE symposium*, Clarkson University, Potsdam, NY, July 2005; poster presentation at the *14th Annual Teaching Effectiveness Conference on Undergraduate Research: Models, Funding, and Pedagogy*, Clarkson University, Potsdam, NY, October 2005. (Advisors: P. Marzocca and A. Behal).

13. A. deRoos[4] and V. M. Rao[4], "Digital Implementation of a Nonlinear Controller for a Single Phase One Quadrant Unity Power Factor Rectifier", oral presentation at the *7th Annual SURE symposium*, Clarkson University, Potsdam, NY, July 2005. (Advisor: A. Behal)

14. M.K. Kamaludeen[4] and V.M. Rao[4], "Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap", poster presentation at the *7th Annual SURE symposium*, Clarkson University, Potsdam, NY, July 2005. (Advisors: P. Marzocca and A. Behal)

15. A. Gnann[4], "Adaptive Control Based Structural Health Monitoring Technique", poster presentation at the *6th Annual SURE symposium*, Clarkson University, Potsdam, NY, July 2004. (Advisors: P. Marzocca and A. Behal)

- **Talks and Presentations**

1. Maximum Likelihood Parameter Estimation in a Stochastic Resonate-and-Fire Neuronal Model, at the *1st IEEE International Conference on Computational Advances in Bio and Medical Sciences*, Orlando, FL, February 2011.

2. On the Relationship between Autonomy, Performance, and Satisfaction: Lessons from a Three-Week User Study with post-SCI Patients using a Smart 6DOF Assistive Robotic Manipulator, at the *IEEE International Conference on Robotics and Automation*, Anchorage, AK, May 2010.

3. Exploring Learning Heuristics for Adopting New Technology to Assist with Activities of Daily Living (ADL): Results of Qualitative Analysis using Nvivo 8 Software, at the *Florida Conference on Recent Advances in Robotics*, Jacksonville, FL, May 2010.

4. Eye-in-Hand Stereo Visual Servoing of an Assistive Robot Arm in Unstructured Environments, at the *2009 IEEE International Conference on Robotics and Automation*, Kobe, Japan, May 2009.

5. Human-in-the-Loop Control of an Assistive Robotic Arm in Unstructured Environments for Spinal Cord Injured Users, interactive presentation at the *4th ACM/IEEE International Conference on Human Robot Interaction*, San Diego, CA, March 2009.

6. Nonlinear Characterization of Neurons and Neuron-Electrode Interface, at the *Univ. Central Florida Biophysics Group Seminar series*, Orlando, September 2008.

7. Rehabilitation Robotics & Systems Biology, at the *NanoScience Technology Center Internal Advisory Board Meeting, Univ. Central Florida*, Orlando, June 2007.

8. System Identification and Modeling for In-Vitro Systems, at the *Computational Biological Systems Research Focus Group, Univ. Central Florida*, Orlando, January 2007.

9. Modeling, Control, and Experimental Results for a Single Phase One Quadrant Unity Power Factor Rectifier, at the *IEEE Conference on Decision and Control*, San Diego, CA, Dec 2006.

10. Digital Implementation of a Nonlinear Controller for a Unity Power Factor Rectifier: Simulation and Experiments, at the *American Control Conference*, Minneapolis, MN, June 2006.

11. Adaptive Output Feedback Control for a Class of MIMO Nonlinear Systems, at the *American Control Conference*, Minneapolis, MN, June 2006.

12. Modeling and Nonlinear Control of STATCOMs for Fast Voltage Regulation, at the *American Control Conference*, Portland, Oregon, June 2005.

13. Observers for a Special Class of Bilinear Systems: Design, Analysis, and Application, at the *American Control Conference*, Portland, Oregon, June 2005.

14. A Novel Passive Path Following Controller for a Rehabilitation Robot, at the *IEEE Conference on Decision and Control*, Paradise Island, Bahamas, December 2004.

15. Nonlinear Adaptive Model Free Control of an Aeroelastic 2-D Lifting Surface, *AIAA Guidance, Navigation, and Control Conference and Exhibit*, Providence, RI, Aug. 2004.

16. Integrated Simulation Studies for the Stretch Reflex Arc, *Clarkson University ECE Seminar Series*, Potsdam, December 2003.

17. Nonlinear Control of Induction Motors, *Dept of Electrical & Computer Engineering, California State University, Northridge*, March 2003.

18. Nonlinear Control of Induction Motors, *Dept of Electrical & Computer Engineering, Clarkson University, Potsdam*, March 2003.

19. Induction Motor Control, U. *of Connecticut, Dept. of Mechanical Engineering Seminar*, December 2001.

20. Lyapunov Based Nonlinear Control of Electrical and Mechanical Systems, *Ph.D. Dissertation, Clemson University*, Clemson, SC, December 2001.

21. Hybrid Biological/Non-Biological Constructs for Robotic Control Applications, *DARPA*, Washington D.C., October 2001.

22. Nonlinear Coupling Control Laws for an Overhead Crane System, at the *IEEE Conference on Control Applications*, Mexico City, Mexico, September 2001.

23. Adaptive Tracking Control of Underactuated Surface Vessels, at the *IEEE Conference on Control Applications*, Mexico City, Mexico, September 2001.

24. Task-Space Tracking Control of Redundant Robot Manipulators via Quaternion Feedback, at the *IEEE Conference on Control Applications*, Mexico City, Mexico, September 2001.

25. Repetitive Learning Control: A Lyapunov-Based Approach, at the *IEEE Conference on Control Applications*, Mexico City, Mexico, September 2001.

26. Tracking and Regulation Control of an Underactuated Surface Vessel with Nonintegrable Dynamics, at the *IEEE Conference on Decision and Control*, Sydney, Australia, December, 2000.

27. On Global Output Feedback Control of Robot Manipulators, at the *IEEE Conference on Decision and Control*, Sydney, Australia, December 2000.

28. Tracking Control of the Induction Motor in the Presence of Magnetic Saturation Effects, at the *IEEE Conference on Decision and Control*, Phoenix, AZ, December 1999.

29. Design of an Energy Management System, Master's Thesis Committee, Indian Institute of Technology Bombay, Mumbai, India, June 1996.

- **Post-Doctoral Advising**

1. D.-J. Kim –University of Central Florida, Orlando, FL (2007-2010).

- **M.S Committee Chair**

1. Z. Wang, MS Thesis – *Nonlinear Estimation and Control for Assistive Robots*, June 2011.

2. J. Suarez, MS Thesis – *Data-True Characterization of Neuronal Models*, June 2011.

3. V. Rao, M.S. Thesis – *Adaptive Control Schemes for Aeroelastic Wing Sections and Implementation of Control Strategies for Unity Power Factor Rectifier* – Clarkson University, May 2006.

4. K. Joshi, M.E. Thesis – *A Comparative Study of Control Strategies for Fast Voltage Regulation with STATCOMs* – Clarkson University, April 2005.

5. R. Sadagopan, M.S. Thesis – *Digital Implementation of a Nonlinear Controller for a Unity Power Factor Rectifier* – Clarkson University, December 2005.

6. A. Lonkar, MS Thesis – *Nonlinear Control Techniques for Mechatronic Systems* – Clemson University, Clemson, SC, July 2004, co-advised with D.M. Dawson.

- **Ph.D. Committee Chair**

1. K. Zhang, Ph.D. Dissertation, in process.

2. N. Paperno, Ph.D. Dissertation, in process.

3. Z. Wang, Ph.D. Dissertation – *Lyapunov Based Control Design for Multiple Input Multiple Output Systems* – completed, Spring 2012.

4. X. Zhang, Ph.D. Dissertation – *Output Feedback and Adaptive Control of Uncertain MIMO Nonlinear Systems with Non-Symmetric Input Gain Matrix* – Clemson University, Clemson, SC, Dec. 2004, co-advised with D.M. Dawson.

- **Honors in the Major Committee Chair**

  - C. Echanique – *Characterization of an Advanced Neuronal Model* – Honors in the Major Thesis, Summer 2012.

- **M.S./Ph.D. Committee Member**

  - Mohamed Alhosani – *Power Systems* – EECS-ECE, University of Central Florida, Orlando, FL, in progress.

  - Yoonhwak Kim – *Structural Health Monitoring* – Civil Engineering, University of Central Florida, Orlando, FL, in progress.

  - Douglas Cooper – *Advanced Digital Signal Processing Techniques* – University of Central Florida, Orlando, FL, in progress

  - Vaibhav Thakore – Nonlinear dynamic modeling, simulation and characterization of the mesoscale neuron-electrode interface– University of Central Florida, Orlando, FL, in progress.

  - Mainul Hossain – *An integrated system for cancer detection and treatment* – University of Central Florida, Orlando, FL, August 2012.

  - Ramin Mehran – *Video Analysis of Crowds and Behavior Recognition* – University of Central Florida, Orlando, FL, Fall 2011.

  - Craig Finch – *An Advanced Model for Protein Adsorption on a Polymer Surface* – University of Central Florida, Orlando, FL, Fall 2011.

  - Jiangmin Chunyu – *Reactive Control of Autonomous Dynamical Systems* – University of Central Florida, Orlando, FL, Fall 2010.

  - Albert Leyte-Vidal – *Establishing Degradation Rates and Service Lifetime of Photovoltaic Systems* – University of Central Florida, Orlando, FL, July 2010.

  - Abhijit Bhalkikar – *Study Of The Interactions Of Proteins, Cells And Tissue With Biomaterials* – University of Central Florida, Orlando, FL, March 2010.

  - Justin Youney – *A Comparison and Evaluation of Common PID Tuning Methods* – University of Central Florida, Orlando, FL, June 2007.

- Kambhatla Kodanda Ram Kashyap – *Novel multi-hop, reliable, scalable transport layer scheme for Wireless sensor and actor networks* – Clarkson University, Potsdam, NY, June 2006.

- Lotten Mthombeni – *Improved Lamination Core Loss Measurements and Calculations* – Clarkson University, Potsdam, NY, April 2006.

- Hugh Douglas – *The Application of Wavelets to Condition Monitoring of Energy Conversion Equipment* – Clarkson University, Potsdam, NY, April 2005.

- Yicheng Chen – *Novel Design Configurations for Permanent Magnet Wind Generators* – Clarkson University, Potsdam, NY, November 2004.

- Jonathan Otter – *Redesign of a PM generator for multi-blade turbines* – Clarkson University, Potsdam, NY, Dec. 2003.

- **Honors in the Major Thesis Committee Member**

  - Melissa Smith – *The effect of a human-teacher vs a robot-teacher on human learning* – University of Central Florida, Orlando, FL, Summer 2011.

- **Undergraduate Student Mentoring**

1. Mark Applegate (Honors, B.S. Dept. of EECS, UCF)
2. Andrea Solano (RAMP scholar, B.S. Dept. of EECS, UCF)
3. Stephen Sheldon (RAMP scholar, B.S. Dept. of EECS, UCF)
4. Tyler Stigliano (RAMP scholar, B.S. Dept. of EECS, UCF)
5. Xin Tong (B.S. Dept. of EECS, UCF)
6. Christopher Echanique (Honors, B.S. Dept. of EECS, UCF)
7. Richee Ramsahoye (B.S. Dept. of EECS, UCF)
8. Taylor Stewart (EXCEL scholar, B.S. Dept. of EECS, UCF)
9. Joe Nichols (EXCEL scholar, B.S. Dept. of EECS, UCF)
10. Melissa Smith (B.S. Dept. of Psychology, UCF)
11. Joshua Treadway (B.S. Dept. of EECS, UCF)
12. Nicole Palmer (B.S. Dept. of MMAE, UCF)
13. Esteban Guerra (B.S. Dept. of EECS, UCF)
14. Christopher Hamilton (B.S. Dept. of EECS, UCF)
15. Ryan Lovelett (B.S. Dept. of EECS, UCF)
16. Brandon Gilzean (B.S. Dept. of EECS, UCF)
17. Andy Pipa (B.S. Dept. of EECS, UCF)
18. Jaime Finkler (B.S. Dept. of EECS, UCF)
19. Marcos Hernandez (B.S. Dept. of EECS, UCF)
20. Simon Echeverry (B.S. Dept. of EECS, UCF)
21. Rafael Guerra (B.S. Dept. of EECS, UCF)
22. Joshua Miller (B.S. Dept. of EECS, UCF)
23. Justin Herris and team members (FUNSAT ADCS team, Dept. of MMAE, UCF)
24. Adriana deRoos (B.S., Clarkson University)
25. Mohamed K. Kamaludeen (B.S., Clarkson University)
26. Abe Gnann (B.S., Clarkson University)

- **High School Student Mentoring**

    1. Andrew Martinez (Robotics, 2009)
    2. Sam Jarsaniya (Robotics, 2010)
    3. Brian Ramirez (Robotics, 2010)
    4. Greg Raymond (Robotics, 2010)
    5. Yash Patel (Robotics, 2011)

- **References:** *Available on Request*