

John F. Hall

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University at Buffalo
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EDUCATION

- Ph.D. Mechanical Engineering, The University of Texas at Austin, 2012
Dissertation: [Design and Control of a Variable Ratio Gearbox for Distributed Wind Turbine Systems](#)
- M.S. Mechanical Engineering, The University of Texas at Austin, 2005
Thesis: A Test Bed Framework for Actuator Management Operating Software
- B.S. Mechanical Engineering, Missouri University of Science and Technology, 1992

ACADEMIC EMPLOYMENT HISTORY

- 08/13 – Assistant Professor, Department of Mechanical and Aerospace Engineering, University at Buffalo
- 08/12 – 08/13 Post-Doctoral Research Associate, Advanced Power Systems and Control Laboratory, The University of Texas at Austin
- 08/08 – 08/13 Teaching Assistant, Department of Mechanical Engineering, The University of Texas at Austin
- 05/06 – 08/08 Graduate Research Assistant, Applied Research Laboratories, The University of Texas at Austin
- 01/03 – 05/05 Graduate Research Assistant, Robotics Research Group, The University of Texas at Austin

INDUSTRIAL EMPLOYMENT HISTORY

- 2003 – 2013 Principal Engineer, Hall and Associates, Austin, Texas
- 2000 – 2005 Senior Design Engineer, Asyst Technologies, Austin, Texas
- 1997 – 2000 Reliability Engineer, Asyst Technologies, Austin, Texas
- 1994 – 1997 Manufacturing Engineer, Westinghouse Electric Corporation, Fort Payne, Alabama
- 1993 – 1994 Tool Design Engineer, Westinghouse Electric Corporation, Round Rock, Texas
- 1992 – 1993 Maintenance Supervisor, Westinghouse Electric Corporation, Blairsville, Pennsylvania
- Summer 1991 Reliability Engineering Intern, General Motors Corporation, Powertrain Division, Warren, Michigan
- Spring 1991 Process Engineering Intern, General Motors Corporation – Chevrolet Pontiac Canada Division, Oklahoma City, Oklahoma
- Summer 1990 Tool Design Intern, General Motor Corporation, Powertrain Division, Warren, Michigan

HONORS AND ACHIEVEMENTS

NSF I-Corp Training Program (2017)
University of Texas Outstanding Dissertation Award Nominee (2013)
Cockrell College of Engineering Doctoral Fellowship (2006)
Tau Beta Pi Honor Society (2004)
Licensed Professional Engineer (1997)
Westinghouse Electric Engineering/Manufacturing Professional Development Program (1994)
ASME International Gas Turbine Institute Scholar (1991)
General Motors Scholar (1990)

RESEARCH

Online profiles

Citations: 179, h-index: 7, i10-index: 6
Google Scholar: <https://goo.gl/TfgiZu>
ORCID: <http://goo.gl/29RjFE>
ResearcherID: <http://goo.gl/U3qNrm>

PUBLICATIONS

Refereed Journal Papers

*Graduate student supervised, †As lead author, ‡As corresponding author

Submitted

1. H. Khakpour* and J.F. Hall†, “A Design Methodology for Selecting Ratios for a Variable Ratio Gearbox used in a Wind Turbine with Active Blades,” *Energy Conversion and Management* (impact factor: 5.589), Submitted December 2017, revision under review.

Published while at the University at Buffalo

1. F. Mou*, H. Khakpour*, A. Estes, and J.F. Hall‡, “Weighted Least Squares Approach for an Adaptive Aerodynamic Engineered Structure with Twist Transformation,” *ASME Journal of Energy Resources Technology* (impact factor: 2.197), Accepted 12/30/2018.
2. H. Khakpour* and J.F. Hall†, “A Variable Twist Blade for Horizontal Axis Wind Turbines: Modeling and Analysis,” *ASME Journal of Solar Energy Engineering* (impact factor: 1.904), May 2018, 140(5). DOI: [10.1115/1.4040104](https://doi.org/10.1115/1.4040104)
3. H. Khakpour*, S. Chaudhari*, and J.F. Hall†‡, “A Design Methodology for Selecting Ratios for a Variable Ratio Gearbox used in a Wind Turbine with Active Blades,” *Renewable Energy* (impact factor: 4.825), January 2018, 118. DOI: [10.1016/j.renene.2017.10.072](https://doi.org/10.1016/j.renene.2017.10.072)
4. A. Lall*, H. Khakpour*, and J.F. Hall†, “A Methodology to Synthesize Gearbox and Control Design for Increased Power Production and Blade Root Stress Mitigation in a Small Wind Turbine,” *ASME Journal of Mechanical Design* (impact factor: 2.565), June 2017, 139(9). DOI: [10.1115/1.4036998](https://doi.org/10.1115/1.4036998)
5. D. Stratton, D. Martino, F.M. Pasquali*, K.E. Lewis, and J.F. Hall†, “A Design Framework for Optimizing the Mechanical Performance, Cost, and Environmental Impact of a Wind Turbine Tower,” *ASME Journal of Solar Energy Engineering* (impact factor: 1.904), April 2016, 138(4). DOI: [10.1115/1.4033500](https://doi.org/10.1115/1.4033500)

6. J.F. Hall[†], M.L. Shaltout, D. Palejiya, D. Chen, "An Integrated Control and Design Framework for Optimizing Energy Capture and Component Life for a Wind Turbine Variable Ratio Gearbox," *ASME Journal of Solar Energy Engineering* (impact factor: 1.904), April 2015, 137(2). DOI: [10.1115/1.4029812](https://doi.org/10.1115/1.4029812)
7. M.L. Shaltout, J.F. Hall and D. Chen, "Optimal Control of a Wind Turbine with A Variable Ratio Gearbox for Maximum Energy Capture and Prolonged Gear Life," *ASME Journal of Solar Energy Engineering* (impact factor: 1.904), March 2014, 136(3). DOI: [10.1115/1.4026676](https://doi.org/10.1115/1.4026676)

Published prior to the University at Buffalo

8. J.F. Hall[†] and D. Chen, "Dynamic Optimization of Drivetrain Gear Ratio to Maximize Wind Turbine Power Generation, Part 1: System Model and Control Framework", *ASME Journal of Dynamic Systems, Measurement and Control* (impact factor: 1.119), January 2013, 135(1). DOI: [10.1115/1.4006882](https://doi.org/10.1115/1.4006882)
9. J.F. Hall[†] and D. Chen, "Dynamic Optimization of Drivetrain Gear Ratio to Maximize Wind Turbine Power Generation, Part 2: Control Design", *ASME Journal of Dynamic Systems, Measurement and Control*, (impact factor: 1.119), January 2013, 135(1). DOI: [10.1115/1.4006886](https://doi.org/10.1115/1.4006886)
10. D. Palejiya, J.F. Hall, C.A. Mecklenborg and D. Chen, "Stability of Wind Turbine Switching Control in an Integrated Wind Turbine and Rechargeable Battery System: A Common Quadratic Lyapunov Function Approach", *ASME Journal of Dynamic Systems, Measurement and Control*, (impact factor: 1.119), February 2013, 135(2). DOI: [10.1115/1.4023059](https://doi.org/10.1115/1.4023059)
11. J.F. Hall[†], C.A. Mecklenborg, and D. Chen, "The Effects of Membrane Properties and Structural Parameters on the Non-Minimum Phase Behavior of the PEM Fuel Cell Humidification System," *ASME Journal of Fuel Cell Science and Technology* (impact factor: 0.748), February 2012, 9(1). DOI: [10.1115/1.4003752](https://doi.org/10.1115/1.4003752)
12. J.F. Hall[†] and D. Chen, "Performance of a 100 kW Wind Turbine with a Variable Ratio Gearbox", *Renewable Energy* (impact factor: 4.068), August 2012, 44. DOI: [10.1016/j.renene.2012.01.094](https://doi.org/10.1016/j.renene.2012.01.094)
13. J.F. Hall[†], C.A. Mecklenborg, D. Chen, and S.B. Pratap, "Wind Energy Conversion with a Variable-Ratio Gearbox: Design and Analysis," *Renewable Energy* (impact factor: 4.068), March 2011, 36(3). DOI: [10.1016/j.renene.2010.08.037](https://doi.org/10.1016/j.renene.2010.08.037)

Refereed Conference Papers

*Graduate student supervised, [†]As lead author, [‡]As corresponding author
 Presenter name underlined

Published while at the University at Buffalo

1. H. Khakpour* and J.F. Hall[‡], "Variable Twist Blade Transformation to Improve Wind Turbine Performance," *Proceedings of the 2018 ASME International Mechanical Engineering Congress & Exposition*, Pittsburgh, PA, November 9-15, 2018.

2. H. Suk* and J.F. Hall‡, “Adaptive Design Methodology to Support Microgrid Scalability over the Life-Cycle,” *Proceedings of the 2018 ASME International Mechanical Engineering Congress & Exposition*, Pittsburgh, PA, November 9-15, 2018.
3. H. Khakpour*, J.F. Hall‡, M. Zheng, T. Wu “Integrative Modeling Platform for Design and Control of an Adaptive Wind Turbine Blade,” *Proceedings of the 2018 ASME Dynamic Systems and Control Conference*, Atlanta, GA, September 1 – October 3, 2018, **(Invited Paper)**
4. F. Mou*, H. Khakpour*, A. Estes, and J.F. Hall‡, “Weighted-Least Squares Optimization Method for Control and Shape Design of an Adaptive Blade Twist Distribution to Increase Wind Capture,” *Proceedings of the 2018 ASME Dynamic Systems and Control Conference*, Atlanta, GA, September 1 – October 3, 2018.
5. A. Mutasim*, D. Sayers, and J.F. Hall‡, “Method For Evaluating Maintenance Capabilities in a Developing Community Using a Multiple DSM Developed Framework,” *Proceedings of the 2018 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, Quebec City, Canada, August 26-29, 2018.
6. F. Mou*, H. Khakpour*, A. Estes, and J.F. Hall‡, “A Weighted Least Squares Approach for the Design of Adaptive Aerodynamic Structures Subjected to an Out-of-Plane Transformation”, *Proceedings of the 2018 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, Quebec City, Canada, August 26-29, 2018.
7. H. Khakpour* and J.F. Hall‡, “Integrative Control and Design Framework for an Actively Variable Twist Wind Turbine Blade to Increase Efficiency,” *Proceedings of the 2018 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, Quebec City, Canada, August 26-29, 2018.
8. H. Khakpour* and J.F. Hall‡, “A Flexible Wind Turbine Blade with an Actively Variable Twist Distribution to Increase Region 2 Efficiency: Design and control”, *Proceedings of the 2017 ASME Dynamic Systems and Control Conference* (acceptance rate: 68%), Tysons Corner, VA, October 11 - 13, 2017. DOI: [10.1115/DSCC2017-5282](https://doi.org/10.1115/DSCC2017-5282) **(Invited Paper)**
9. H. Khakpour* and J.F. Hall‡, “A Design Methodology for a Flexible Wind Turbine Blade with an Actively Variable Twist Distribution to Increase Region 2 Efficiency”, *Proceedings of the 2017 ASME International Design and Engineering Technical Conference* (acceptance rate: 68%, identified as one of nine “Papers of Distinction” out of 113 papers accepted), Cleveland, OH, August 6-9, 2017. DOI: [10.1115/DETC2017-68302](https://doi.org/10.1115/DETC2017-68302)
10. Z. Ball, J. Szabo, F. Pasquali*, and J.F. Hall‡, “A Framework for Wind Energy Conversion to Promote Sustainability in Product Design,” *Proceedings of the 2017 ASME International Design and Engineering Technical Conference* (acceptance rate: 62%), Cleveland, OH, August 6-9, 2017. DOI: [10.1115/DETC2017-68393](https://doi.org/10.1115/DETC2017-68393)
11. H. Khakpour* and J.F. Hall‡, “Analysis of a Simplified Blade Design to Facilitate Wind Energy Penetration in the Developing World,” *Proceedings of the 2017 ASME International Design and Engineering Technical Conference*, Cleveland, OH, August 6-9, 2017. DOI: [10.1115/DETC2017-68411](https://doi.org/10.1115/DETC2017-68411)

12. A. Lall*, H. Khakpour*, and J.F. Hall‡, “Design and Control Framework for Selecting Wind Turbine Gear Ratios based on Optimal Power Generation and Blade Stress,” *Proceedings of the 2016 ASME Dynamic Systems and Control Conference* (acceptance rate: 68%), Minneapolis, MN, October 12 - 14, 2016. DOI: [10.1115/DSCC2016-9716](https://doi.org/10.1115/DSCC2016-9716) **(Invited Paper)**
13. A. Lall*, H. Khakpour*, and J.F. Hall‡, “An Integrative Framework for Design and Control Optimization of a Variable-Ratio Gearbox in a Wind Turbine with Active Blades”, *Proceedings of the 2016 ASME International Design and Engineering Technical Conference* (acceptance rate: 77%, identified as one of nine “Papers of Distinction” out of 118 papers accepted), Charlotte, NC, August 21-24, 2016. DOI: [10.1115/DETC2016-60244](https://doi.org/10.1115/DETC2016-60244)
14. D. Stratton, D. Martino, K. Lewis, J.F. Hall‡, “Selection of Sustainable Wind Turbine Tower Geometry and Material Using Multi-Level Decision Making,” *Proceedings of the 2014 ASME International Design and Engineering Technical Conference* (acceptance rate: 59%), Buffalo, NY, August 17-20, 2014. DOI: [10.1115/DETC2014-35215](https://doi.org/10.1115/DETC2014-35215)

Published prior to the University at Buffalo

1. Z. Yan, J.F. Hall, and D. Chen, “MIMO Control of Wind Turbine Using Direct Shooting Method,” *Proceedings of the 2013 American Control Conference* (acceptance rate: 55%), Washington, DC, June 17-19, 2013. DOI: [10.1109/ACC.2013.6580397](https://doi.org/10.1109/ACC.2013.6580397)
2. M.L. Shaltout, N. Zhao, J.F. Hall and D. Chen, “Wind Turbine Gearbox Control for Maximum Energy Capture and Prolonged Gear Life,” *Proceedings of the 2012 ASME Dynamic Systems and Control Conference* (acceptance rate: 52%), Ft. Lauderdale, FL, Oct. 17-19, 2012. DOI: [10.1115/1.4026676](https://doi.org/10.1115/1.4026676)
3. Z. Yan, J.F. Hall, and D. Chen, “A Dynamic Optimization Approach for Maximum Aerodynamic Coefficient of Wind Turbine Systems,” *Proceedings of the 2012 ASME Dynamic Systems and Control Conference* (acceptance rate: 52%), Ft. Lauderdale, FL, Oct. 17-19, 2012. DOI: [10.1115/DSCC2012-MOVIC2012-8719](https://doi.org/10.1115/DSCC2012-MOVIC2012-8719)
4. J.F. Hall† and D. Chen, “Control of a Variable Ration Gearbox and Mechanical Brake to Maximize Wind Energy Production,” *Proceedings of the 2012 American Control Conference* (acceptance rate: 55%), Montreal, Canada, June 27 - 29, 2012. DOI: [10.1109/ACC.2012.6315173](https://doi.org/10.1109/ACC.2012.6315173)
5. C.A. Mecklenborg, D. Palejiya, J.F. Hall, and D. Chen, “Mode Changing Stability of an Integrated Wind Turbine and Rechargeable Battery System,” *Proceedings of the 2011 American Control Conference* (acceptance rate: 55%), San Francisco, CA, June 29 - July 1, 2011. DOI: [10.1109/ACC.2011.5991267](https://doi.org/10.1109/ACC.2011.5991267)
6. J.F. Hall†, C.A. Mecklenborg, and D. Chen, “Design Properties That Affect Controller Gain and Available Bandwidth of Non-Minimum Phase Membrane Humidifiers,” *Proceedings of the ASME Dynamic Systems and Control Conference* (acceptance rate: 52%), Los Angeles, CA, September 13-15, 2010. DOI: [10.1115/DSCC2010-4239](https://doi.org/10.1115/DSCC2010-4239)

Conference Papers

1. H. Suk*, A. Yadav, N. Eadie, and J.F. Hall‡, “An Adaptive Mathematical Framework for Scalability in Microgrid Modeling,” *Sustainability Summit*, Xavier University, Bhubaneswar, Odisha, India, February 9-10, 2018 **(Invited Paper)**
2. F. Siraj*, J.F. Hall, and B. Baier, “Water-Droplet Contact-Adhesion of Ice Formed on Reference Materials,” *39th Annual Meeting of the Adhesion Society*, San Antonio, TX, February 21-24, 2016

INVITED PRESENTATIONS

An Adaptive Mathematical Framework for Scalability in Microgrid Modeling, Sustainability Summit, Xavier University, Bhubaneswar, Odisha, India, February 9-10, 2018

A Flexible Wind Turbine Blade with an Actively Variable Twist Distribution to Increase Region 2 Efficiency: Design and control, ASME Dynamic Systems and Control Conference, Tysons Corner, VA, October 11 - 13, 2017

Design and Control Framework for Selecting Wind Turbine Gear Ratios based on Optimal Power Generation and Blade Stress, ASME Dynamic Systems and Control Conference, Minneapolis, MN, October 12 - 14, 2016

Sustainable Wind Energy: The 100-Year Wind Turbine, RENEW Institute Workshop, University at Buffalo, Buffalo, NY, May 2015

What to Expect in an Engineering Career, Presentation to Theta Tau, University at Buffalo, Buffalo, NY, November 2014

A Look at the Energy Systems Design Research Group, Presentation to SunEdison, Incorporated, Hamburg, NY, May 2014

MEDIA COVERAGE

Wind energy’s swift growth, explained, April 2018

[The Conversation](#), Examples of other reporting outlets: [Popular Mechanics](#), [Los Angeles Times](#), [The Chicago Tribune](#), [Salon](#), [World News Network](#), [Yahoo Finance](#), [New Haven Register](#), [Times Union](#), [UB Now](#).

RESEARCH SUPERVISION

Doctor of Philosophy

In progress

1. Hamid Khakpour, Ph.D., August 2014 – present. Topic: Design and Control of an Adaptive Wind Turbine Blade subjected to Twist Transformation. Passed qualifying exam January 2015. Degree expected August 2018.
2. Felipe Pasquali, Ph.D., August 2014 - present. Topic: Topology Optimization of a Wind Turbine Blade under Dynamic Loading. Conditionally passed qualifying exam January 2018. Degree expected May 2020.

3. Hailie Suk, Ph.D., August 2017 - present. Topic: An Adaptive Mathematical Framework for Scalability in Microgrid Modeling. Taking qualifying exam January 2019. Degree expected May 2021.

Master of Science Thesis

Completed

1. Amrita Lall, M.S., August 2014 - May 2016, "An Integrative Framework for Design and Control Optimization of a Variable-Ratio Gearbox in a Wind Turbine with Active Blades"
2. Felipe Pasquali, M.S., August 2014 - May 2016, "An Integrative Framework for Optimal Tower Life and Cost"

Master of Science Project

Completed

1. Swanil Chaudhari, January 2014 - January 2015, "Integration of Pitch and Gear Control in a Wind Turbine"
2. Ajinkya Lonikar, January 2014 - June 2015, "Wind Turbine Gearbox Failure Analysis"
3. Sahil Kamdar, August 2014 - June 2015, "Optimization of Power Production and Thrust Loading for a Tidal Turbine"
4. Malav Kapadia, January 2014 - June 2015, "Feasibility of 3D Printed Fused Deposition Modeling for Fabrication of Structurally Sound Rotor Blades for Micro Wind Turbines"
5. Pranay John, January 2014 - June 2015, "Sensitivity Analysis of Mechanical Design Parameters in Wind Turbine Modeling"
6. Kedar Ratnakar, August 2014 - June 2015, "Selection Criteria for a Floating Wind Turbine Configuration"
7. Mustafa Celebi, January 2014 - August 2015, "Development of Additive Manufactured Sandwich Composites for Wind Turbine Blades"
8. Ankit Karwa, August 2015 - June 2016, "Blade Element Momentum Theory for Wind Turbine Analysis"
9. Prasanth Sekaran, August 2015 - June 2016, "Design Guideline and Computer-Aided Analysis of an Active-Controlled Multi-Fan Boundary Layer Wind Tunnel"
10. Amey Mathkar, August 2015 - August 2016, "Control Design Framework for Variable Ratio Gearbox in Small Wind Turbines"
11. Tejas Purandare, January 2016 - June 2017, "Modeling and Analysis of Flexible Wind Turbine Blade"
12. Katherine Coley, August 2017 - January 2018, "Modeling method for Analyzing Mechanical Performance of Endodontic Files"
13. Fuzhao Mou, August 2017 - present. Topic: Design Optimization of Adaptive Aerodynamic Structures using Weighted Least Squares. Degree expected June 2018.
14. Kaiyue Deng, August 2017 - present. Topic: Characterization of material properties of 3d printed Carbon-Reinforced Plastic. Degree expected January 2019.

Undergraduate Research Students

*Received \$500 award through Center for Undergraduate Research and Creative Activities

1. Akshay Gupta* (August 2015 - May 2017)

2. Ryan Nguyen (May 2015 – May 2018)
3. Jason Sun (August 2018 – Present)

Graduate Student Thesis/Dissertation Program Committees

1. Weizhi Zhu, M.S., Mechanical Engineering, defended April 2018
2. Rishab Kirat Turakhia, M.S., Mechanical Engineering, defended September 2017
3. Aziz Michel Naim, Ph.D., Mechanical Engineering, defended February 2017
4. Praveen Kumare Gopalakrishnan, M.S., Mechanical Engineering, defended December 2016
5. Zachary Ball, M.S., Mechanical Engineering, defended September 2016
6. Hongfei Lin, M.S., Mechanical Engineering, defended June 2016
7. Allicia Gursaud, M.S., Mechanical Engineering, defended June 2016
8. Harshit Goyal, M.S., Aerospace Engineering, defended August 2015
9. Sunayana Jayaram, M.S., Aerospace Engineering, defended August 2015
10. Yangbo Liu, M.S., Mechanical Engineering, defended May 2015
11. Philip Odonkor, M.S., Mechanical Engineering, defended May 2015
12. Xi Gong, M.S., Mechanical Engineering, defended May 2015
13. Faraaz Mohammed Siraj, M.S., Mechanical Engineering, defended April 2015
14. Eswar Kambhampati, M.S., Mechanical Engineering, defended October 2014
15. Sulabh Gupta, M.S., Mechanical Engineering, defended August 2014

PROPOSALS

Funded

Additive Manufacturing Technology for Improved Wind Turbine Blade Design and Performance, National Science Foundation, April 2018 – October 2018, I-Corp Program, PI, \$30,000 (100% share).

An Additively Manufactured Modular Wind Turbine Blade, National Science Foundation, May 2017 – June 2017, I-Corp Training Program Travel Grant, \$500.

Climate Change, Water Resources Disparity, and the Energy-Water Nexus: A Multidisciplinary Systems Approach to Building a Regional Water Management System, September 2014 – August 2015, Research and Education in Energy, Environment and Water Institute, University at Buffalo, PI: John Hall, Co-PI: Sonjoy Das, \$8,500 (50% share).

TEACHING

University at Buffalo

Engineering Principles, EAS199SL, (2017 – Present) Introductory engineering course offered through the School of Engineering and Applied Sciences. Employs a combination of instruction, laboratory work, and group projects to teach students a fundamental framework that can be used to solve a wide range of engineering problems.

Design of Complex Systems, EAS199SL, MAE549, (2017) Graduate course that teaches students to how to develop equations of motion for complex multidisciplinary systems. Subsequently uses dynamic models to analyze time-dependent engineering phenomena related to component life and sustainability.

Wind Energy Conversion, MAE410/MAE510, (2013 – present) Graduate course that gives students an understanding of the theory and processes involved in converting wind to electrical power. Provides the basic tools needed to model and study wind energy conversion systems.

Design Project, MAE494LT, (2013 – present) Streamlined senior design project course with Design Process and Methods (MAE451) course to facilitate year-long development projects.

The University of Texas at Austin

Dynamic Systems and Controls, Upper-level undergraduate
Computers and Programming, First-year undergraduate
Design Project Laboratory, Senior-level undergraduate
Mechatronics Laboratory, Upper-level undergraduate

PROFESSIONAL AFFILIATIONS

American Society of Mechanical Engineers
National Society of Professional Engineers
Pi Tau Sigma
Tau Beta Pi

SERVICE

Mechanical and Aerospace Engineering Department

Co-Coordinator, Mechanical and Aerospace Engineering Seminar Series, August 2017 - present
Member, Teaching Professor Search Committee, September 2016– November 2016
Chair, Adjudication Committee, December 2015
Member, Teaching Fellowship Selection Committee, February 2015 – March 2015
Member, Design and Optimization Faculty Search, January 2015– April 2015
Faculty Advisor, Pi Tau Sigma Honor Society, October 2014 – present
Member, MAE 177/277/377 Course Streamline Committee, June 2014– October 2014
Member, Undergraduate Studies Committee, June 2014 - present

School of Engineering and Applied Sciences

Committee Member, Scholarship Selection Committee, November 2016 - present
Presenter, Freshman Orientation, August 2016
Marshall, Graduation Ceremony, May 2016, May 2017
Mentor, Freshman EAS 202 course, March 2015 – present

University

Research presentation and lab tour, University at Buffalo Presidential Fellowship Candidates, 2017

Professional Organizations

Session Organizer, Multidisciplinary Design Optimization, *Design Automation Conference, ASME International Design Engineering Technical Conferences; 2018*
Session Organizer, Emerging Design for X, *Design Automation Conference, ASME International Design Engineering Technical Conferences; 2018*
Session Organizer and Session Chair, Invited Session: Advances in Wind Energy Systems, *ASME Dynamic Systems and Control Conference; 2016 - present*
Symposium Organizer and Session Chair, Multidisciplinary Design Optimization, *Design Automation Conference, ASME International Design Engineering Technical Conferences; 2016 – present*

Symposium Organizer and Session Chair, Sustainable Design, *Design Automation Conference, ASME International Design Engineering Technical Conferences*; 2018

Symposium Organizer and Session Chair, Multidisciplinary Design Optimization, *International Conference on Design Theory and Methodologies, ASME International Design Engineering Technical Conferences*; 2018 – present

Journal Reviewer

ASME Journal of Mechanical Design

ASME Journal of Solar Energy Engineering

ASME Journal of Dynamic Systems Measurement and Control Energies

IEEE Transactions on Control Systems Technology

International Journal of Environmental Technology and Management

Journal of Wind Engineering and Industrial Aerodynamics Mechatronics

Renewable Energy

Renewable Energy Focus

Structural and Multidisciplinary Optimization

Conference Paper Reviewer

ASME Dynamic Systems and Control Conference; 2010 - present

ASME International Design Engineering Technical Conferences; 2016 - present

ASME International Mechanical Engineering Congress and Exposition 2018

Community

Volunteer presenter, Inspiring Future Engineers, Buffalo, New York

Assistant Scout Master, Boy Scouts of America, Austin, Texas

Assistant Leader, Girl Scouts of America, Austin, Texas

Volunteer, Texas Longhorn Aquatics Swim Team, Austin, Texas

Coach, Youth Soccer, Town and Country Soccer, Austin, Texas

Volunteer, Lifeworks, Austin, Texas