

Saeed Azad

30th August, 2021

saeed.azad@colostate.edu | 607-232-3085 | LinkedIn: saeedazad
Colorado State University, 430 North College Avenue, Fort Collins, Colorado 80524

EDUCATION

- 8/2020 Ph.D., Mechanical Engineering
University of Cincinnati, Cincinnati, OH
GPA: 4.00/4.00
Dissertation: Combined Design and Control Optimization of Stochastic Dynamic Systems
- 5/2020 Preparing Future Faculty Certificate, Arts & Sciences Grad Certificate
University of Cincinnati, Cincinnati, OH
- 5/2016 M.Sc., Mechanical Engineering
Alfred University, Alfred, NY
GPA: 4.00/4.00
Thesis: A Game Theoretic Approach to a Retail Electricity Market with a High Penetration of Small and Mid-size Renewable Suppliers
- 8/2010 B.Sc., Mechanical Engineering
Azad University of Mashhad, Mashhad, Iran
GPA: 15.8/20.0

PROFESSIONAL APPOINTMENTS

- 7/2021 - Present Postdoctoral Fellow, Colorado State University, Fort Collins, CO
Department of Systems Engineering
- 8/2020 - 7/2021 Lecturer, Northern Kentucky University, Highland Heights, KY
Physics, Geology & Engineering Technology Department

PUBLICATIONS

Journal Articles

- 2021 Azad, Saeed, and Michael J. Alexander-Ramos. 'Robust Combined Design and Control Optimization of Hybrid-Electric Vehicles Using MDSDO.' In *IEEE Transactions on Vehicular Technology* 70, no. 5, (2021): 4139 - 4152
- 2020 Azad, Saeed, and Michael J. Alexander-Ramos. 'A Single-loop Reliability-based MDSDO for Combined Design and Control Optimization of Stochastic Dynamic Systems.' In *Journal of Mechanical Design* 143, no. 2 (2021): 021703.

- 2020 Azad, Saeed, and Michael J. Alexander-Ramos. 'Robust MDSDO for Co-design of Stochastic Dynamic Systems.' *Journal of Mechanical Design* 142, no. 1 (2020): 011403-1-8.
- 2019 Azad, Saeed, Mohammad Behtash, Arian Houshmand, and Michael Alexander-Ramos. 'PHEV Powertrain Co-design with Vehicle Performance Considerations Using MDSDO.' *Structural and Multidisciplinary Optimization* (2019): 1-15.
- 2017 Azad, Saeed, and Ehsan Ghotbi. 'A Game Equilibrium Model of a Retail Electricity Market with High Penetration of Small and Mid-size Renewable Suppliers.' *The Electricity Journal* 30, no. 5 (2017): 22-29.

Conference Proceedings

- 2019 Azad, Saeed, and Michael J. Alexander-Ramos. 'Reliability-based MDSDO for Co-design of Stochastic Dynamic Systems.' In *ASME 2019 International Mechanical Engineering Congress and Exposition. American Society of Mechanical Engineers Digital Collection*.
- 2018 Azad, Saeed, and Michael J. Alexander-Ramos. 'Robust MDSDO for Co-design of Stochastic Dynamic Systems.' In *ASME 2018 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, American Society of Mechanical Engineers, 2018.
- 2017 Azad, Saeed, Mohammad Behtash, Arian Houshmand, and Michael Alexander-Ramos. 'Comprehensive PHEV Powertrain Co-design Performance Studies Using MDSDO.' In *World Congress of Structural and Multidisciplinary Optimisation*, pp. 83-97. Springer, Cham, 2017.
- 2016 Azad, Saeed, and Ehsan Ghotbi. 'Nash Equilibrium of a Retail Electricity Market with a High Penetration of Small Renewable Suppliers.' In *ASME 2016 Power Conference collocated with the ASME 2016 10th International Conference on Energy Sustainability and the ASME 2016 14th International Conference on Fuel Cell Science, Engineering and Technology. American Society of Mechanical Engineers Digital Collection, 2016*.

Manuscripts in Preparation

- Expected 2021 Azad, Saeed, and Michael J. Alexander-Ramos. 'Reliability-Based Control Co-Design of an Active Suspension Using Sequential Optimization and reliability Assessment' *Structural and Multidisciplinary Optimization*.

HONORS AND AWARDS

University of Cincinnati, Cincinnati, OH

- 2019 CEAS Graduate Student of the Month, \$500
Graduate Student Government Conference Travel Award, \$700
- 2016 - 2019 University Graduate Scholarship (UGS/GIA), \$21000/year

Alfred University, Alfred, NY

- 2016 Bernstein Conference Travel Award, \$1800
- 2015 Third place in Affordability and Comfort Zone contests, U.S. DOE Solar Decathlon, California

CONFERENCE ACTIVITY/PARTICIPATION

- 2019 Azad, Saeed, and Michael J. Alexander-Ramos. "Reliability-based MDSDO for Co-design of Stochastic Dynamic Systems." In *ASME 2019 International Mechanical Engineering Congress and Exposition. American Society of Mechanical Engineers Digital Collection*.
- 2016 Azad, Saeed, and Ehsan Ghotbi. "Nash Equilibrium of a Retail Electricity Market with a High Penetration of Small Renewable Suppliers." In *ASME 2016 Power Conference collocated with the ASME 2016 10th International Conference on Energy Sustainability and the ASME 2016 14th International Conference on Fuel Cell Science, Engineering and Technology. American Society of Mechanical Engineers Digital Collection, 2016*.

TEACHING EXPERIENCE

Northern Kentucky University, Highland Heights, KY

- Spring 2021 Metrology and Geometric Tolerancing, Thermodynamics and Heat Transfer
- Fall 2020 Statics and Strength of Materials, Machine Design, Engineering Materials

University of Cincinnati, Cincinnati, OH

- Spring 2020 Applied Computational Methods Laboratory (Instructor of Record)
- Fall 2018 - 2019 Statics and Particle Dynamics (Graduate Teaching Assistant)

Alfred University, Alfred, NY

- Spring 2016 Machine Design and Mechanical Vibrations (Graduate Teaching Assistant)
- Fall 2015 - 2016 Calculus I (Supplemental Instructor)
- Spring 2015 - 2016 Engineering Economic Analysis, Kinematic and Dynamic Analysis, and MATLAB Programming (Graduate Teaching Assistant)

RESEARCH AND LAB EXPERIENCE

7/2021 - Present	Postdoctoral Researcher, Colorado State University
5/2019 - 8/2019	Test and Validation Intern, P3 North America, focusing on wireless power transfer for vehicle applications, conformance testing and interoperability testing of electric vehicle and electric vehicle supply equipment
8/2016 - 1/2018	Graduate Research Assistant, University of Cincinnati, focusing on combined design and control optimization (control co-design) of stochastic dynamic systems
5/2015 - 8/2015	Researcher assistant, Alfred University, working with Alfred team in preparation for the the U.S. DOE Solar Decathlon 2015

SERVICE AND LEADERSHIP

11/2020 - 11/2021	Session co-organizer: <i>International Mechanical Engineering Congress and Exposition, ASME</i>
8/2020 - 7/2021	Member of faculty seminar committee, Northern Kentucky University, Highland Heights, KY
05/2019 - Present	Peer reviewer: <i>Structural & Multidisciplinary Optimization Journal, International Design Engineering Technical Conference & Computers and Information in Engineering Conference, ASME, International Mechanical Engineering Congress and Exposition, ASME</i>
8/2018 - 8/2020	IPALs: International Partners and Leaders, assisted international and domestic students and promoted cross-cultural communication on campus, University of Cincinnati, Cincinnati, OH
8/2018 - 7/2020	Grad-undergrad Research Connections, College of Engineering and Applied Science, University of Cincinnati, Cincinnati, OH
6/2018 - 6/2019	MME GSA: Mechanical and Materials Engineering Graduate Student Association (MME GSA) officer, University of Cincinnati, Cincinnati, OH
5/2017 - 7/2020	CEAS E&I: College of Engineering and Applied Science Equity and Inclusion Committee member, University of Cincinnati, Cincinnati, OH

COMMUNITY INVOLVEMENT

Student Volunteer	TEDx Cincinnati, Cincinnati, OH
City Captain	National Drive Electric Week, Cincinnati, OH
Student Volunteer	Habitat for Humanity, Cincinnati, OH