

CURRICULUM VITAE
MATTHEW A. LACKNER

BUSINESS ADDRESS

Department of Mechanical and Industrial Engineering
University of Massachusetts Amherst
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EDUCATION

University of Massachusetts Amherst
Ph.D., Mechanical Engineering, 2007.

Massachusetts Institute of Technology
M.S., Aeronautics and Astronautics, 2004.

Princeton University
B.S.E., Mechanical and Aerospace Engineering (Minor: Physics), 2002.

PROFESSIONAL APPOINTMENTS

University of Massachusetts Amherst
Professor, Department of Mechanical and Industrial Engineering, 2020 - present.

University of Massachusetts Amherst
Associate Professor, Department of Mechanical and Industrial Engineering, 2015 - 2020.

University of Massachusetts Amherst
Assistant Professor, Department of Mechanical and Industrial Engineering, 2009 - 2014.

The Technical University of Delft (The Netherlands)
Postdoctoral Researcher, Department of Aerospace Engineering, 2007 - 2008.

HONORS AND AWARDS

Mechanical Engineering Professor of the Year, University of Massachusetts Amherst, 2018.

College of Engineering Outstanding Teaching Award, University of Massachusetts Amherst, 2018.

Best New Technology Poster, American Wind Energy Association Offshore Windpower Conference, Baltimore, MD, 2015.

Mechanical Engineering Professor of the Year, University of Massachusetts Amherst, 2015.

Mechanical Engineering Professor of the Year, University of Massachusetts Amherst, 2014.

Best Paper Finalist, 30th ASME Wind Energy Symposium, Nashville, TN, 2012.

Best Wind Energy Paper, Journal of Solar Energy Engineering, 2009.

Magna Cum Laude, Princeton University, 2002.

Tau Beta Pi, Engineering Honor Society, Princeton University, 2001.

Sigma Xi, Scientific Research Honor Society, Princeton University, 2001.

DOCTORAL STUDENTS SUPERVISED

Adviser

Annon, Aaron. University of Massachusetts Amherst, MIE, In progress, expected December 2022.

Khan, Majid. University of Massachusetts Amherst, MIE, In progress, expected May 2022.

Liu, Cheng. University of Massachusetts Amherst, MIE, In progress, expected May 2023.

McTiernen, Kaylie. University of Massachusetts Amherst, MIE, In progress, expected August 2022.

Johlas, Hannah. University of Massachusetts Amherst, MIE (co-advisor with Schmidt), Graduated August 2021.

Gaertner, Evan. University of Massachusetts Amherst, MIE, Graduated December 2020.

deVelder, Nathaniel. University of Massachusetts Amherst, MIE, (co-advisor with Perot), Graduated May 2020.

Park, Semyung. University of Massachusetts Amherst, MIE, Graduated September 2019.

Mohammadi, Kasra. University of Massachusetts Amherst, MIE (co-advisor with McGowan), Graduated December 2018.

Liu, Shujian. University of Massachusetts Amherst, MIE, Graduated September 2017.

Koh, Rachel. University of Massachusetts Amherst, MIE (co-advisor with Hyers and Clouston), Graduated May 2017.

Pourazarm, Pariya. University of Massachusetts Amherst, MIE (co-advisor with Modarres-Sadeghi), Graduated May 2016.

Lacava, William. University of Massachusetts Amherst, MIE (co-advisor with Danai), Graduated May 2016.

Benitz, Maija. University of Massachusetts Amherst, MIE (co-advisor with Schmidt), Graduated May 2016.

Hao, Yujia. University of Massachusetts Amherst, MIE, Graduated May 2016.

Stewart, Gordon. University of Massachusetts Amherst, MIE, Graduated September 2015.

Sebastian, Thomas. University of Massachusetts Amherst, MIE, Graduated January 2012.

Graduate Committee Member

Balakrishna, Krishnaveni. University of Massachusetts Amherst, Department of Civil and Environmental Engineering, In progress.

Coughlan, Katherine. University of Massachusetts Amherst, Department of Civil and Environmental Engineering, In progress.

Dey, Anita. University of Massachusetts Amherst, MIE, In progress.

Massey, Blake. University of Massachusetts Amherst, Department of Environmental Conservation, In progress.

Courier, Todd. University of Massachusetts Amherst, MIE, Graduated December 2020.

Yadav, Kshitij. University of Massachusetts Amherst, Department of Civil and Environmental Engineering, Graduated August 2020.

Sur, Samrat. University of Massachusetts Amherst, MIE, Graduated December 2019.

Fontana, Casey. University of Massachusetts Amherst, Department of Civil and Environmental Engineering, Graduated December 2018.

Pedersen, Morten, NTNU, Department of Mechanical Engineering, Graduated June 2017.

McWilliam, Michael. The University of Victoria, Department of Mechanical Engineering, Graduated December 2015.

Si, Yulin. The University of Agder, Department of Engineering, Graduated September 2015.

Carswell, Wystan. University of Massachusetts Amherst, Department of Civil and Environmental Engineering, Graduated September 2015.

Namik, Hazim. The University of Auckland, Department of Mechanical Engineering, Graduated December 2011.

Morgan, Eugene. Tufts University, Department of Civil and Environmental Engineering, Graduated May 2011.

MASTERS STUDENTS SUPERVISED

Adviser

Gruskiewicz, Samuel. University of Massachusetts Amherst, MIE, In progress.

Rees, Jack. University of Massachusetts Amherst, MIE, In progress.

Roach, Sam. University of Massachusetts Amherst, MIE, Graduated December 2021.

Rose, Doron. University of Massachusetts Amherst, MIE, In progress.

Fan, Shanon. University of Massachusetts Amherst, MIE, Graduated September 2021.

Pfeiffer, Timothy. University of Massachusetts Amherst, MIE, Graduated May 2017.

Finn-Foley, Daniel. University of Massachusetts Amherst, MIE, Graduated May 2016.

Britt, Todd. University of Massachusetts Amherst, MIE, Graduated May 2015.

Gaertner, Evan. University of Massachusetts Amherst, MIE, Graduated September 2014.

Mate, Gaurav. University of Massachusetts Amherst, MIE (co-advisor with Manwell), Graduated September 2014.

Mittal, Mahesh. University of Massachusetts Amherst, MIE (co-advisor with Perot), Graduated September 2014.

Aquino, Bryce. University of Massachusetts Amherst, MIE, Graduated May 2014.

Yilmaz, Onur. University of Massachusetts Amherst, MIE, Graduated May 2014.

deVelder, Nathaniel. University of Massachusetts Amherst, MIE, Graduated December 2013.

McClelland, Charles. University of Massachusetts Amherst, MIE (co-advisor with Hyers), Graduated December 2013.

Roderick, Colin. University of Massachusetts Amherst, MIE, Graduated May, 2012.

Stewart, Gordon. University of Massachusetts Amherst, MIE, Graduated December 2011.

Mesick, Nathan. University of Massachusetts Amherst, MIE, Graduated December 2009.

Graduate Committee Member

Boersma, Pieter. University of Massachusetts Amherst, MIE, Graduated in September, 2018.

Mueller, Nico. University of Stuttgart, Aerospace Engineering, Graduated in March, 2018.

Sahare, Kushal. University of Massachusetts Amherst, MIE, Graduated in December, 2017.

Bader, Shujat. University of Massachusetts Amherst, MIE, Graduated in May, 2017.

Dey, Anita. University of Massachusetts Amherst, MIE, Graduated in May, 2017.

Schlek, Fabian. University of Stuttgart, Aerospace Engineering, Graduated in May, 2017.

Fischer, Daniel. University of Stuttgart, Aerospace Engineering, Graduated in May, 2015.

Farrugia, Russel. University of Malta, Mechanical Engineering, Graduated in September, 2014.

Haid, Lorenz. University of Stuttgart, Aerospace Engineering, Graduated in May, 2013.

Carswell, Wytan. University of Massachusetts Amherst, CEE, Graduated in May, 2012.

Muralidhar, Pranesh. University of Massachusetts Amherst, MIE, Graduated in May, 2012.

Singh, Karamvir. University of Massachusetts Amherst, MIE, Graduated in May, 2012.

Beyer, Friedemann. University of Stuttgart, Aerospace Engineering, Graduated in December, 2011.

Digraskar, Dnyanesh. University of Massachusetts Amherst, MIE, Graduated December 2009.

UNDERGRADUATE STUDENTS SUPERVISED

Benjamin Canton (2021 – 2022)

Liam McGrath (2020 – 2021)

Kelly Clevenson (2019)

Anson Haniwalt (2019)

Ahnya Dague (2018 – 2019)

Erik Simon-Vuoritie (2018 – 2019)

Matthew Short (2016 – 2010)

James Bedell (2017 – 2018)

Ross Adams (2017 – 2018)

Nicholas Uvanovic (2017 – 2018)

Meghan Glade (2017 – 2019)

John Hoar (2017 – 2018)

Wayne Farrell (2016 – 2018)

Alexander Losh (2015-2016)

Quentin Pagnier (2015-2016)

Noah Boysen (2015-2016)

Gordon Swain (2015)

Jon Swanton (2015-2016)

Daniel Gonzales (2021 – 2022)

David Shlimak (2020 – 2022)

Wyatt Warner (2019)

Abhishek Ram (2019)

Jake Delano (2018 – 2019)

Amelia Bruno (2018 – 2019)

Tanvir Mangat (2017 – 2018)

Michael Horner (2017 – 2018)

Yonaton Kaufmann (2017 – 2018)

Amy Morin (2017 – 2018)

Saahas Jain (2017 – 2018)

Jessica Fischer (2017)

Akhil Borra (2016)

David Varney (2015-2016)

Pavel Grigorich (2015-2016)

Monika Sudol (2015-2016)

Brandon Whitchurch (2015-Present)

Tyler Richards (2015)

Dowling, Matthew (2014-2015)	Aoude, Nassim (2014-2015)
Kolodzky, Sarah (2013-2014)	Calderara, Justin (2014)
Finn, Alexandra (2013-2014)	Rush, Eugene (2010-2014)
Baumhoff, Elizabeth (2012- 2014)	Shrestha, Kristi (2012-2013)
Burhoe, Anna (2012-2013)	Lee, George (2012-2013)
Forbes, Gregory (2012-2013)	Chouinard, Jacob (2012-2013).
Woolley, Mason (2011-2012).	Murphey, Matthew (2011-2012).
Speciale, Alexander (2011-2012).	Lynch, James (2011-2012).
Liotta, Alexander (2011-2012).	Schwendenmann, Andrew (2011-2012).
Trulson, Eric (2011).	Tucker, Eric (2010).
daSilva, Airton (2009-2010).	Venooker, Andrew (2009-2010).

STUDENT AWARDS

2020 – Aaron Annan was awarded the Motherway Fellowship in Mechanical Engineering

2017 – Caitlin Dragun-Bianchi was awarded the Edwin V. Sisson Doctoral Fellowship in the College of Engineering.

2017 – Meghan Glade was awarded a NASA Massachusetts Space Grant Consortium Research Fellowship.

2017 – Hannah Johlas was awarded an NSF graduate fellowship.

2016 – Akhil Borra was awarded a NASA Massachusetts Space Grant Consortium Research Fellowship.

2014 – Evan Gaertner was awarded an NSF Integrative Graduate Education and Research Training (IGERT) Fellowship in Offshore Wind Energy.

2014 – Evan Gaertner was awarded the Edwin V. Sisson Doctoral Fellowship in the College of Engineering.

2013 – Rachel Koh was awarded an NSF Integrative Graduate Education and Research Training (IGERT) Fellowship in Offshore Wind Energy.

2013 – Rachel Koh was awarded a Massachusetts Space Grant Consortium Research Fellowship.

2012 – William Lacava was awarded an NSF Integrative Graduate Education and Research Training (IGERT) Fellowship in Offshore Wind Energy.

2011 – Gordon Stewart was awarded an NSF Integrative Graduate Education and Research Training (IGERT) Fellowship in Offshore Wind Energy.

2011 – Thomas Sebastian was awarded a Massachusetts Space Grant Consortium Research Fellowship.

2011 – Thomas Sebastian was awarded the ASME Solar Energy Division Graduate Student Award.

2011 – Colin Roderick was awarded the Conservation Services Group (CSG) Energy Efficiency and Clean Energy Scholarship.

GRANTS AND FELLOWSHIPS (APPROVED, CURRENT, AND COMPLETED)

U.S. Department of Energy NOWRDC, “Phase 1: Ensuring Long-Term Availability and Bankability of Offshore Wind Through Hurricane Risk Assessment and Mitigation”, co-PI with PI Arwade and co-PI DeGroot, \$650,000 (\$135,000 to UMass), 3/1/2022 – 2/28/2024.

National Science Foundation, “GCR: Integrating Social and Economic Equity into the Science and Engineering of the Sustainable Energy Transition”, **PI** with co-PI Baker, co-PI Crago, co-PI Harper, and co-PI Shenoy, \$3,550,000, 10/1/2020 – 9/30/2025, in progress.

National Science Foundation, “NRT: Enhancing Resiliency and Increasing Equity in the Transition to a Sustainable Energy Future”, **PI** with co-PI Baker, co-PI Crago, co-PI DeConto, and co-PI Zakeri, \$2,700,000, 9/1/2020 – 8/31/2025, in progress.

U.S. Department of Energy SBIR, “Tilt-Up Tower and Installation System to Reduce the Cost of Distributed Wind Turbines”, **Co-PI** with PI Arwade, co-PI Gerasimidis, and Pecos Wind LLC, \$61,000 (\$200,000 total), 6/29/2020 – 3/31/2021, in progress.

World University Network, “Establishing The Low Carbon Energy Transition in a Changing Climate Network”, **Co-PI** with PI DeConto, co-PI Hamin, \$32,000, 9/1/2020 – 8/31/2021, awarded.

U.S. Department of Energy NOWRDC, “Techno-Economic mooring configuration and design for floating offshore wind turbines in shallow waters”, **Co-PI** with PI Sharman, co-PI Arwade, Principle Power Inc (PI), \$350,000, 10/1/2020 – 12/31/2022, in progress.

MassCEC AmpliyMass, “Matching funds for Innovative Deep-water Anchoring Configurations and Components for Semi-Submersible Floating Wind Farms”, **PI** with co-PI Arwade, and co-PI Sharman, \$60,000, 10/1/2020 – 12/31/2022, in progress.

U.S. Department of Energy NOWRDC, “Innovative Deep-water Anchoring Configurations and Components for Semi-Submersible Floating Wind Farms”, **Co-PI** with Principle Power Inc (PI), co-PI Arwade, and co-PI Sharman, \$121,548 (to UMass), 10/1/2020 – 12/31/2022, in progress.

National Science Foundation, “IGE: WindU: Multi-University Consortium in Wind Energy Graduate Education - Meeting a National Need”, **Co-PI** with Northern Arizona University (lead institution), co-PI Manwell, and co-PI McGowan, \$82,466 (to UMass), 4/15/2019 – 3/31/2022, in progress.

Massachusetts Clean Energy Center, “Guidelines and Case Studies: Application of the Offshore Wind Turbine Design Standard IEC 61400-3-1 to Massachusetts Conditions”, **Co-PI** with PI Manwell, co-PI McGowan. \$199,995, 7/1/2017 – 8/31/2019, completed.

Convergent Science, “Simulation of Wind Turbines using an Advanced Adaptive Meshing Model,” **Co-PI** with PI Schmidt. \$93,462, 9/1/2016 – 8/31/2018, completed.

Massachusetts Clean Energy Center, “A collaborative project with NASA Langley to use their SansEC sensors for wildlife collision detection on wind turbines”, **Co-PI** with PI Modarres-Sadeghi, \$64,845, 8/1/2016 – 7/31/2019, completed.

National Science Foundation CMMI, “Collaborative Research: Active Control of Nonlinear Flow-Induced Instability of Wind Turbine Blades under Stochastic Perturbations.” **co-PI** with PI Modarres-Sadeghi, co-PI Hollot, co-PI Caracoglia (Northeastern University). \$280,934, 9/1/2015 – 8/31/2019, completed.

GE Renewables, “Advanced structural damping of wind turbines.” **PI**, \$71,395, 7/1/2018 – 7/31/2019, completed.

Bureau of Ocean Energy Management, “Simulating breaking waves and estimating loads on offshore wind turbines using computational fluid dynamic models”, **PI** with co-PI Schmidt, co-PI Arwade, co-PI Myers (Northeastern University), and co-PI Robertson (NREL). \$144,343, 10/1/2016 – 9/20/2018, completed.

Massachusetts Clean Energy Center, “Development of National Offshore Wind Research Agenda”, **Co-PI** with PI Manwell, co-PI Arwade, co-PI Baker, co-PI DeGroot, co-PI McGowan. \$50,000, 9/1/2016 – 8/31/2018, completed.

USGS Geological Survey, “Addressing water supply issues through the modeling, analysis and optimization of renewable hybrid systems for water and electricity production”, **Co-PI** with PI McGowan. \$25,000, 8/1/2017 – 7/15/2018, completed.

USGS Geological Survey, “Understanding the interaction of renewable energy generation and desalination within the water-energy system”, **PI**. \$5,476, 6/1/2016 – 8/15/2016, completed.

National Science Foundation CBET REU Supplement, “Collaborative Research: Analysis and design of textured super-hydrophobic surfaces capable of preventing ice formation on wind turbine blades.” **PI** with co-PI Perot, and PI Raessi (University of Massachusetts Dartmouth). \$5,000, 9/1/2013 – 8/31/2016, completed.

U.S. Department of Energy, “Bat Impact Minimization Technologies and Field Testing Opportunities.” **Participant** with Dowling, Dumont, Sievert, Modarres-Sadeghi, Carlson, and Smotherman (Texas A&M). \$312,500, 6/1/2015 – 6/1/2019, ongoing.

Massachusetts Clean Energy Center, “2016 Collegiate Wind Competition support.” **PI** with co-PI Cowden, Baker, and Hamin. \$10,000, 6/1/2015 – 6/1/2016, completed.

U.S. Department of Energy, “2016 Collegiate Wind Competition.” **PI** with co-PI Cowden, Baker, and Hamin. \$20,000, 6/1/2015 – 6/1/2016, completed.

Alstom Power Inc., “Advanced controls of floating wind turbines.” **PI**, \$164,638, 9/1/2014 – 8/31/2016, completed.

National Science Foundation CBET, “Nonlinear analysis of flow-induced instabilities of wind turbine blades using theoretical models and supported by experimental data.” **co-PI** with PI Modarres-Sadeghi. \$272,602, 9/1/2014 – 8/31/2017, completed.

National Science Foundation CBET, “Collaborative Research: Analysis and design of textured super-hydrophobic surfaces capable of preventing ice formation on wind turbine blades.” **PI** with co-PI Perot, and PI Raessi (University of Massachusetts Dartmouth). \$256,414, 9/1/2013 – 8/31/2017, completed.

National Science Foundation Major Research Instrumentation, “High Performance Computing Cluster.” **Participating Faculty** with PI Hill (MIT), Shenoy (UMass), et al. \$1,600,000, 9/1/2012 – 8/31/2015, completed.

U.S. Department of Energy, “Simulator for Offshore Wind Plant Applications.” **Co-PI and UMass lead** with PI Moriarty (NREL), et al. \$1,200,000 (\$190,954 to UMass), 2/1/2012 – 12/31/2015, completed.

U.S. Department of Energy, “Floating Platform Dynamic Models.” **Co-PI and UMass lead** with PI Jonkman (NREL), co-PI Schmidt, et al. \$1,500,000 (\$174,000 to UMass), 2/1/2012 – 12/31/2015, completed.

- National Science Foundation IGERT, “IGERT: Offshore Wind Energy Engineering, Environmental Science, and Policy.” **Investigator and thrust leader** with PI Baker, et al. \$3,200,000 (approximately \$400,000 to my group), 9/1/2011 – 8/31/2016, in progress.
- Massachusetts Clean Energy Center, “System Design of Two Bladed Downwind Turbines and Experimental Analysis of Blade Instabilities.” **PI** with Modarres-Sadeghi. \$167,889, 9/1/2011 – 12/31/2015, completed.
- U.S. Department of Energy, “Aqua-Ventus.” **Co-PI and UMass lead** with PI Dagher (University of Maine), et al. \$4,000,000 (\$200,618 to UMass), 2/1/2013 – 3/31/2014, completed.
- Massachusetts Clean Energy Center, “Wind Energy Technical Support.” **Co-PI** with PI Manwell and co-PI McGowan. \$350,000, 7/1/2013 – 6/30/2014, completed.
- Armstrong Fund for Science (The University of Massachusetts Amherst), “The Design and Analysis of a Novel Multi-Rotor Offshore Wind Turbine.” **PI** with Manwell and Brena. \$30,000, 8/1/2012 – 7/31/2014, completed.
- NVIDIA Academic Partnership Program, “TESLA K20 Graphics Processing Card for Wind Turbine Aerodynamic Simulations.” **PI**. \$3,500 value, unrestricted equipment gift, 4/1/2013, completed.
- Massachusetts Clean Energy Center, “Wind Energy Technical Support.” **Co-PI** with PI Manwell and co-PI McGowan. \$350,000, 7/1/2012 – 6/30/2013, completed.
- Massachusetts Clean Energy Center, “Wind Energy Technical Support.” **Co-PI** with PI Manwell and co-PI McGowan. \$254,199, 7/1/2011 – 6/30/2012, completed.
- U.S. Department of Energy. “Wind-energy Science, Technology, and Research (WindSTAR) Consortium Curriculum, Workforce Development, and Education Plan.” **Co-PI** with PI Manwell and co-PI McGowan. \$130,000, 8/1/2010 – 6/30/2012, completed.
- U.S. Department of Energy, “Offshore Wind Energy Systems Engineering Course Development.” **Co-PI** with PI McGowan and co-PI Manwell. \$242,687, 12/1/2009 – 9/30/2012, completed.

REFEREED PUBLICATIONS: PUBLISHED, ACCEPTED, SUBMITTED, AND IN REVISION

47. Johlas, H.M., Schmidt, D.P., Lackner, M.A., “Large Eddy Simulations of Curled Wakes from Tilted Wind Turbines.” Accepted for publication, <https://doi.org/10.1016/j.renene.2022.02.018>, *Renewable Energy*, 2022.
46. Johlas, H.M., Martínez-Tossas, L., Churchfield, M.J., Lackner, M.A., Schmidt, D.P., “Floating platform effects on power generation in spar and semisubmersible wind turbines.” Vol. 24, No. 8, 901-916, *Wind Energy*, 2021.
45. Park S., Lackner, M.A., “Edgewise vibration suppression of multi-megawatt wind turbine blades using passive tuned mass dampers.” Vol. 45, No. 5: 1082-1100, *Wind Engineering*, 2021.
44. Li Y., Park S., Zheng Jiang, J., Lackner, M.A., Neild, S., and Ward, I., “Vibration suppression for monopile and spar-buoy offshore wind turbines using the structure-immittance approach.” Vol. 23, No 10: 1966-1985, *Wind Energy*, 2020.
43. Park S., Glade, M., Lackner, M.A., “Multi-objective optimization of orthogonal TLCs for reducing fatigue and extreme loads of a floating offshore wind turbine.” Volume 209, 110260, *Engineering Structure*, 2020.
42. Kapoor A., Ouakka, S., Arwade, S., Lundquist, J., Lackner, M.A., Myers, A., Worsnop, R., Bryan, G., “Hurricane eyewall winds and structural response of wind turbines.” Vol. 5: 89 –

104, *Wind Energy Science*, 2020.

41. Johlas H, Martinez-Tossas LA, Lackner MA, Schmidt D, and Churcheld M, "Large eddy simulations of offshore wind turbine wakes for two floating platform types" *Journal of Physics: Conference Series*, 1452, 012034, 2020.
40. Roach, S., Park, S., Gaertner, E., Lackner, M.A., and Manwell, J., "Wind Trawler: Operation of a Wind Energy System in the Far Offshore Environment." *Journal of Physics: Conference Series*, 1452, 012038, 2020.
39. Annan, A., Lackner, M., and Manwell, J., "Wind Trawler: Operation of a Wind Energy System in the Far Offshore Environment." *Journal of Physics: Conference Series*, 1452, 012031, 2020.
38. Johlas, H., Martínez-Tossas, L., Schmidt, D., Lackner, M.A., Churchfield, M., "Large eddy simulations of floating offshore wind turbine wakes with coupled platform motion." *Journal of Physics: Conference Series*, Vol. 1256 (1), 012018, 2019.
37. Park, S., Lackner M.A., Pourazarm, P., Cross-Whiter, J., Rodriguez Tsouroukdissian, A., "An investigation on the impacts of passive and semi-active structural control on a fixed-bottom and a floating offshore wind turbine." Vol. 22, No. 11: 1451-1471, *Wind Energy*, 2019.
36. Aird J., Gaertner E., Lackner M.A., "Dynamic Prescribed-Wake Model for Analyzing the Aerodynamics of Offshore Floating Wind Turbines", *Wind Engineering*, Vol. 43, No. 1: 47-63, 2018.
35. Hao Y., Lackner M.A., "Wind Farm Wake Modeling and Wake Impacts Analysis Using the NWTTC Design Codes." *Wind Engineering*, Vol. 41, No. 1: 62-73, 2016.
34. Pourazarm P., Caracoglia L., Lackner M.A., Modarres-Sadeghi Y., "Perturbation Methods for the Reliability Analysis of Wind-Turbine Blade Failure due to Flutter." *Journal of Wind Engineering & Industrial Aerodynamics*, Vol. 156: 159-171, 2016.
33. Benitz, M.A., Carlson, D.W., Seyed-Aghazadehb, B., Modarres-Sadeghi, Y., Lackner, M.A., Schmidt, D., "CFD Simulations and Experimental Measurements of Flow Past Free-Surface Piercing, Finite Length Cylinders with Varying Aspect Ratios." *Computers and Fluids*, Vol. 136: 247-259, 2016.
32. Pourazarm P., Modarres-Sadeghi Y., Lackner M.A., "A parametric study of the flow-induced instability for the MW-size wind turbine blades." *Wind Energy*, Vol. 19, No. 3: 497-514, 2016.
31. La Cava, W., Danai, K., Spector, L., Flemming, P., Wright, A., Lackner, M.A., "Automatic identification of wind turbine models using evolutionary multi-objective optimization." *Renewable Energy*, Vol. 87: 892-902, 2016.
30. Stewart, G., Robertson, A., Jonkman, J., Lackner, M.A., "The creation of a comprehensive metocean data set for offshore wind turbine simulations." *Wind Energy*, Vol. 19, No. 6:1151-1159, 2016.
29. Graf P.A., Stewart G., Lackner M.A., Dykes K., Veers P., "High throughput computation and the applicability of Monte Carlo integration in fatigue load estimation of floating offshore wind turbines" Vol. 19, No. 5:861-872, 2016.
28. Stewart, G.M., Lackner, M.A., Arwade, S.R., Hallowell, S., Myers, A.T., "Statistical Estimation of Extreme Loads for the Design of Offshore Wind Turbines." *Wind Engineering*, Vol. 39, No. 6: 629-640, 2015.

27. Gaertner, E., Lackner, M.A., "Modeling Dynamic Stall for a Free Vortex Wake Model." *Wind Engineering*, Vol. 39, No. 6: 675-692, 2015.
26. Pourazarm P., Caracoglia L., Lackner M.A., Modarres-Sadeghi Y., "Period-Doubling Route to Chaos in a Two-Degree-of-Freedom Plate Placed in Water." *Journal of Fluids and Structures*, Vol. 57: 375-390, 2015.
25. Pourazarm P., Caracoglia L., Lackner M.A., Modarres-Sadeghi Y., "Stochastic Analysis of Flow-Induced Dynamic Instabilities of Wind Turbine Blades." *Journal of Wind Engineering & Industrial Aerodynamics*, Vol. 137: 37-45, 2015.
24. Benitz M.A., Lackner M.A., Schmidt D.P., "Hydrodynamics of offshore structures with specific focus on wind energy applications." *Renewable and Sustainable Energy Reviews*, Vol. 44: 692-716, 2015.
23. Singh K., Baker E., Lackner M.A., "Curtailling Wind Turbine Operations to Reduce Avian Mortality." *Renewable Energy*, Vol. 78: 351-356, 2015.
22. Carswell W., Arwade S.R., DeGroot D.J., Lackner M.A., "Soil-Structure Reliability of Offshore Wind Turbine Monopile Foundations." *Wind Energy*, Vol. 18, No. 3: 483-498, 2015.
21. Stewart G., Lackner M.A., "The impact of passive tuned mass dampers and wind-wave misalignment on offshore wind turbine loads." *Engineering Structures*, Vol. 73, No. 15: 54-61, 2014.
20. Chase D., Danai K., Lackner M.A., Manwell J.F., "Detection of Damage in Operating Wind Turbines By Signature Distances." *International Journal of Prognostics and Health Management*, Vol. 4, No. 018, 2013.
19. Stewart G., Lackner M.A., "Optimization of a Passive Tuned Mass Damper for Reducing Loads in Offshore Wind Turbines." *IEEE Transactions on Control Systems Technology*, Vol. 21, No. 4, 2013.
18. Lackner M.A., "An Investigation of Variable Power Collective Pitch Control for Load Mitigation of Floating Offshore Wind Turbines." *Wind Energy*, Vol. 16, No. 3: 435-444, 2013.
17. Sebastian T., Lackner M.A., "Characterization of the Unsteady Aerodynamics of Offshore Floating Wind Turbines." *Wind Energy*, Vol. 16, No. 3: 339-352, 2013.
16. Lackner M.A., deVelder, N., Sebastian T., "On 2D and 3D Potential Flow Models of Upwind Wind Turbine Tower Interference." *Computers and Fluids*, Vol. 71: 375-379, 2013.
15. Sebastian T., Lackner M.A., "Development of a Free Vortex Code for Offshore Floating Wind Turbines." *Renewable Energy*, Vol. 46: 269-275, 2012.
14. Sebastian T., Lackner M.A., "Analysis of the Induction and Wake Evolution of an Offshore Floating Wind Turbine." *Energies: Special Issue on Wind Energy*, Vol. 5, No. 4: 968-1000, 2012.
13. Arwade S.R., Lackner M.A., Grigoriu, M.D., "Probabilistic models for wind turbine and wind farm performance" *Journal of Solar Energy Engineering*, Vol. 133, No. 4: 041006, 2011.
12. Stewart G., Lackner M.A., "The Effect of Actuator Dynamics on Active Structural Control of Offshore Wind Turbines" *Engineering Structures*, Vol. 33, No. 5: 1807-1816, 2011.
11. Lackner M.A., Rotea, M., "Passive Structural Control of Offshore Wind Turbines." *Wind Energy*, Vol. 14, No. 3: 373-388, 2011.
10. Morgan E.C., Lackner M.A., Vogel R., Baise L., "Probability Distributions for Offshore Wind

- Speeds” *Energy Conversion and Management*, Vol. 52, No. 1: 15-26, 2011.
9. Lackner M.A., Rotea, M., “Structural Control of Floating Wind Turbines.” *Mechatronics*, Vol. 21, No. 4: 704-719, 2011.
 8. Lackner M.A., McGowan J.G., Manwell J.F., Rogers A.L., “A New Method for Improved Hub Height Mean Wind Speed Estimates using Short-Term Hub Height Data.” *Renewable Energy*, Vol. 35, No. 10, 2340-2347, 2010.
 7. Lackner M.A., van Kuik G.A.M., “The Performance of Wind Turbine Smart Rotor Control Approaches During Extreme Loads.” *Journal of Solar Energy Engineering*, Vol. 132, No. 1: 011008, 2010.
 6. Lackner M.A., “Controlling Platform Motions and Reducing Blade Loads for Floating Wind Turbines.” *Wind Engineering*, Vol. 33, No. 6: 541-553, 2010.
 5. Lackner M.A., van Kuik G.A.M., “A Comparison of Smart Rotor Control Approaches using Trailing Edge Flaps and Individual Pitch Control.” *Wind Energy*, Vol. 13, No. 2-3: 117-134, 2010.
 4. Lackner M.A., Rogers A.L., Manwell J.F., “Uncertainty Analysis in MCP-Based Wind Resource Assessment and Energy Production Estimation.” *Journal of Solar Energy Engineering*, Vol. 130, No. 3, August, 2008.
 3. Lackner M.A., Rogers A.L., Manwell J.F., “The Round Robin Site Assessment Method: An Innovative Strategy for Efficient Wind Energy Site Assessment.” *Renewable Energy*, Vol. 33, No. 9, 2008.
 2. Lackner M.A., Manwell J.F., “A New Decision Making Approach to Wind Energy Site Assessment.” *Wind Engineering*, Vol. 31, No. 4: 247-265, 2007.
 1. Lackner M.A., Elkinton C.N., “An Analytical Framework for Offshore Wind Farm Layout Optimization.” *Wind Engineering*, Vol. 31, No. 1: 17-31, 2007.

PEER REVIEWED CONFERENCE PROCEEDINGS

39. Johlas, H., Hallowell, S., Xie, S., Lomonaco, P., Lackner, M.A., Arwade, S., Myers, A., Schmidt, D., “Modeling Breaking Waves for Fixed-Bottom Support Structures for Offshore Wind Turbines.” *ASME 2018 1st International Offshore Wind Technical Conference*, San Francisco, California, October 2018.
38. Cross-Whiter, J., Ackers, B., Arora, D., Wright, A., Fleming, P., Lackner, M.A., Park, S., “Load Mitigation on Floating Offshore Wind Turbines With Advanced Controls and Tuned Mass Dampers.” *ASME 2018 1st International Offshore Wind Technical Conference*, San Francisco, California, October 2018.
37. Gaertner E., Lackner M.A., “Aero-elastic design optimization of floating offshore wind turbine blades.” *AIAA SciTech Meeting and Exhibit*, Orlando, FL, January 2018.
36. Rodriguez Tsouroukdissian, A., Park, S., Pourazarm, P., La Cava, W.G., Lackner, M.A., Lee, S., Cross-Whiter, J., “Smart Novel Semi-Active Tuned Mass Damper for Fixed-Bottom and Floating Offshore Wind.” *Offshore Technology Conference*, Houston, Texas, May 2016.
35. Park, S., Lackner, M.A., Cross-Whiter, J., Rodriguez Tsouroukdissian, A., La Cava, W.G., “An Investigation of Passive and Semi-Active Tuned Mass Dampers For a Tension Leg Platform Floating Offshore Wind Turbine in ULS Conditions.” *ASME 35th International Conference on Ocean, Offshore and Arctic Engineering*, Busan, South Korea, July 2016.

34. Gaertner E., Liu, S., Lackner M.A., "Improved Free Vortex Wake Models Of Floating Offshore Wind Turbines." *AIAA SciTech Meeting and Exhibit*, San Diego, CA, January 2016.
33. La Cava W.G., Danai K., Spector L., Fleming P., Lackner M.A., Wright A., "Automatic Identification of Closed-loop Wind Turbine Dynamics Via Genetic Programming." *ASME 2015 Dynamic Systems and Control Conference*, Columbus, OH, October 2015.
32. Benitz M.A., Schmidt D.P., Lackner M.A., Robertson A., Jonkman J., Stewart G.S., "Validation of hydrodynamic load models using CFD for the OC4-DeepCwind Semisubmersible." *ASME 34th International Conference on Ocean, Offshore and Arctic Engineering*, St. John, Canada, July 2015.
31. Churchfield M.J., Moriarty P.J., Hao Y., Lackner M.A., Barthelmie, R., Lundquist, J., Oxley, G.S., "A Comparison of the Dynamic Wake Meandering Model, Large-Eddy Simulation, and Field Data at the Egmond aan Zee Offshore Wind Plant." *53rd AIAA Aerospace Sciences Meeting and Exhibit*, Kissimmee, FL, January 2015.
30. Koh R., Clouston P.L., Hyers R., Lackner M.A., "Wood Composites for Utility Scale Wind Turbine Blades: a Rationalization for Wood Based on Weight", *2014 World Conference on Timber Engineering (WCTE 2014)*, Quebec City, Canada, August 10-14, 2014.
29. Koh R., Clouston P.L., Hyers R., Lackner M.A., "Wood Composites for Utility Scale Wind Turbine Blades: Rationalization, Development and Mechanical Testing of Angle-Ply Laminated Veneer Lumber", *1st International Conference on Mechanics of Composites*, Stony Brook University, 9-12 June 2014.
28. Benitz M.A., Schmidt D.P., Lackner M.A., Jonkman J., Robertson A., Stewart G.S., "Comparison of Hydrodynamic Load Predictions Between Reduced-Order Engineering Models and CFD for the OC4-DeepCWind Semi-Submersible." *33rd International Conference on Ocean, Offshore and Arctic Engineering*, San Francisco, CA, June 2014.
27. Hao Y., Lackner M.A., Keck R.-E., Lee S., Churchfield M.J., Moriarty P.J., "Implementing the Dynamic Wake Meandering Model in the NWTC Design Codes." *52nd AIAA Aerospace Sciences Meeting and Exhibit*, National Harbor, MD, January 2014.
26. Barj L., Stewart S., Stewart G., Lackner M.A., Jonkman J., Robertson A., Matha D., "Wind/Wave Misalignment in the Loads Analysis of a Floating Offshore Wind Turbine." *52nd AIAA Aerospace Sciences Meeting and Exhibit*, National Harbor, MD, January 2014.
25. Pourazarm, P., Modarres-Sadeghi, Y., & Lackner, M.A., "Flow-Induced Instability of Wind Turbine Blades." *52nd AIAA Aerospace Sciences Meeting and Exhibit*, National Harbor, MD, January 2014.
24. Stewart, G., Lackner, M.A., Haid, L., Matha, D., Jonkman, J., Robertson, A., "Assessing Fatigue and Ultimate Load Uncertainty in Floating Offshore Wind Turbines Due to Varying Simulation Length." *International Conference on Structural Safety & Reliability*, New York, NY, June 2013.
23. Haid, L., Stewart, G.M, Jonkman, J., Robertson, A., Matha, D. Lackner, M.A., "Simulation-Length Requirements in the Loads Analysis of Offshore Floating Wind Turbines." *Proceedings of the ASME 2013 32nd International Conference on Ocean, Offshore and Arctic Engineering OMAE*, Nantes, France, June 2013.
22. Namik H., Rotea M.A., Lackner M.A., "Active Structural Control with Actuator Dynamics on a Floating Wind Turbine." *51st AIAA Aerospace Sciences Meeting and Exhibit*, Dallas, TX, January 2013.

21. Carswell W., Arwade S.R., DeGroot D.J., Lackner M.A., "Probabilistic Analysis of Offshore Wind Turbine Support Structures." *51st AIAA Aerospace Sciences Meeting and Exhibit*, Dallas, TX, January 2013.
20. Pourazarm P., Modarres-Sadeghi Y., Lackner M., "An Experimental Study of Small-Scale Flexible Wind Turbine Blades." *APS Division of Fluid Dynamics 65th Annual Meeting*, San Diego, CA, November 2012.
19. Stewart G., Lackner M.A., Robertson, A., Jonkman, J., Goupee, A.J., "Calibration and Validation of a FAST Floating Wind Turbine Model of the DeepCwind Scaled Tension-Leg Platform." *ISOPE-2012 - The Twenty-second (2012) International Offshore and Polar Engineering Conference*, Rhodes, Greece, June 17–22, 2012.
18. Stewart G., Lackner M.A., "Determining Optimal Tuned Mass Damper Parameters for Offshore Wind Turbines Using a Genetic Algorithm." *50th AIAA Aerospace Sciences Meeting and Exhibit*, Nashville, TN, January 2012.
17. Sebastian T., Lackner M.A., "Unsteady Near-Wake of Offshore Floating Wind Turbines." *50th AIAA Aerospace Sciences Meeting and Exhibit*, Nashville, TN, January 2012.
16. Beyer F., Sebastian T., Matha D., Lackner M.A., "Development, Validation and Application of a Curved Vortex Filament Model for Free Vortex Wake Analysis of Floating Offshore Wind Turbines." *50th AIAA Aerospace Sciences Meeting and Exhibit*, Nashville, TN, January 2012.
15. Beyer F., Sebastian T., Matha D., Lackner M.A., "Curved Vortex Filaments in Free Vortex Wake Analysis of Floating Wind Turbines." *EWEA Offshore 2011*, Amsterdam, The Netherlands, November 2011.
14. Stewart G., Lackner M.A., "The Effect of Actuator Dynamics on Active Structural Control of Offshore Wind Turbines." *49th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2011.
13. Sebastian T., Lackner M.A., "Offshore Floating Wind Turbines - An Aerodynamic Perspective." *49th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2011.
12. Morgan E.C., Lackner M.A., Vogel R., Baise L., "Application-dependent Probability Distributions for Offshore Wind Speeds" *American Geophysical Union, Fall Meeting*, 2010.
11. Lackner M.A., Rotea M.A., "Active Structural Control of Offshore Wind Turbines." *The Science of Making Torque from Wind*, Heraklion, Greece, June 2010.
10. Duran, M., Lackner M.A., "The Role of Turbine Design Parameters on Offshore Wind Farm Power Output." *World Wind Energy Conference*, Istanbul, Turkey, 2010.
9. Rotea M.A., Lackner M.A., Saheba R., "Active Structural Control of Offshore Wind Turbines." *48th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2010.
8. Sebastian T., Lackner M.A., "A Comparison of First-Order Aerodynamic Analysis Methods for Floating Wind Turbines." *48th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2010.
7. Lackner M.A., "Platform Pitch Control and Blade Load Reductions for Floating Wind Turbines." *Proceedings of Windpower 2009*, American Wind Energy Association, Chicago, IL, May 2009.
6. Lackner M.A., van Kuik G.A.M., "A Comparison of Smart Rotor Control Approaches using Trailing Edge Flaps and Individual Pitch Control." *Proceedings of the 47th AIAA Aerospace Sciences Meeting and Exhibit*, San Francisco, CA, December 2009.

5. Lackner M.A., van Kuik G.A.M., “A Comparison of Smart Rotor Control Approaches using Trailing Edge Flaps and Individual Pitch Control.” *Proceedings of the Dutch Wind Workshop*, Delft, The Netherlands, October 2008.
4. Barlas T., Lackner M.A., “Smart Rotor Blade Technology Applied to the Upwind Reference Turbine.” *Proceedings of 56th IEA Topical Expert Meeting on the Application of Smart Structures for Large Wind Turbine Rotor Blades*, Albuquerque, NM, May 2008.
3. Manwell J.F., McGowan J.G., Lackner M.A., “Development of a Streamlined Site Assessment Methodology (SSAM).” *Proceedings of Windpower 2008*, American Wind Energy Association, Houston, TX, May 2008.
2. Lackner M.A., Rogers A.L., Manwell J.F., “Uncertainty Analysis in Wind Resource Assessment and Wind Energy Production Estimation.” *Proceedings of the 45th AIAA Aerospace Sciences Meeting and Exhibit*, Reno, NV, January 2007.
1. Teolis, C., Teolis, A., Paduano, J., Lackner M., “Analytic Representation of Eddy Current Sensor Data for Fault Diagnostics.” *Proceedings of the 2005 IEEE Aerospace Conference*, Big Sky, MT, March 2005.

PRESENTATIONS AT PROFESSIONAL MEETINGS, INVITED LECTURES, AND POSTER SESSIONS

22. Lackner, M.A., “The fluid physics challenges of offshore wind energy” Invited lecture, *mini-symposium on “Wind Energy Fluid Mechanics” at the APS Division of Fluid Dynamics*, November, 2020.
21. Lackner, M.A., “Structural control of offshore wind turbines using tuned mass dampers” *NAWEA/WindTech 2019*, Amherst, Massachusetts, October 2019.
20. Roach S., Park S., Gaertner E., Lackner, M.A., and Manwell, J., “Application of the New IEC International Design Standard for Offshore Wind Turbines to a Reference Site in the Massachusetts Offshore Wind Energy Area” *NAWEA/WindTech 2019*, Amherst, Massachusetts, October 2019.
19. Li Y, Park S, Zheng Jiang J, Lackner MA, Neild S, and Ward I, “Inerter-based technology for mitigating offshore wind turbine vibrations” *Wind Energy Sciences Conference*, Cork Ireland, June 2019.
18. Gaertner E. and Lackner M., “Optimization of Low Induction Rotors for Floating Offshore Wind Turbine Applications” *Wind Energy Sciences Conference*, Cork Ireland, June 2019.
17. Lackner M.A., “Structural control and aero-elastic optimization of offshore wind turbines.” *Invited lecture, TU Wien*, Vienna, Austria, November, 2017.
16. Lackner M.A., “Structural control of offshore wind turbines.” *Wind Energy Science Conference*, Copenhagen, Denmark, June, 2017.
15. Lackner, M.A., “Analysis of tower shadow effects on the aerodynamics of floating offshore wind turbines.” *Seventh M.I.T. Conference on Computational Fluid and Solid Mechanics*, Cambridge, MA, June, 2013.
14. Lackner, M.A., “Aerodynamic and Structural Modeling of Floating Offshore Wind Turbines.” *Invited Lecture at Kyushu University*, Fukuoka, Japan, March, 2013.
13. Lackner, M.A., “Aerodynamic and Structural Modeling of Floating Offshore Wind Turbines.” *Invited Lecture at University of Massachusetts Dartmouth*, Dartmouth, MA, October, 2012.

12. Sebastian T., Lackner M.A., "Flowfield Analysis of an Offshore Floating Wind Turbine: Results and Implications." *3rd Annual New England Marine Renewable Energy Center Technical Conference*, Cambridge, MA, November 2011.
11. Sebastian T., Lackner M.A., "Aerodynamic Analysis of Offshore Floating Wind Turbines." *AWEA Offshore Windpower Workshop*, American Wind Energy Association, Baltimore, MD, October 2011.
10. Lackner M.A., Sebastian, T., "Computational Modeling Challenges for Floating Offshore Wind Turbines: Aerodynamic Unsteadiness." *University of Massachusetts Lowell Wind Workshop*, Lowell, MA, September 2011.
9. Sebastian T., Lackner M., "The Aerodynamics of Floating Wind Turbines," *3rd Annual Clean Energy Connections Conference and Opportunity Fair*, Springfield, MA, October 2010.
8. Sebastian T., Lackner M.A., "Free Wake Modeling of Offshore Floating Wind Turbines." *AWEA Offshore Windpower Workshop*, American Wind Energy Association, Atlantic City, NJ, October 2010.
7. Lackner M.A., Rotea M.A., "Active Structural Control of Offshore Wind Turbines." *The Science of Making Torque from Wind*, Heraklion, Greece, June 2010.
6. Rotea M.A., Lackner M.A., Saheba R., "Active Structural Control of Offshore Wind Turbines." *48th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2010.
5. Sebastian T., Lackner M.A., "A Comparison of First-Order Aerodynamic Analysis Methods for Floating Wind Turbines." *AWEA Offshore Windpower Workshop*, American Wind Energy Association, Boston, MA, December 2009.
4. Lackner M.A., "Platform Pitch Control and Blade Load Reductions for Floating Wind Turbines." *Windpower 2009 Conference and Exhibition*, American Wind Energy Association, Chicago, IL, May 2009.
3. Lackner M.A., van Kuik G.A.M., "A Comparison of Smart Rotor Control Approaches using Trailing Edge Flaps and Individual Pitch Control." *47th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2009.
2. Lackner M.A., van Kuik G.A.M., "A Comparison of Smart Rotor Control Approaches using Trailing Edge Flaps and Individual Pitch Control." *Dutch Wind Workshop*, Delft, The Netherlands, October 2008.
1. Lackner M.A., Rogers A.L., Manwell J.F., "Uncertainty Analysis in Wind Resource Assessment and Wind Energy Production Estimation." *45th AIAA Aerospace Sciences Meeting and Exhibit*, Reno, NV, January 2007.

COURSES TAUGHT

MIE 124 Computer Problem Solving for Engineers (2014-2019).

MIE 230 Thermodynamics (2011, 2012, 2013, 2015).

MIE 398T UTA Practicum (2013-2014).

MIE 497w Wind Energy System Design (2009, 2011).

MIE 497e Thermofluid Design (2015).

MIE 442 Propulsion System Performance (2017-2020).

MIE 573 Wind Energy Systems Engineering (2019)
MIE 597wc Collegiate Wind Competition (2015-2017).
MIE 607 Advanced Fluid Mechanics (2010-2012, 2018, 2020).
MIE 673 Wind Turbine Design (formerly MIE 697C) (2010, 2012).
MIE 674 Offshore Wind Energy Engineering (formerly MIE 797W) (2011).

COURSES CREATED

MIE 442 Propulsion System Performance (first taught 2017).
MIE 497e/w Wind Energy System Design (first taught 2009).
MIE 597wc Collegiate Wind Competition (first taught 2015).
MIE 673 Wind Turbine Design (first taught 2010).
MIE 674 Offshore Wind Energy Engineering (with McGowan and Manwell) (first taught 2011).

UMASS SERVICE

MIE Graduate Committee, University of Massachusetts Amherst, 2021 – present.
MIE 4+1 Program Director, University of Massachusetts Amherst, 2019 – present.
MIE Strategic Planning Committee co-chair, University of Massachusetts Amherst, 2019 – 2021.
Faculty Advisor to Tau Beta Pi, University of Massachusetts Amherst, 2016 – present.
Faculty Advisor to ASME, University of Massachusetts Amherst, 2016 – present.
Faculty Advisor to Engineers Without Borders, University of Massachusetts Amherst, 2013 – present.
MIE Research and Awards Committee, University of Massachusetts Amherst, 2015 – 2017.
Chair of search committee for Endowed Chair in Renewable Energy, University of Massachusetts Amherst, 2015 – 2017.
Undergraduate Program Committee, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst, 2012 - 2015.
MIE Search Committee, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst, 2011 – 2012.
Ad-hoc Research Faculty Committee, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst, 2011 - 2012.
Department Personnel Committee, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst, 2011 – 2012, 2018 – 2019
Undergraduate Program Committee, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst, 2009 - 2011.

PROFESSIONAL AND OTHER SERVICE

IEA Wind Task 49 - Integrated design of floating wind arrays, Participant, 2021 – present.

Wind Energy Technical Committee Member, American Society of Mechanical Engineers, 2010-Present.

Education Committee Member, North American Wind Energy Academy, 2012-Present.

Wind Turbine Design Judge, KidWind Challenge at Greenfield Community College, 2013-2016

International Advisory Board, International Conference on Future Technologies for Wind Energy, University of Wyoming, 2013.

JOURNAL AND CONFERENCE REVIEWS

AIAA Aerospace Sciences Meeting and Exhibit

ASME Turbo Expo

Engineering Structures

IEEE Transactions on Sustainable Energy

IEEE Transactions on Control Systems Technology

The Journal of Atmospheric and Oceanic Technology

The Journal of Intelligent Material Systems and Structures

The Journal of Mechanical Science and Technology

The Journal of Structural Engineering

Ocean Engineering

Renewable Energy

Wind Energy

Wind Engineering

CONFERENCE SESSIONS CHAIRED AND PANEL SESSIONS SERVED

Wind Plant Optimization, *AIAA SciTech 2016*, San Diego, CA, January, 2016.

Wind Turbine Aeroelasticity and Structural Dynamics, *52nd AIAA Aerospace Sciences Meeting and Exhibit*, National Harbor, MD, January, 2014.

Graduate Student Symposium Organizer, *2013 North American Wind Energy Academy Symposium*, Boulder, CO, August, 2013.

Conference Organizer, *Inaugural Meeting of the North American Wind Energy Academy*, Amherst, MA, August, 2012.

The Promise of Offshore Renewable Energy in New England and Beyond, *9th Energy Ocean International Conference*, Boston, MA, June 2012.

Wind Turbine Aerodynamics, *50th AIAA Aerospace Sciences Meeting and Exhibit*, Nashville, TN, January 2012.

Computational Modeling, *University of Massachusetts Lowell Wind Workshop*, Lowell, MA, September 2011.

Offshore Wind Energy, *49th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2011.

Wind Turbine Control Algorithms, *48th AIAA Aerospace Sciences Meeting and Exhibit*, Orlando, FL, January 2010.

Wind Energy Systems and Technology Session, 2009 AMSE 3rd International Conference on
Energy Sustainability, San Francisco, CA, July 2009.