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**Jeremiah Johnson, Ph.D.**  
Center for Sustainable Systems  
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#### RESEARCH INTERESTS

- Energy systems analysis, renewable energy integration, industrial ecology, life cycle assessment, anthropogenic material flows

#### ACADEMIC POSITIONS

- Assistant Professor, School of Natural Resources & Environment, University of Michigan, Ann Arbor, MI, 2014 – present
- Core Faculty, Center for Sustainable Systems, 2012 – present
- Faculty Affiliate, Erb Institute for Global Sustainable Enterprise, 2012 – present
- Faculty Affiliate, University of Michigan Energy Institute, 2012 – present
- Assistant Research Scientist, School of Natural Resources & Environment, University of Michigan, Ann Arbor, MI, 2012 – 2014

#### EDUCATION

- **Ph.D.**, Yale University, Department of Chemical Engineering, Environmental Engineering Program, New Haven, CT, “*Distinguished*” rating by research committee, 2007  
Dissertation: “Material flows and energy use in anthropogenic metal cycles”  
Recipient of Association of Environmental Engineering and Science Professors (AEESP) & CH2MHill Outstanding Doctoral Dissertation Award  
Committee: Thomas Graedel (Chair), Menachem Elimelech, William Mitch, Reid Lifset
- **M.S.**, Yale University, Department of Chemical Engineering, Environmental Engineering Program, New Haven, CT, 2004
- **B.S.**, Clarkson University, Department of Chemical Engineering, Environmental Engineering Concentration, Potsdam, NY, *Highest University Honors*, 2001

#### OTHER PROFESSIONAL EXPERIENCE

- Principal Consultant, PA Consulting Group, Global Energy Practice, Cambridge, MA, 2007-2012
- Project Manager and Research Scientist, Hawaii Island Sustainable Energy Initiative, The Kohala Center, Kamuela, HI, 2006-2007
- Environmental Health and Safety Co-op, Cargill Corn Milling Operations, Cedar Rapids, IA, 2002

#### ARTICLES IN PREPARATION

- Lin, Y., Mitchell-Ward, N., Mathieu, J., **Johnson, J.X.**, *Life Cycle Impacts of using Li-Ion Batteries for Power System Reserves*
- Arbabzadeh, M., Keoleian, G.A., **Johnson, J.X.**, *Parameters driving enhanced environmental performance of energy storage systems across grid applications*
- Ryan, N.A., Lewis, G., **Johnson, J.X.**, Keoleian, G.A., *Decision support algorithm to guide method selection for quantifying emissions from electricity consumption*
- Lin, Y., Mathieu, J., **Johnson, J.X.**, *Stochastic optimal power flow formulation for environmental dispatch strategy with energy storage*

- Chalal, R., **Johnson, J.X.**, *Environmental Impacts of Design Considerations for State Implementation Plans to Limit CO<sub>2</sub> from Existing Power Plants*

#### REFEREED PUBLICATIONS

Total citations: ISI – 296, Google Scholar – 502; h-index: ISI – 8, Google Scholar – 10

23. Novacheck, J., **Johnson, J.X.**, *Value of Wind Diversity to Decrease Variability Induced Ramping in the Presence of Transmission Constraints*, revise and resubmit, 2016.
22. Alfaro, J.F., Miller, S.A., **Johnson, J.X.**, Riolo, R.R., *Agent Based Modeling for Stakeholder Engagement and Decision Making in Electricity System Planning*, in review, 2016.
21. Ryan, N., Keoleian, G.A., **Johnson, J.X.**, *Comparative Assessment of Models and Methods to Calculate Grid Electricity Emissions*, revise and resubmit, 2016.
20. Chiang, A., Keoleian, G., Moore, M.R., **Johnson, J.X.**, *Emission Abatement Costs and Benefits of Siting an Offshore Wind Farm: A Spatial Analysis of Lake Michigan*, revise and resubmit, 2016.
19. Good, J., **Johnson, J.X.**, *Impact of Inverter Loading Ratio on Solar Photovoltaic System Performance*, *Applied Energy*, 177: 475–486, 2016.
18. Lin, Y., **Johnson, J.X.**, Mathieu, J., *Emissions Impacts of Using Distributed Energy Storage for Power System Reserves*, *Applied Energy*, 168: 444–456, 2016.
17. Arbabzadeh, M., **Johnson, J.X.**, Keoleian, G.A., Rasmussen, P., Thompson, L., *Twelve Principles for Green Energy Storage in Grid Applications*, *Environmental Science & Technology*, 50(2): 1046–1055, 2016.
16. **Johnson, J.X.**, Novacheck, J., *The Impact of Coal Plant Retirements on Emissions Mitigation from Renewable Portfolio Standards*, *The Electricity Journal*, 28 (8): 59–68, 2015. [Editorial review]
15. Novacheck, J., **Johnson, J.X.**, *The Environmental and Cost Implications of Solar Energy Preferences in Renewable Portfolio Standards*, *Energy Policy*, 86: 250–261, 2015.
14. **Johnson, J.X.**, Novacheck, J., *Emissions Reductions from Expanding State-Level Renewable Portfolio Standards*, *Environmental Science & Technology*, 49(9): 5318–5325, 2015.
13. Arbabzadeh, M., **Johnson, J.X.**, De Kleine R., Keoleian, G.A., *Vanadium redox flow batteries to reach greenhouse gas emissions targets in an off-grid configuration*, *Applied Energy*, 146: 397–408, 2015.
12. **Johnson, J.X.**, De Kleine R., Keoleian, G.A., *Assessment of Energy Storage for Transmission-Constrained Wind*, *Applied Energy*, 124: 377–388, 2014.
11. **Johnson, J.X.**, McMillan, C.A., Keoleian, G.A., *Evaluation of Life Cycle Assessment Recycling Allocation Methods: The Case Study of Aluminum*, *Journal of Industrial Ecology*, 17 (5): 700–711, 2013.
10. **Johnson, J.**, Chertow, M., *Climate Stabilization Wedges in Action: A Systems Approach to Energy Sustainability for Hawaii Island*, *Environmental Science & Technology*, 43(7): 2234–2240, 2009.
9. **Johnson, J.**, Reck, B., Wang, T., Graedel, T.E., *The Energy Benefit of Stainless Steel Recycling*, *Energy Policy*, 36 (1): 181–192, 2008.
8. **Johnson, J.**, Graedel, T.E., *The “Hidden” Trade of Metals in the United States*, *Journal of Industrial Ecology*, 12 (5/6): 739–751, 2008.
7. Wang, T., Mao, J., **Johnson, J.**, Reck, B., Graedel, T.E., *Anthropogenic Metal Cycles in China*, *Journal of Material Cycles and Waste Management*, 10 (2): 188–197, 2008.
6. **Johnson, J.**, Harper, E.M., Lifset, R., Graedel, T.E., *Dining at the Periodic Table: Metals Concentrations as They Relate to Recycling*, *Environmental Science & Technology*, 41(5): 1759–1765, 2007.
5. **Johnson, J.**, Schewel, L., Graedel, T.E., *The Contemporary Anthropogenic Chromium Cycle*, *Environmental Science & Technology*, 40 (22): 7060–7069, 2006.

4. Harper, E.M., **Johnson, J.**, Graedel, T.E., *Making Metals Count: Applications for Material Flow Analysis*, Environmental Engineering Science, 23 (3): 493-506, 2006.
3. **Johnson, J.**, Gordon, R.B., Graedel, T.E., *Silver Cycles: The Stocks and Flows Project, Part 3*, JOM: Journal of the Minerals, Metals, and Materials Society, 58 (2): 34-38, 2006.
2. **Johnson, J.**, Jirikowic, J., Bertram, M., van Beers, D., Gordon, R.B., Henderson, K., Klee, R.J., Lanzano, T., Oetjen, L., Graedel, T.E., *Contemporary Anthropogenic Silver Cycle: A Multilevel Analysis*, Environmental Science & Technology, 39 (12): 4655-4665, 2005. [Featured on cover]
1. **Johnson, J.**, Bertram, M., Henderson, K., Jirikowic, J., Graedel, T.E., *The Contemporary Asian Silver Cycle: One-Year Stocks and Flows*, Journal of Material Cycles and Waste Management, 7 (2): 93-103, 2005.

#### CONFERENCE PROCEEDINGS

- Lin, Y., Mathieu, J., **Johnson, J.X.**, *Stochastic optimal power flow formulation for environmental dispatch strategy with energy storage*, IEEE 19th Power Systems Computation Conference (PSCC), 2016.
- Lin, Y., Hiskens, I., Backhaus, S., **Johnson, J.X.**, Mathieu, J. *Explaining inefficiencies in buildings providing ancillary services*, 2016 ACEEE Summer Study on Energy Efficiency in Buildings, August 2016, Pacific Grove, CA.
- **Johnson, J.**, Chertow, M., *A Systems Approach to Energy Sustainability in Hawai'i County*, IEEE Proceedings of the 42nd Hawaii International Conference on System Sciences, Waikoloa, Hawaii, 2009.

#### TEACHING CASES

- Miranda-Blackney, T., Cui, Y., Santiago, A., Talbot, J., **Johnson, J.**, *Renewable Energy at the National Aquarium*. WDI Publishing, in press, 2016.
- Ryan, D., Bednar, D., Cecco, L., MV Reddy, P., **Johnson, J.**, *Evading the Death Spiral: Minnesota's Value of Solar Tariff*. WDI Publishing, case 1-430-450, 2015.

#### NON-REFEREED PUBLICATIONS

- **Johnson, J.**, Novacheck, J., Barteau, M., Lyon, T., *Expanding the Renewable Portfolio Standard for Michigan: A Study*, University of Michigan Energy Institute, January 2015.
- **Johnson, J.**, Chertow, M., Davies, M., Gagne, C., Hausfather, Z., Lippert, D., *Analysis and Recommendations for the Hawaii County Energy Sustainability Plan*, 2007, 219 pages, available online at [http://www.kohalacenter.org/pdf/analysis\\_and\\_recommendations.pdf](http://www.kohalacenter.org/pdf/analysis_and_recommendations.pdf).
- **Johnson, J.**, book review for "Transforming Sustainability Strategy into Action: The Chemical Industry", Ecological Economics, 61: 194-195, 2007.
- **Johnson, J.**, Leistra, D., Opton-Himmel, J., Smith, M., *Baseline Energy Analysis for Hawaii Island*, sponsored and distributed by the Kohala Center, Kamuela, Hawaii, 2006.

#### FUNDING AND AWARDS

- University of Michigan Office of Research and Rackham Graduate School: Distinguished Faculty & Grad Student Seminars Program, Co-PI (PI: J. Mathieu), Emerging Topics in Sustainable Electric Power Systems, 2016-2017, \$10,000.
- National Science Foundation: Environmental Sustainability, Co-PI (PI: M. Xu), UNS: U.S.-China: Integrated Systems Modeling of Food-Energy-Water (FEW) Nexus for Urban Sustainability, 2016-2020, \$499,990.

- National Science Foundation: Environmental Sustainability, PI (Co-PI: J. Mathieu), Environmental Impacts of Using Distributed Energy Storage for Power System Reserves, 2015-2018, \$310,000.
- University of Michigan, Transforming Learning for a Third Century Program, Co-PI (with 18 others), Transforming Sustainability Education and Case-Based Teaching, 2015-2018, \$1,595,749.
- University of Michigan Energy Institute, Co-PI (with J. Mathieu), Assessing the Environmental Impacts of Providing Power System Reserves with Demand Response and Distributed Energy Storage – Grant Renewal, 2015, \$40,000.
- University of Michigan, M-Cubed, Co-PI (with J. Mathieu, I. Hiskens), Improving the Energy Efficiency of Buildings Participating in Power System Ancillary Services, 2015-2016, \$60,000.
- U.S.-China Clean Energy Research Center, Co-PI (with G. Keoleian), Electricity and Material Sourcing Scenario Analysis to Guide Vehicle Technology Strategies Implementation Proposal, 2015, \$68,000.
- 5 Lakes Energy, PI, A Dynamic Tool for Evaluating Carbon Mitigation Options from Existing Power Plants in Michigan, Phase II, 2015, \$54,251.
- University of Michigan Energy Institute, Co-PI (with J. Mathieu), Assessing the Environmental Impacts of Providing Power System Reserves with Demand Response and Distributed Energy Storage, 2014, \$40,000.
- The Energy Foundation and 5 Lakes Energy, PI, A Dynamic Tool for Evaluating Carbon Mitigation Options from Existing Power Plants in Michigan, 2014, \$45,622.
- University of Michigan Energy Institute, PI, Evaluation of Alternative Design Considerations for Renewable Portfolio Standards, 2014, \$45,200.
- Kohala Center, Student Support, Transportation Solutions to Reduce Fossil Fuel Dependence on Hawaii Island, 2013-2014, \$6,000.
- National Science Foundation: Sustainable Energy Pathways Program, Co-PI (PI: L. Thompson), Non-Aqueous Redox Flow Battery Chemistries for Sustainable Energy Storage, 2012-2016, \$1,750,000.
- University of Michigan: Rackham Centennial Fellowship, Student Support – Josh Novacheck, Environmental Impacts of Various Renewable Grid Integration, 2013, \$6,000.
- Association of Environmental Engineering and Science Professors (AEESP) & CH2MHill Outstanding Doctoral Dissertation Award, 2007, \$1,000.
- Yale University: Graduate Student Assembly Conference Scholarship, 2005.
- International Precious Metals Institute: Student Award, 2004, \$1,500.
- National Science Foundation Graduate Student Award: Honorable Mention, 2003.
- Yale University: Faculty of Engineering Fellowship, 2003.
- Yale University: Graduate School of Arts & Sciences Fellowship, 2003.
- Intel Award for Environmental Innovation, 2002.

#### SELECTED SERVICE

- Program Chair (2016) and Leadership Committee (2014-2016) for the International Symposium on Sustainable Systems and Technology (ISSST)
- Committee member: President Schlissel's Committee on Greenhouse Gas Reduction, 2014-2015.
- Judge in Renewable Energy Case Competition, Ross School of Business, University of Michigan, 2012, 2014, 2015.
- Advisor for University of Michigan Social Venture Fund, 2014-2015.
- Erb Institute Teaching Case Judge, 2014.
- Dow Sustainability Project Advisor, Value of Solar in Michigan, 2014.

- Reviewer: National Science Foundation; Environmental Science & Technology; Energy Policy; Journal of Industrial Ecology, Applied Energy, Landscape and Urban Planning, PLOS One

#### PRESENTATIONS

- Lin, Y., Hiskens, I., Backhaus, S., **Johnson, J.X.**, Mathieu, J. “Explaining inefficiencies in buildings providing ancillary services” to be presented at 2016 ACEEE Summer Study on Energy Efficiency in Buildings, August 2016, Pacific Grove, CA.
- Lin, Y., Mathieu, J., **Johnson, J.X.**, *Stochastic optimal power flow formulation for environmental dispatch strategy with energy storage*, to be presented at IEEE 19th Power Systems Computation Conference (PSCC), June 2016, Genoa, Italy.
- **Johnson, J.X.**, *Green Energy Principles for Grid Energy Storage*, presented at EPRI ENV-Vision International Electricity Sector Conference, May 2016, Washington, D.C.
- Arbabzadeh, M.M., **Johnson, J.X.**, Keoleian, G., *Sustainability Assessment Algorithm for Green Energy Storage in Grid Applications*, presented at International Symposium for Sustainable Systems and Technology, May, 2016; Phoenix, AZ.
- Ryan, N., Keoleian, G., **Johnson, J.X.**, *Comparative Assessment & Decision Support Algorithm to aid in Method Selection for Calculating Grid Electricity Emissions*, presented at International Symposium for Sustainable Systems and Technology, May, 2016; Phoenix, AZ.
- Chiang, A., Keoleian, G., Moore, M., **Johnson, J.X.**, *Investment, viewshed, and emission abatement costs in offshore wind farm siting optimization*, presented at International Symposium for Sustainable Systems and Technology, May, 2016; Phoenix, AZ.
- Lin, Y., Mathieu, J., Mitchell-Ward, N., **Johnson, J.X.**, *Examining the Life Cycle Impacts of Energy Storage for Power System Reserves*, presented at International Symposium for Sustainable Systems and Technology, May, 2016; Phoenix, AZ.
- **Johnson, J.X.**, Good, J., *Impact of Inverter Loading Ratio on Solar Photovoltaic System Performance*, presented at International Symposium for Sustainable Systems and Technology, May, 2016; Phoenix, AZ.
- **Johnson, J.X.**, “Influencing Environmental Outcomes of Energy Storage in Grid Applications” presented at the Golisano Institute of Sustainability, Rochester Institute of Technology, December 2015, Rochester, NY.
- Arbabzadeh, M., **Johnson, J.X.**, Keoleian, G.A., “Design Principles for Green Energy Storage Systems” presented at the 228<sup>th</sup> Electrochemical Society (ECS) Meeting, 2015, Phoenix, AZ.
- Novacheck, J., **Johnson, J.X.**, “The Impact of Coal Plant Retirements on the Environmental Benefits of Renewable Portfolio Standards” presented at the Energy Policy Research Conference, September 2015, Denver, CO.
- Lin, Y., **Johnson, J.X.**, Mathieu, J. “Environmental Impacts of Using Distributed Energy Storage for Power System Reserves” presented at the International Society for Industrial Ecology Conference, July, 2015; University of Surrey, UK.
- Arbabzadeh, M., **Johnson, J.X.**, De Kleine R., Keoleian, G.A., “Optimal use of grid-scale energy storage to meet greenhouse gas emissions targets in an off-grid configuration” presented at the International Society for Industrial Ecology Conference, July, 2015; University of Surrey, UK.
- Arbabzadeh, M., **Johnson, J.X.**, De Kleine R., Keoleian, G.A., “Design Principles for Green Energy Storage Systems” presented at the International Society for Industrial Ecology Conference, July, 2015; University of Surrey, UK.

- **Johnson J.X.**, Novacheck, J., “Power system optimization to determine air emissions impacts of Renewable Portfolio Standards” presented at the Association of Environmental Engineering and Science Professors (AEESP) conference, June, 2015; Yale University, New Haven, CT.
- Lin, Y., **Johnson, J.X.**, Mathieu, J., “Environmental Impacts of Using Distributed Energy Storage for Power System Reserves” presented at the International Symposium for Sustainable Systems and Technology, May, 2015; Dearborn, MI.
- Arbabzadeh, M.; **Johnson, J.X.**; Keoleian, G.A., “Using design principles for green energy storage systems to evaluate renewable energy integration” presented at the International Symposium for Sustainable Systems and Technology, May, 2015; Dearborn, MI.
- Arbabzadeh, M., **Johnson, J.X.**, De Kleine R., Keoleian, G.A., “Design principles for green energy storage systems” presented at Engineering Sustainability, April, 2015; University of Pittsburgh: Pittsburgh, PA.
- Novacheck, J., **Johnson, J.X.**, “Value of Wind Diversity for Increased Integration of Wind Power into the Grid” presented at the 2014 IEEE Power & Energy Society General Meeting, July 2014; National Harbor, MD.
- **Johnson, J.X.**, Chalat, R., “State-based Carbon Rule Analysis for Power Systems” presented at EPA Carbon Standards Technical Meeting for Midwest Advocates, July 2014, Chicago, IL.
- **Johnson, J.X.**, Novacheck, J., “Environmental Impacts of Coal Power Cycling to Facilitate Wind Integration” presented at the International Symposium on Sustainable Systems & Technology, May 2014; Oakland, CA.
- Novacheck, J., **Johnson, J.X.**, “Value of Wind Diversity for Increased Integration of Wind Power into the Grid” presented at the International Symposium on Sustainable Systems & Technology, May 2014; Oakland, CA.
- **Johnson, J.X.**, “Environmental Impacts of Coal Power Cycling to Facilitate Wind Integration,” presented at School of Natural Resources & Environment, April, 2014; University of Michigan: Ann Arbor, MI.
- **Johnson, J.X.**, “Environmental Impacts of Coal Power Cycling to Facilitate Wind Integration,” presented at the Departments of Industrial Engineering and Environmental & Ecological Engineering, March 2014; Purdue University, West Lafayette, IN.
- **Johnson, J.X.**, “Environmental Impacts of Coal Power Cycling to Facilitate Wind Integration,” presented at the Department of Environmental and Water Resources Engineering, January 2014; University of Michigan: Ann Arbor, MI.
- **Johnson, J.X.**, “Energy Systems Analysis across the Private Sector, Public Sector, and Academia” presented at the School of Forestry & Environmental Studies, November 2013; Yale University: New Haven, CT.
- **Johnson, J.X.**, “The Energy Challenges and Opportunities of the 21st Century” presented at the Midland American Chemical Society Fall Scientific Meeting, October 2013, Bay City, MI. (Keynote)
- **Johnson, J.**, “Inside the Mind of Electric Utilities,” presented at the School of Natural Resources and Environment, Center for Sustainable Systems, November 2012; University of Michigan: Ann Arbor, MI.
- **Johnson, J.**, “Material Flows and Energy Use in Anthropogenic Metal Cycles,” presented at the Department of Earth & Environmental Engineering, June 2009; Columbia University: New York, NY.
- **Johnson, J.**, “Climate Stabilization Wedges in Action: A Systems Approach to Energy Sustainability for Hawaii Island,” presented at the Engineering Systems Division, March 2009; Massachusetts Institute of Technology: Cambridge, MA.

- **Johnson, J.**, “Climate Stabilization Wedges in Action: A Systems Approach to Energy Sustainability for Hawaii Island,” presented at the Bren School of Environmental Science and Management, March 2009; University of California: Santa Barbara, CA.
- **Johnson, J.**, Chertow, M., “A Systems Approach to Energy Sustainability in Hawai‘i County,” presented at the Hawaii International Conference on System Sciences, January 2009; Waikoloa, HI.
- **Johnson, J.**, “Analysis and Recommendations for the Hawaii County Energy Sustainability Plan,” presented at the Hawaii County Energy Stakeholders Meeting and two public hearings, May 2007; Hawaii County Department of Research and Development and the Kohala Center, multiple locations, HI.
- **Johnson, J.**, “The ‘Hidden’ Trade of Metals in the United States,” presented to the Committee on Critical Mineral Impacts on the U.S. Economy, National Research Council of the National Academies, March 2007; National Academy of Science, Washington, D.C.
- **Johnson, J.**, “Material Flows and Energy Use in Anthropogenic Metal Cycles,” presented as a dissertation defense, January 2007; Yale University, New Haven, CT.
- **Johnson, J.**, Harper, E.M., Graedel, T.E., “Dining at the Periodic Table: Recycling and Design of Multi-Element Products,” presented at the Gordon Research Conference on Industrial Ecology, August 2006; Queens College: Oxford, UK.
- **Johnson, J.**, “Stainless Steel Cycles,” presented at the Team Stainless Meeting, April 2006; International Stainless Steel Forum: Brussels, Belgium.
- **Johnson, J.**, “Contemporary Chromium Flows: From Mining to Recycling,” presented at CHROMIUM 2006, February 2006; Cape Town, South Africa.
- **Johnson, J.**, Harper, E.M., Graedel, T.E., “Assessing Recyclability and Design of Multi-Element Products,” presented at the Robert M. Langer Chemical Engineering Graduate School Symposium, December 2005; Yale University: New Haven, CT.
- **Johnson, J.**, Graedel, T.E., “Assessing Local Scarcity and Import Reliance through Material Flow Analysis of Chromium,” presented at the International Society for Industrial Ecology Conference, June 2005; Royal Institute of Technology: Stockholm, Sweden.
- Graedel, T.E., Dong, J., Harper, E., **Johnson, J.**, “Metal Cycle Progress: A Focus on Steel,” presented at the National Science Foundation Conference on Biocomplexity in the Environment, March 2005; Arlington, VA.
- **Johnson, J.**, “The Contemporary Multilevel Cycle of Silver,” presented at the Gordon Research Conference on Industrial Ecology, August 2004; Queens College: Oxford, UK.
- **Johnson, J.**, “Chromium: Trade Issues, Availability, and Energy Consumption,” presented at First Annual Meeting of the Advisory Committee of the National Science Foundation Project on Multilevel Cycles, Models, and Scenarios for Iron Alloying Elements, March 2004; Yale University: New Haven, CT.
- Caufield, J., Collier, M., Davies, K., **Johnson, J.**, Grimberg, S. “Mitigating Acid Mine Drainage through Byproduct Reuse,” presented at the International Waste Education and Research Consortium, April 2001; New Mexico State University: Las Cruces, NM.

#### PROFESSIONAL AFFILIATIONS

- International Society for Industrial Ecology (ISIE)
- Association of Environmental Engineering and Science Professors (AEESP)

#### TEACHING

- University of Michigan

- NRE501.091: Renewable Electricity & the Grid, Primary Instructor (Winter 2015, 2016)
- NRE550/STRAT566: Systems Thinking for Sustainable Development & Enterprise, Primary Instructor (Winter 2016)
- Guest lectures: ESE501 (Fall 2014, Fall 2015); ENG100 (Fall 2013); UROP (Summer 2015)
- Yale University
  - FES500: Greening the Industrial Facility, Teaching Fellow, two semesters
  - FES300: Technology and Environment, Teaching Fellow, one semester
  - CENG120: Introduction to Environmental Engineering, Teaching Fellow, one semester

#### STUDENT ADVISEES AND RESEARCH ASSISTANTS

- Doctoral student
  - (Co-chair) Maryam Arbabzadeh, School of Natural Resources & Environment, University of Michigan, September 2013 to present; recipient of Dow Doctoral Fellowship and the Barbour Scholarship
- Doctoral student committee
  - Vineet Raichur, Design Science Program, University of Michigan, August 2015
- Master's theses
  - (Chair) Xinwei Li, School of Natural Resources & Environment, December 2015 to present
  - (Chair) Bhuvan Neema, School of Natural Resources & Environment, November 2015 to present
  - (Chair) Nick Mazzili, School of Natural Resources & Environment, November 2015 to present
  - (Chair) Dan Ryan, School of Natural Resources & Environment, January 2015 to present
  - (Co-Chair) Nicole Ryan, School of Natural Resources & Environment, January 2015 to present
  - (Chair) Shreyas Vangala, School of Natural Resources & Environment, January 2015 to present
  - (Chair) Joshua Novacheck, Mechanical Engineering and School of Natural Resources & Environment, University of Michigan, January 2013 to December 2014; recipient of the Dow Masters Fellowship.
- Research assistants
  - Dan Ryan, School of Natural Resources & Environment, University of Michigan January 2015 to present
  - Nicole Ryan, Mechanical Engineering and School of Natural Resources & Environment, University of Michigan, September 2014 to present
  - Rachel Chalot, Applied Economics and School of Natural Resources & Environment, University of Michigan January 2014 to present
  - Joshua Novacheck, Mechanical Engineering and School of Natural Resources & Environment, University of Michigan, January 2013 to December 2014
  - Maite Madrazo, Ross School of Business and School of Natural Resources & Environment, University of Michigan, Winter 2013
  - Markus Walther, School of Natural Resources & Environment, University of Michigan, Winter 2013
- Master's projects
  - Southeast Michigan Regional Energy Office, Municipal Street Lighting Consortium: Nalin Deshpande, Emily Durand, Yun Liang, Danielle Yuqiao Liu, Grace McGinnis, Winter 2015 to present

- SunEdison Solar Strategies: Blake Heidenreich, John Serron, Will Kletter, Nate Underwood, Pavel Azgaldov, Adithya Dahagama, and Chris Wolff, School of Natural Resources & Environment, University of Michigan, Winter 2014 to Winter 2015
- Transportation Solutions to Reduce Fossil Fuel Dependence on Hawaii Island: Maite Madrazo, Jonas Epstein, Trevor McManamon, Daphne Medina, and Xiaofei Wen, School of Natural Resources & Environment, University of Michigan, Fall 2013 to Winter 2014

#### PRESS

- Maloney, P., “First do no harm: Michigan researchers publish storage sustainability guidelines” *Utility Dive*, February 22, 2016.
- Balaskovitz, A., “Michigan researchers issue guidelines for sustainable energy storage” *Midwest Energy News*, February 19, 2016.
- Allington, A., “States wavering on standards for renewable energy” *National Public Radio, Marketplace*, July 24, 2015.
- Balaskovitz, A., “Natural gas or renewables? New model helps states decide” *Midwest Energy News*, March 23, 2015.
- Balaskovitz, A., “Energy policy takes center stage in state Legislature this year” *MiBiz*, March 1, 2015.
- Ignaczak, N., “Can we power the Mitten with energy freedom?” *Concentrate*, February 11, 2015.
- WEMU News, interview on Michigan Renewable Portfolio Standard, January 20, 2015.
- Tsao, S., “Study: Higher Michigan RPS would boost wind, solar,” *Argus Media*, January 14, 2015.
- WKAR Public Media, interview on Michigan Renewable Portfolio Standard, *Current State*, January 13, 2015.
- Balaskovitz, A., “Michigan study shows ‘modest’ costs to expand renewables” *Midwest Energy News*, January 13, 2015.
- Balaskovitz, A., “‘A tale of two peninsulas’: Can Michigan’s grid be unified?” *Midwest Energy News*, November 20, 2014.
- Balaskovitz, A., “Biomass key to Upper Peninsula’s future renewable portfolio” *Midwest Energy News*, October 28, 2014.
- WKAR Public Media, interview on Presque Isle Power Plant retirement, *Current State*, October 21, 2014.
- Balaskovitz, A., “Will EPA carbon rules push Michigan harder on clean energy?” *Midwest Energy News*, July 1, 2014.
- Johnson, J., “Greener energy for Michigan: study examines impact, cost of increased RPS targets”, University of Michigan, Planet Blue, *The Conversation*, June 20, 2014.
- Reed, E., “Will The EPA Take Your Job?” *Main Street*, June 23, 2014.
- Matheny, K., “New coal rules: Good news on Michigan jobs, or bad news on electricity rates?” *Detroit Free Press*, June 2, 2014.
- Neuhauser, A., “State of the Union Preview: Energy and the Environment - Experts weigh in on what Obama may say on energy and environmental policy” *U.S. News & World Report*, January 28, 2014.