

# Meghann Newell Smith

Email: [smithmeg@montclair.edu](mailto:smithmeg@montclair.edu) | ORCID: 0000-0001-9323-4268

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## PROFESSIONAL SUMMARY

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Experienced professor and researcher with academic interests in renewable energy development, environmental impact assessment, and sustainability analytics. Skilled in life cycle analysis, life cycle costing, survey development, statistical analysis and risk assessment. Practiced in community outreach and education, public speaking, and technical writing.

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## WORK EXPERIENCE

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2024-present	Assistant Professor (tenure-track), Department of Earth and Environmental Studies, Montclair State University
2022-2024	Assistant Professor, Clean Energy and Sustainability Analytics Center, Montclair State University
2021-2022	Research Fellow, Clean Energy and Sustainability Analytics Center, Montclair State University
2018-2021	Research Associate, Clean Energy and Sustainability Analytics Center, Montclair State University
2017-2021	Graduate Assistant, Department of Earth and Environmental Studies, Montclair State University
2014-2019	Adjunct Professor, School of Business, Mathematics, Engineering and Technology, County College of Morris
2017	Adjunct Professor, Department of Human Ecology, Montclair State University
2015-2017	Instructor, Future Stars Day Camp (formerly College for Kids), County College of Morris
2013-2017	Laboratory Supervisor, Hospitality & Culinary Arts Dept., School of Business, Mathematics, Engineering and Technology, County College of Morris

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## EDUCATION

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2017-2021	Montclair State University, College of Science and Mathematics, Montclair, NJ Ph.D. Environmental Science and Management, Advisor: Pankaj Lal. Dissertation title: <i>Sustainability of Hard Apple Cider: An Environmental and Socio-Economic Assessment.</i>
2014-2016	Montclair State University, College of Humanities and Social Sciences, Montclair, NJ M.S. Nutrition and Food Science, Advisor: Douglas Murray. Thesis title: <i>Artisanal Cider and the Craft Beverage Consumer Tourist Experience.</i>
2009-2013	University of Arizona, College of Agriculture and Life Sciences, Tucson, AZ B.S. Nutrition (Dietetics Discipline)

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## RESEARCH AND TEACHING INTERESTS

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- **Industrial ecology** – applying life cycle assessment and life cycle costing to a variety of fields to determine impacts, impart scenario analysis, and inform recommendations for best practices, policy development, etc.
- **Natural resource management** – applying in-depth qualitative inquiry with data-driven quantitative analysis to inform best management practices for products, processes, and systems
- **ESG investing and analysis** – quantifying Scope 1, 2, and 3 emissions to inform financial decisions and manage risks and opportunities
- **Renewable energy development** – combining analytic techniques and stakeholder engagement to support sustainable growth and achieve energy security
- **Youth and community outreach** – engaging with the public through educational events, highlighting STEM concepts in innovative ways to foster environmental stewardship

## TECHNICAL SKILLS

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- Environmental Impact Assessment – creating life cycle assessment models through multiple software (SimaPro, openLCA, GREET) for estimating emissions, scenario analysis, uncertainty/risk analysis
- Material Flow Analysis – creating MFA models using STAN software for substance flow analysis
- Economic Assessment – applying valuation techniques including techno-economic assessment, levelized cost of energy, life cycle costing, and social cost-benefit analysis
- Survey Development and Administration – creating online and mixed-methods surveys (Qualtrics, ArcGIS Survey 123) applying analytic methods rooted in research (discrete choice experiment, best-worst scaling, analytical hierarchy process, principal component analysis, various regression models)
- Statistical Analysis – proficient in multiple statistical software platforms including JMP Pro, SPSS, STATA
- Teaching Platforms – Blackboard, Canvas, Wiley PLUS, Cengage, Pearson Mastering and MyLab
- Administrative Platforms – Ellucian Colleague, WorkDay, Microsoft Office

## PROJECTS AWARDED

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### *Current projects:*

**Life Cycle Assessment of Wide-Scale Adoption of Residential Ground Source Heat Pump Systems.** Principal Investigator, undergraduate research CSAM summer research program faculty advisor - \$5,200 - CSAM Summer 2026 Undergraduate Research Program, Montclair State University College of Science and Mathematics. (May 2026 – August 2026)

**Examining Ground Source Heat Pumps' (GHSPs) Role in the Clean Energy Transition.** Principal Investigator, undergraduate research CSAM summer research program faculty advisor - \$7,500 – CSAM Summer 2025 Undergraduate Research Program, Montclair State University College of Science and Mathematics. (May 2025 – August 2025)

**Life Cycle Assessment of Offshore Wind: a case for decarbonized steel sector.** Principal Investigator, graduate research fellow faculty advisor - \$32,000 – Offshore Wind Fellowship 2024-2025, Wind Institute. (September 2024 – June 2025)

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## Completed projects:

**Triennium 2 Energy Efficiency Analysis Proposal.** Co-Investigator, responsible for project management, coordination, and analysis - \$847,991 – New Jersey Board of Public Utilities. (February 2024 – January 2025)

**Applying SWOT-AHP Analysis to New Jersey Offshore Wind.** Principal Investigator, undergraduate research fellow faculty advisor - \$17,000 – Offshore Wind Fellowship 2023-2024, Wind Institute. (September 2023 – June 2024)

**Monitoring the Socioeconomic Impacts of New Jersey's Offshore Wind Development on Recreational Fisheries Economy.** Co-Principal Investigator, responsible for survey development, administration, statistical analysis, and report writing - \$440,983 – New Jersey Department of Environmental Protection. (July 2023 – April 2025)

**Technical Assistance: New Jersey Fuel Cell Task Force Report.** Co-Investigator, lead writer for the report and communications with the Task Force - \$111,393 – New Jersey Board of Public Utilities. Partnering with the New Jersey Fuel Cell Task Force (Air Liquide, California Hydrogen Business Council, Center for Hydrogen Safety, Fuel Cell & Hydrogen Energy Association, NJBPU, NJDCA, NJDEP, NJEDA, NJ Fuel Cell Coalition, Rutgers University, Toyota Motor North America). (January 2022 – January 2023)

**Building Transformative Pathways to Sustainability Programs.** Senior Personnel, investigation of renewable energy development and sustainable solutions among interdisciplinary projects - \$525,000 – PSEG Foundation. In partnership with the PSEG Institute for Sustainability Studies (ISS). (September 2022 – September 2023)

## PEER-REVIEWED PUBLICATIONS (\*Advised student)

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[Google Scholar](#) (h-index = 8, i10-index = 6, Citations = 220).

## Published works:

- **Smith, M.**, Shoaib, N., Lal, P. (2025) Life Cycle Assessment of New Jersey Offshore Wind. *Wind Energy Science*, 10 (7), <https://doi.org/10.5194/wes-10-1389-2025> (CiteScore: 7.5)
- Shrestha, K., **Smith, M.**, Lal, P. (2025) Offshore wind farms in New Jersey, USA: Stakeholder concerns and anticipated impacts on recreational fishing. *Marine Policy*, 181, 106854 <https://doi.org/10.1016/j.marpol.2025.106854> (impact factor: 3.7)
- Bhushal, G.A., **Smith, M.**, Vedwan, N., Lal, P. (2025) Influence of Field Trips on Adolescent Environmental Stewardship: Examining the Role of the Dominant Social Paradigm. *World*, 6(3) <https://doi.org/10.3390/world6030088> (impact factor: 1.9)
- **Smith, M.**, Fiore, J., Lal, P. (2025) Forest landowners' perception of and participation in a woody biomass market. *Biomass and Bioenergy*, 202, 108144. <https://doi.org/10.1016/j.biombioe.2025.108144> (impact factor: 5.8)
- Tariq, Z., **Smith, M.**, Lal, P. (2025) Unlocking Value from Food Waste: A Cross-Regional Meta-Analysis of Economic Opportunities. *Bioresource Technology Reports*, 102087. <https://doi.org/10.1016/j.biteb.2025.102087> (CiteScore: 7.2)

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- Oluoch, S., Lal, P., Susaeta, A., **Smith, M.**, Wolde, B. (2024) Consumer preferences for wood-pellet based green energy programs in the Eastern United States. *Energies*, 17, 8, 1821. <https://doi.org/10.3390/en17081821> (impact factor: 3.0)
- **Smith, M.**, Lal, P., Vedwan, N. (2023) Motivations of Farmer's Management Decisions and Willingness to Adopt Sustainable Practices. *Journal of Rural Studies*. 103, 103138. <https://doi.org/10.1016/j.jrurstud.2023.103138> (impact factor: 5.1)
- **Smith, M.**, Lal, P. (2022) Environmental and economic assessment of hard apple cider using an integrated LCA-LCC approach. *Sustainable Production and Consumption*. <https://doi.org/10.1016/j.spc.2022.04.026> (impact factor: 10.9)
- **Smith, M.**, Bevacqua, A., Tembe, S., Lal, P. (2021) Life Cycle Analysis (LCA) of residential ground source heat pump systems: A comparative analysis of energy efficiency in New Jersey. *Sustainable Energy Technologies and Assessments*, 47, 101364. <https://doi.org/10.1016/j.seta.2021.101364> (impact factor: 7.1)
- Prasad, A., Lal, P., Wolde, B., **Smith, M.**, Zhu, M., Samanthula, B.K., Panorkou, N. (2021) Exploring the human-nature connection and the perceived risk of nature in children. *Applied Environmental Education & Communication*. <https://doi.org/10/1080/1533015X.2021.1991508> (CiteScore: 2.3)
- **Smith, M.**, Lal, P., Oluoch, S., Vedwan, N., Smith, A. (2021) Valuation of Sustainable Attributes of Hard Apple Cider: A Best-Worst Choice Approach. *Journal of Cleaner Production*, 318, 128478. <https://doi.org/10.1016/j.jclepro.2021.128478> (impact factor: 9.7)
- Oluoch, S., Lal, P., Wolde, B., Susaeta, A., Soto, J.R., **Smith, M.**, Adams, D.C. (2021) Public Preferences for Longleaf Pine Restoration Programs in the Southeastern United States. *Forest Science*, 67, 3, 265-274. <https://doi.org/10.1093/forsci/fxab008> (impact factor: 1.9)
- **Smith, M.**, Nguyen, G., Wiczerak, T., Wolde, B., Lal, P., Munsell, J. (2019) Stakeholders' Perceptions of Geographical Criteria for Loblolly Pine Management for Bioenergy Production in Virginia. *Forests*, 10, 9, 801, 1-17. <https://doi.org/10.3390/f10090801> (impact factor: 2.9)
- **Smith, M.**, Lal, P. (2017) Hard Apple Cider in the New York Hudson Valley Region: A Tourism Study. *Middle States Geographer*, 50: 28-38. **\*\*Best Paper Award\*\***

## TECHNICAL REPORTS

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- Lal, P., **Smith, M.**, Sarkar, A., Ranjan, A., Wolde, B., Nguyen, G. (2023) New Jersey Fuel Cell Task Force Report. Clean Energy and Sustainability Analytics Center. Prepared for the New Jersey Fuel Cell Task Force, United States Department of Energy. **Notable Document Award.**
- Lal, P., Birur, D., Wolde, B., Levin, Todd., Zhou, Z., Thimmapuram, P., Provost, N., Wiczerak, T., Lyttek, E., Prasad, A., **Smith M.** (2021) Economic Assessment of New Jersey Re-joining Regional Greenhouse Gas Initiative (RGGI). Clean Energy and Sustainability Analytics Center and Argonne National Laboratory. Prepared for New Jersey Board of Public Utilities.
- Lal, P., Masozera, M., Kaiytare, A., Banerjee, O., Cicoweiz, M., Wolde, B., Ranjan, A., Bagstad, K., Alavalapati, J., Lyttek, E., Nguyen, G., Birur, D., Wiczerak, T., **Smith, M.**, Luong, T., Oluoch, S. (2020) Achieving Green Growth Through Terrestrial Natural Capital Restoration in Rwanda. Clean Energy and Sustainability Analytics Center. Prepared for the Green Growth Knowledge Platform and GIZ's The Economics of Land Degradation Initiative.
- **Smith, M.**, Nguyen, G., Wiczerak, T., Wolde, B., Lal, P., Munsell, J. (2019) Bioenergy: Opportunities and Challenges. *Virginia Forests Fall 2019 issue*, 15-17.

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- Messina, F.J., Nadeau, S.C., Lal, P., Stern, E.A., Singh, J., **Smith, M.**, Wiczerak, T. (2018) Sustainability Regulatory Integration and Reform for Superfund Sediment Remediation Projects: A White Paper. Prepared for the Sediment Management Working Group.

## CONFERENCE PROCEEDINGS (Full paper)

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- **Smith, M.** (2020) Life Cycle Assessment (LCA) of Apple Orchard Management: an insight into sustainable agriculture and new opportunities. *International Conference for Sustainable Development*.
- **Smith, M.** (2019) Environmental Assessment of Hard Apple Cider. *Middle States Association of American Geographers annual meeting*.
- **Smith, M.**, Lal, P. (2019) Life Cycle Assessment (LCA) of the Hard Apple Cider Production System. *International Conference for Sustainable Development*.
- **Smith, M.** (2019) Environmental and Economic Assessment of Hard Apple Cider in the Northeastern U.S. *Association of American Geographers annual meeting*.
- **Smith, M.** (2018) Assessing the Characteristics of Tourists visiting Hard Apple Cideries in the Hudson Valley Region. *Middle States Association of American Geographers annual meeting*.
- **Smith, M.**, Lal, P. (2018) Exploring Consumer's Perceptions of Sustainably-Produced Wine and Beer: a systematic review. *Montclair State University Student Symposium*.
- **Smith, M.** (2018) Hard Apple Cider in the New York Hudson Valley Region: A Tourism Study. *Association of American Geographers annual meeting*.
- **Smith, M.** (2017) Assessment of Hard Apple Cider Tourism Potential in the Hudson Valley Region. *Middle States Association of American Geographers annual meeting*.

## TECHNICAL PRESENTATIONS (\*Advised student)

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### *Paper presentations:*

- **Smith, M.** From Carbon-Intensive to Material-Intensive Energy Generation: A Life Cycle Perspective on Offshore Wind Trade-offs. Engineering and Environmental Science Seminar Series. CUNY College of Staten Island, New York, April 23 2026. **Invited Speaker.**
- **Smith, M.** Measuring What Matters: a Transition to Sustainable Agriculture in a Climate-Stressed Food System. 7<sup>th</sup> Global Virtual Conference on Climate Change: Climate Conclave 2026. April 13-14, 2026. **Invited Speaker.**
- **Smith, M.**, Pineda, J.C.\* Life Cycle Insights into Sustainable Materials for Offshore Wind. Great Debate: Clean Energy and the Rise of the Circular Economy. American Geophysical Union annual meeting 2025, New Orleans, Louisiana, December 15-18 2025.
- Lal, P., Ranjan, A., **Smith M.**, Luong, T. Monitoring the Socioeconomic Impacts of New Jersey's Offshore Wind Development on Recreational Fisheries Economy, World Conference on Natural Resource Modeling 2025 in Kathmandu, Nepal., June 9–12, 2025.
- Shrestha, K., Lal, P., **Smith M.**, Luong, T. Rucker, C. Offshore Wind Farms in New Jersey: Stakeholder Concerns and Anticipated Impacts on Recreational Fishing, RMI Annual Meeting, Stockton University, Atlantic City, May 30, 2025.
- Lal, P., Randjan, A., **Smith, M.**, Luong, T., Shrestha, K. Monitoring the Socioeconomic Impacts of New Jersey's Offshore Wind Development on Recreational Fisheries Economy. Research and Monitoring Initiative Meeting 2025 Paper Presentation, Stockton University, Atlantic City, NJ, May 2025.
- Monesteri, F.\* , **Smith, M.** Evaluating Offshore Wind Potential in New Jersey Using SWOT-AHP Analysis. NAWEA/WindTech 2024 Paper Presentation, Rutgers University, New Brunswick, NJ, October 2024.

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- **Smith, M.** Life Cycle Assessment of New Jersey Offshore Wind. NAWEA/WindTech 2024 Paper Presentation, Rutgers University, New Brunswick, NJ, October 2024.
- Monesteri, F.\*, **Smith, M.** Evaluating Offshore Wind Potential in New Jersey Using SWOT-AHP Analysis. International Conference of Sustainable Development Paper Presentation, New York, NY, September 2024.
- Luong, T., **Smith, M.**, Lal, P., Dubey, R.S., Wang, Y., Nguyen, G. Assessing Willingness to Pay for Sustainable Tourism in Vietnam, A Best-Worst Choice Analysis of Phu Quoc Island, Nha Trang, and Da Nang Cities. International Conference on Advances in Tourism Economics Paper Presentation, Washington, DC, July 2024.
- Lal, P., **Smith, M.**, Ranjan, A. Monitoring the Socioeconomic Impacts of New Jersey's Offshore Wind Development on Recreational Fisheries Economy. New Jersey Offshore Wind Research and Monitoring Initiative Symposium Paper Presentation, Monmouth University, West Long Branch, NJ. May 2024.
- Monesteri, F.\*, **Smith, M.** Applying SWOT-AHP Analysis to New Jersey Offshore Wind. Wind Institute Research Symposium Paper Presentation, Kean University, Union, NJ, April 2024.
- Ranjan, A., Lal, P., **Smith M.** Socioeconomic Impacts of Offshore Wind Development on the Recreational Fisheries Economy, American Association of Geographers Annual Meeting, Honolulu, Hawaii, April 18, 2024.
- **Smith, M.** Life Cycle Assessment of Offshore Wind Projects in New Jersey – Estimating Scope 1, 2, and 3 Emissions. New Jersey Offshore Wind Technology Conference and Exhibition paper presentation, New Jersey Institute of Technology (NJIT). Newark, NJ, December 2023.
- **Smith, M.**, Lal, P., Oluoch, S., Vedwan, N., Smith, A. Hard Apple Cider Consumer Valuation of Sustainable Attributes: a case study of the US Mid-Atlantic States. Middle States Association of American Geographers annual meeting Paper Presentation, online, October 16-17, 2020.
- Shoaib, N., Lal, P., **Smith, M.** LCA of offshore floating turbines in New Jersey. Middle States Association of American Geographers annual meeting Paper Presentation, online, October 16-17, 2020.
- **Smith, M.** Life Cycle Assessment (LCA) of Apple Orchard Management: an insight into sustainable agriculture and new opportunities. International Conference for Sustainable Development Paper Presentation, Online, September 21-22, 2020.
- Nguyen, G., Lal, P., Lyttek, E., **Smith, M.**, Wiczerak, T. Assessing Bioenergy Potential Based on Loblolly Pine Residues Using GIS-based Models in Virginia. Society of American Foresters National Convention Paper Presentation, Louisville, KY, October 30, 2019.
- **Smith, M.** Environmental Assessment of Hard Apple Cider. Middle States Association of American Geographers annual meeting Paper Presentation, Kutztown, PA, October 18-19, 2019.
- **Smith, M.** Environmental and Economic Assessment of Hard Apple Cider in the Northeastern U.S. Association of American Geographers annual meeting Paper Presentation, Washington, D.C., April 3-7, 2019.
- **Smith, M.** Assessing the Characteristics of Tourists visiting Hard Apple Cideries in the Hudson Valley Region. Middle States Association of American Geographers annual meeting Paper Presentation, Montclair, NJ, October 26-27, 2018.
- **Smith, M.**, Lal, P. Exploring Consumer's Perceptions of Sustainably-Produced Wine and Beer: a systematic review. Montclair State University Student Symposium Paper Presentation, Montclair, NJ, April 27, 2018.
- **Smith, M.** Hard Apple Cider in the New York Hudson Valley Region: A Tourism Study. Association of American Geographers annual meeting Paper Presentation, New Orleans, LA April 9-14, 2018.

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- **Smith, M.** Assessment of Hard Apple Cider Tourism Potential in the Hudson Valley Region. Middle States Association of American Geographers annual meeting Paper Presentation, Geneseo, NY, October 20-21, 2017. **Best Paper Award.**

## *Panel speaker:*

- Panel Session: Round Table for a Climate-Friendly Future: Practical Approaches and Achievable Goals. Raritan Valley Community College Environmental Sustainability Committee, Invited Speaker, Branchburg, New Jersey, March 31 2026.
- Panel Session: Great Debate: Clean Energy and the Rise of the Circular Economy. American Geophysical Union annual meeting 2025, New Orleans, Louisiana, December 15-18 2025.
- Panel Session: Hydrogen Policy, Economy, and Deployment. Hydrogen Energy Workshop, Invited Speaker, Montclair, NJ, May 2024.
- Panel Session: Geothermal Energy Development and Deployment. 5<sup>th</sup> Annual Clean and Sustainable Energy Summit, Invited Speaker, Montclair, NJ, May 2024.
- Core Facility Partners. New Jersey Commission on Science, Innovation and Technology (NJCSIT) Research and Development Cores and Companies, Invited Speaker, Ewing, NJ, April 2024.
- Clean Energy and Sustainability Analytics Center. Collaborative Research & Technology Innovation Partnerships and Research Institutes, Centers and Laboratory Showcase, National Academy of Inventors (NAI) Chapter at New Jersey Institute of Technology (NJIT). Newark, NJ, March 2023.
- CESAC Research & Partnership with the New Jersey Fuel Cell Task Force. Panel Session: Hydrogen and Fuel Cell Technology Development: Pathway to meet Clean Energy Goals. 4<sup>th</sup> Annual Clean and Sustainable Energy Summit, Invited Speaker, Montclair, NJ, November 2022.

## *Poster presentations:*

- Borigi, S. \*, **Smith, M.** Optimizing Tomato Production in Controlled Environment Agriculture: Economic Feasibility and Sustainability Analysis in New York State. Student Research Symposium, Montclair State University, Montclair, NJ, April 24, 2026.
- Hammond, K. \*, **Smith, M.** A data mining approach to integrating institutional and sustainability indicators for performance benchmarking across higher education institutions in the US. Student Research Symposium, Montclair State University, Montclair, NJ, April 24, 2026.
- Bouthot, D. \*, Robles, E. \*, Zachwieja, C. \*, **Smith, M.** Unlocking Developer Adoption of Ground Source Heat Pumps in New Jersey Residential Construction. Student Research Symposium, Montclair State University, Montclair, NJ, April 24, 2026.
- Atolagbe, M. \*, **Smith, M.** An integration of geospatial analysis and life cycle assessment for ground source heat pump adoption potential across new residential building typologies in New Jersey. Student Research Symposium, Montclair State University, Montclair, NJ, April 24, 2026.
- Atolagbe, M. \*, **Smith, M.** Spatial Analysis of residential ground source heat pump adoption potential in New Jersey. STEM Summit, Montclair State University, Montclair, NJ, March 20, 2026.
- Robles, E. \*, Zachwieja, C. \*, **Smith, M.**, Behavioral Barriers to Residential GSHP Adoption: A COM-B Approach. Student Research Symposium, Montclair State University, Montclair, NJ, April 24, 2026.
- Robles, E. \*, Zachwieja, C. \*, **Smith, M.** NJ's Home Energy Transition Using GSHPs. CSAM Student Research Celebration, Montclair State University, Montclair, NJ, September 10, 2025.
- Zachwieja, C. \*, Robles, E. \*, **Smith, M.** Energy Efficiency Transition in New Jersey. CSAM Student Research Celebration, Montclair State University, Montclair, NJ, September 10, 2025.
- **Smith, M.**, Pineda, J.C.\* Winds of Change: Life Cycle Impacts of New Jersey's Offshore Wind Future. Climate Solutions Symposium, Penn State University, May 19-20, 2025.

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- Krish, E.\*, **Smith, M.** Social-Accounting-Matrix Modeling of Taxes and Subsidies to Curb the Export of E-Waste Resources From the US. Annual Clean and Sustainable Energy Summit, Montclair State University, Montclair, NJ, May 14, 2025.
- Pineda, J.C.\*, **Smith, M.** Reducing Emissions and Increasing Resource Efficiency in Offshore Wind Turbines: Insights from Life Cycle Analysis. Wind Institute Research Symposium, Montclair State University, Montclair, NJ, May 14, 2025.
- Sadikaj, D.\*, **Smith, M.** Life Cycle Assessment of Co-Located Floating Solar and Offshore Wind. Annual Clean and Sustainable Energy Summit, Montclair State University, Montclair, NJ, May 14, 2025.
- Fleishman, J.\*, **Smith, M.** Evaluating the economic efficiency of lithium-ion batteries and hydrogen fuel cells with a gate-to-gate technoeconomic assessment. Annual Clean and Sustainable Energy Summit, Montclair State University, Montclair, NJ, May 14, 2025.
- Pineda, J.C.\*, **Smith, M.** Evaluating Decarbonization Pathways and Resource Efficiency in Offshore Wind Turbine Components via Life Cycle Analysis. Montclair State University Student Research Symposium, April 25, 2025.
- Sadikaj, D.\*, **Smith, M.** Life Cycle Assessment Model of Co-Located Floating Solar and Offshore Wind. William Patterson University 18<sup>th</sup> Annual Undergraduate Research Symposium, April 2025.
- Sadikaj, D.\*, **Smith, M.** Co-Locating Floating Solar with Offshore Wind Platforms: An LCA Proposal. Women in STEM Summit, March 21, 2025.
- Fleishman, J.\*, **Smith, M.** Technoeconomic Assessment on Lithium-ion Battery and Hydrogen Fuel Cell Electric Vehicle Technologies. Terra North Jersey STEM Summit, March 2025. **\*\*Air Force Award – presented to research of greatest interest to the US Air Force.\*\***
- Pineda, J.C.\*, **Smith, M.** Assessing Options for Decarbonization and Metal Reduction in Offshore Wind Turbines Using Life Cycle Analysis. International Industrial Ecology Day 2024, November 2024.
- Daily-Sterling, A.\*, **Smith, M.** Life Cycle Evaluation of Prescription Medicine Dispersion in New Jersey. International Industrial Ecology Day 2024, November 2024.
- Pineda, J.C.\*, **Smith, M.** Decarbonizing the Steel Sector for Sustainable Offshore Wind. NAWEA/WindTech 2024 Graduate Student Symposium, Rutgers University, New Brunswick, NJ, October 2024.
- Luong, T., **Smith, M.**, Lal, P., Dubey, R.S., Wang, Y., Nguyen, G. Willingness to pay for more sustainable tourism destinations in Vietnam: The cases of Phu Quoc Island, Nha Trang, and Da Nang cities. 5<sup>th</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, May 2024.
- Bhushal, G., **Smith, M.**, Lal, P., Vedwan, N. Influence of Field Trips on Adolescent Environmental Stewardship: Examining the Role of the Dominant Social Paradigm, Montclair State University Research Symposium, Montclair, NJ, April 2024.
- Monesteri, F.\*, **Smith, M.** Applying SWOT-AHP Analysis to New Jersey Offshore Wind, a research proposal. New Jersey Offshore Wind Technology Conference and Exhibition, New Jersey Institute of Technology (NJIT). Newark, NJ, December 2023.
- Nguyen, H.T.G., Lal, P., **Smith, M.**, Sullivan, W., Tran, L.D. Ranjan, A. Farmers' Perceptions of Flooding Ecosystem Services in Vietnam's Mekong Delta. 4<sup>th</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, November 2022.
- Luong, T., **Smith, M.**, Lal, P. Willingness to pay for more sustainable tourism destinations in Vietnam: The cases of Phu Quoc island, Nha Trang, and Da Nang cities. 4<sup>th</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, November 2022.

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- **Smith, M.** Valuation of sustainable attributes of hard apple cider: A best-worst choice approach. 3<sup>rd</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, October 2021.
- **Smith, M.** Life cycle analysis (LCA) of ground source heat pumps: A comparative analysis of energy efficiency in New Jersey. 3<sup>rd</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, October 2021.
- **Smith, M.** Environmental and Economic Assessment of Hard Apple Cider: an integrated LCA-LCC approach. 3<sup>rd</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, October 2021.
- **Smith, M.** Stakeholders' Perception of Geographical Criteria for Loblolly Pine Management for Bioenergy in Virginia. 3<sup>rd</sup> Annual Clean and Sustainable Energy Summit Poster Presentation, Montclair, NJ, October 2021.
- Kenny, M., Nguyen, G., **Smith, M.** Realizing the Energy Master Plan Through Spatial Analysis. Middle States Association of American Geographers annual meeting Poster Presentation, online, October 16-17, 2020.
- **Smith, M.**, Nguyen, G., Wiczerak, T., Wolde, B., Lal, P., Munsell, J. Stakeholders' Perceptions of Geographical Criteria for Loblolly Pine Management in Virginia. American Geophysical Union annual meeting Poster Presentation, San Francisco, CA, December 9, 2019.
- Nguyen, G., Lal, P., Lyttek, E., **Smith, M.**, Wiczerak, T. GIS-based methodology of site selection for Loblolly pine cultivation in Virginia. International Conference for Sustainable Development Poster Presentation, New York, NY, September 24-25, 2019. **Best Poster Award.**
- Nguyen, G., Lal, P., Lyttek, E., **Smith, M.**, Wiczerak, T. Assessing Bioenergy Potential Based on Loblolly Pine Residues Using GIS-based Models in Virginia. Sigma Xi Student Research Symposium Poster Presentation, Montclair, NJ, April 27, 2019.
- Stern, E.A., Lal, P., **Smith, M.**, Singh, J. Sustainability Regulatory Integration and Reform for Superfund Sediment Remediation Projects. Battelle Sediments Conference Poster Presentation, New Orleans, LA, February 13, 2019.
- **Smith, M.**, Lal, P., Stern, E.A., Singh, J., Wiczerak, T. Sustainability Regulation Integration and Reform for Superfund Sediment Remediation Projects: an Eco-Industrial Approach. Middle States Association of American Geographers annual meeting Poster Presentation, Montclair, NJ, October 26-27 2018.
- Fowler, M., Burli, P., Lal, P., **Smith, M.** Life-Cycle Analysis of Switchgrass (*Panicum virgatum*) based Ethanol. Middle States Association of American Geographers annual meeting Poster Presentation, Geneseo, NY, October 20-21 2017.

## ADVISING

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### Graduate students:

- Klavdiya Hammond (PhD Environmental Science and Management; September 2025 – present): Integrating life cycle assessment, sustainable AI, and data governance to identify environmental and social hotspots, optimize campus sustainability, and position universities as scalable models for smart cities.
- Mercy Atolagbe (MS Sustainability Science; January 2026 – present): GIS-based suitability analysis towards wide-scale ground source heat pump adoption in New Jersey.
- Sumanth Borgi (MS Sustainability Science; January 2026 – present): Experimental Evaluation of Closed-Loop Irrigation and Nutrient Recycling for Climate-Resilient Controlled Environment Agriculture.

# Meghann Newell Smith

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## *Undergraduate students:*

- Marcus Sandy (BS Sustainability Science, research assistant; February 2026 – present): Understanding the environmental impacts of wide-scale ground source heat pump adoption in New Jersey
- David Bouthot (BS Environmental Science, research assistant; October 2025 - present): Assessing the barriers and opportunities for ground source heat pump installers/developers for wide-scale adoption in New Jersey
- Christopher Zachwieja (BS Sustainability, student researcher; May 2025 – present): Assessing the barriers and opportunities for ground source heat pump installers/developers for wide-scale adoption in New Jersey
- Edwin Robles (BS Sustainability, research assistant; November 2024 – present): Assessing the barriers and opportunities for New Jersey residential home owners and renters adopting ground source heat pump energy efficiency technology for space heating/cooling.

## *Former students:*

- Danela Sadikaj (BS Earth and Environmental Science, research assistant; January 2025 – present): Exploring the environmental impact of co-located offshore wind and floating solar farms using life cycle assessment. Graduated January 2026.
- Niki Bajracharya (MS Sustainability, independent study; August 2025 – present): Estimating the environmental trade-offs of co-located offshore floating solar and wind using life cycle assessment. Graduated January 2026.
- Annalise Jarski (MS Sustainability, capstone research; August 2025 – present): Exploring how invasive species and trail maintenance impact hikers' experience and evaluating their willingness to pay for improved trail quality. Graduated January 2026.
- Sara Ardila Hernandez (MS Sustainability, independent study; August 2025 – December 2025): Integrating life cycle assessment into environmental site assessments to enhance sustainability outcomes in urban infrastructure and public utility contexts. Graduated January 2026.
- Jean Claire Pineda (MS Sustainability Science, graduate New Jersey Wind Institute Fellow, 2024 cohort; September 2024 – present): Applying life cycle assessment to analyze the potential impact of a decarbonized steel sector on the developing offshore wind domestic supply chain. Graduated May 2025.
- Ellie Krish (MS Sustainability; January 2025 – May 2025): Explored the economy-wide impact of recycling electronic waste using computable general equilibrium modelling. Graduated May 2025.
- Faith Monesteri (BA/MA English, undergraduate New Jersey Wind Institute Fellow, 2023 cohort; September 2023 – May 2025): Interviewed and surveyed offshore wind stakeholders to explore and weight the SWOT of the New Jersey offshore wind industry through AHP analysis. Graduated BS program in May 2025.
- Jordan Fleishman (Livingston High School junior, research internship; June 2024 – June 2025): Modelling the environmental and economic impacts of battery disposal, recycling, and material recovery using life cycle assessment and technoeconomic assessment. Attending Michigan University class of 2029.
- Alyssa Dailey-Sterling (MS Earth and Environmental Science; September 2024 – December 2024): Applying life cycle assessment and life cycle costing to analyze the environmental and economic impact of prescription medicine packaging and dispersion. Graduated January 2025.

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## HONORS AND AWARDS

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- Gamma Theta Upsilon (GTU), Iota chapter of the International Geographical Honor Society, Faculty Nominee (2024)
- Notable Document Award (August 2024) In recognition for the publication “Hydrogen and Fuel Cell Technology Towards Clean Energy Goals from The National Conference of State Legislatures and the Legislative Research Librarians Staff Association.
- Montclair State University Doctoral Fellowship Award (Aug. 2017 – Jan. 2021) Annual stipend awarded to doctoral students for acting as either research associates or teaching assistants during the academic term.
- Alpha Epsilon Lambda Honor Society (Apr. 2018 – Jan. 2021) Honor awarded to those with academic achievement in the top 20th percentile of the college of degree program, completion of 18 graduate credits in program, and have demonstrated leadership through on and off-campus activities.
- College of Science and Mathematics Travel Award (2017, 2018, 2019) Annual grant of \$250 awarded for academic travel for attending and presenting at national conferences and meetings.
- Department of Environmental Studies Dean’s Travel Award (2017, 2018, 2019) Annual grant of \$250 awarded for academic travel for attending and presenting at national conferences and meetings.
- PSEG Institute for Sustainable Studies, Innovations in Food Sustainability Competition Award (Apr. 2018) Demonstrated a vision of incorporating food security on campus in a sustainable way through a low-waste, low-cost, high-access program.
- Middle States Division, American Association of Geographers Best Graduate Student Paper Award (Oct. 2017) Award granted based on submission, and subsequent publication in Middle States Geographer, of “Assessment of Hard Apple Cider Tourism Potential in the Hudson Valley Region”.

## COURSES

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### *Recently taught:*

- EAES-499/599 Life Cycle Assessment, MSU (Spring 2026)
- EAES-201 Understanding Weather and Climate, MSU (Fall 2025)
- EAES-107 Earth and the Environment, MSU (Spring 2025)
- EAES-202 Introduction to Sustainability Science, MSU (Spring 2025, 2026)
- EAES-575 Environmental Economics, MSU (Fall 2022, 2023, 2024)
- EAES-101 Planet Earth, MSU (Spring 2023, 2024, 2025; Fall 2024, 2025)
- STAT-103 The Development of Statistics, MSU (Spring 2023)

### *Previously taught:*

- NUFD-350 Quantity Food Applications, MSU
- HOS-105 Food Science & Nutrition, CCM
- HOS-103 Food Production, CCM
- HOS-101 Introduction to Food, CCM
- HOS-100 Food Safety, CCM
- Cooking for Kids I (Ages 4-8) and II (Ages 8-13), CCM
- Baking for Kids I (Ages 4-8) and II (Ages 8-13), CCM
- Introduction to Cooking (Ages 14-18), CCM
- Advanced Cooking (Ages 14-18), CCM
- Introduction to Baking (Ages 14-18), CCM

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- Advanced Baking (Ages 14-18), CCM
- EAES-584 (TA) Urban Studies and Policy Analysis, MSU
- EAES-575 (TA) Environmental Economics, MSU
- EAES-160 (TA) The Human Environment, MSU
- EAES-101 (TA) Planet Earth Laboratory, MSU

## ACADEMIC AND PROFESSIONAL SERVICE/ACTIVITIES

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### *Service:*

Academic Assessment Committee, EAES Department Representative, October 2025 - present

Curriculum Committee, EAES Department, September 2025 - present

Sustainability Science undergraduate major and minor academic advisor, EAES Department September 2025 – present

Student Affairs Council, University Senate, September 2025 - present

CSAM Faculty Senator, University Senate, April 2025 - present

Invited speaker, Paterson STEAM High School's STEAM Day 2024 event, representing Montclair's Department of Earth and Environmental Studies.

Poster Contest Judge, Industrial Ecology Day 2024, evaluated the posters and presentations for the undergraduate and graduate research presentation session.

Consultant, providing guidance on Introduction to Sustainability course revision for Passaic County Community College, including class content, structure, and supplementary materials. NASA-funded project "PCCC Urban Climate Change Initiative – Year 1."

Advisory Board, providing guidance and technical support for STEAM High School's sustainability program and Perkins Funding application, Paterson School District, Paterson, New Jersey.

Advisory Board, providing guidance and technical support for International High School's engineering program and Perkins Funding application, Paterson School District, Paterson, New Jersey.

### *Professional development:*

Center for Global Trade Analysis GTAP 101 Course, offered by Purdue University. 6-week intensive online learning for introductory concepts on theoretical and applied micro/macroeconomics and computable general equilibrium (CGE) modeling for economy-wide trade and impact analysis. (September – October 2025)

Workshop for Early Career Geoscience Faculty, sponsored by NSF and NAGT and hosted at Macalester College in St Paul, MN. 5-day intensive in-person workshop to support and improve teaching and research practices for early career geoscience faculty members across the nation. (June 22-26 2025)

### *Professional affiliations:*

- National Association of Geoscience Teachers (NAGT)
- Gamma Theta Upsilon (GTU)
- Research on International Global Studies (RIGS)
- International Society for Industrial Ecology (ISIE)

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- American Association for the Advancement of Science (AAAS)
- American Geophysical Union (AGU)
- American Association of Geographers (AAG)