Omar I. Asensio

Associate Professor and Director of the Data Science & Policy Lab

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RESEARCH INTERESTS:

Professor Asensio's research focuses on climate and electrification strategies at the intersection of technology, AI, and sustainability. His research employs large-scale data, field experiments, and human-in-the-loop AI systems to address pressing innovation challenges in energy systems, transportation, and human mobility. Professor Asensio's research in resource conservation and electric vehicles has been cited in policy advisory communications by the National Academy of Sciences, the UK government, the United Nations Economic Commission for Latin America and the Caribbean, and the IndiaAI initiative. Recent topics include agentic AI systems for policy analysis, dynamic pricing and urban sustainability, and the operational reliability of energy infrastructure and its co-benefits for urban and rural communities.

TEACHING INTERESTS:

Professor Asensio's teaching focuses on quantitative methods classes at the undergraduate and graduate levels, including research design, causal inference and prediction, data science and machine learning for public policy and economics applications, event studies, primary and

secondary data collection, randomized controlled trials, and quasi-experimental methods for impact evaluation. Professor Asensio's teaching interests include data science education for professionals and managers, including experiential learning through classroom partnerships with the U.S. Department of Energy, the U.S. State Department Diplomacy Lab, and the World Bank. He currently serves as the faculty director for the Institute minor in Applications of Artificial Intelligence and Machine Learning representing the Ivan Allen College.

EDUCATION:

UCLA, Postdoc, Anderson School of Management Ziman Center Institute of the Environment and Sustainability	2017
UCLA, Doctorate in Environmental Science & Engineering with specialties in Economics	2015
University of Southern California, M.S. Materials Engineering	2005
University of Southern California, B.S. Chemistry (minor in Philosophy)	2002

DISTINCTIONS AND AWARDS:

- Member, National Academies of Sciences, Engineering, and Medicine (NASEM), New Voices 2021 cohort
- Two-time Chair, Association for Public Policy Analysis and Management (APPAM) Natural Resources, Energy and Environmental Policy Section, 2022, 2021
- U.S. Department of Energy, Jump into STEM Team Advisor Award, 2023-2020
- Faculty Excellence in Research Award, Ivan Allen College, 2023
- Alliance for Research on Corporate Sustainability (ARCS) Emerging Sustainability Scholar Award, 2022
- National Science Foundation CAREER Award, 2020
- Class of 1969 Teaching Fellows, Georgia Tech, 2018-2019
- APPAM 40-for-40 Fellowship for Early Career Contributions to Public Policy, 2018
- Research Impact on Practice Award, Academy of Management Organizations and the Natural Environment Division, 2015
- Best Paper People's Choice Award, ARCS 2015

SELECTED PUBLICATIONS:

1. **Asensio, O. I.,** Buckberg, E., Cole, C., Heeney, L., Knittel, C., Stock, J. H. (2025) Charging Uncertainty: real time charging data on electric vehicle adoption. National Bureau of Economic Research (NBER) Working Paper 33342, January 2025.

2. **Asensio, O. I.,** Churkina, O., Rafter, B. E., O'Hare K. E. (2024) "Housing policies and energy efficiency spillovers in low and moderate income communities." *Nature Sustainability*, 7(5), 590-601.
3. **Asensio, O. I.**, Apablaza, C. Z., Lawson, M. C., Chen, E. W., and Horner, S. J. (2022) "Impacts of micromobility on car displacement with causal evidence from a natural experiment and geofencing policy." *Nature Energy*, 7, 1100-1108.
4. Hicks, D., Zullo, M., Doshi, A., and **Asensio, O. I.** (2022) "Widespread use of National Academies consensus reports by the American public." *Proceedings of the National Academies of Sciences*, 119(9), e2107760119.
5. **Asensio, O. I.** (2022) "Shared electric scooters and electric bikes can reduce traffic in urban centers" *Nature Energy,* 7, 1013-1014.
6. **Asensio, O. I.**, Apablaza, C. Z., Lawson, M. C. and Walsh, S. E. (2021) "A field experiment on workplace norms and electric vehicle charging etiquette." *Journal of Industrial Ecology*, 26, 183-196.
7. **Asensio, O. I.**, Alvarez, K., Dror, A., Wenzel, E., Hollauer, C., and Ha. S. (2020) "Real-time data from mobile platforms to evaluate sustainable transportation infrastructure." *Nature Sustainability*, 3, 463-471.
8. **Asensio, O. I.** and Delmas, M. A. (2017) "The effectiveness of U.S. energy efficiency building labels." *Nature Energy*, 2, 17033.
9. **Asensio, O. I.** and Delmas, M. A. (2015) "Nonprice incentives and energy conservation." *Proceedings of the National Academy of Sciences*, 112(6), E510-E515.

Peer-reviewed Conference Papers with Proceedings

10. **Liu, Y.**, Asensio, O. I. (2025). Machine learning discovery of regional and social disparities in electric vehicle charging reliability with GPT-5. Climate Change AI Workshop, 39th Annual Conference on Neural Information Processing Systems (NeurIPS 2025), December 2025, San Diego, CA, Paper #82
11. Viswa Sri, R. A., Md Gulam, K., Liu, Y., **Asensio, O. I.**, Peeta, S. (2025). Effectiveness of Health and Environmental Information Provision in Promoting Sustainable Travel Modes. In *Proceedings of the Transportation Research Board 104th Annual Meeting. TRB 2025. TRBAM-25-02656* (Best Paper Award 2025, AEP35 Standing Committee lectern session)
12. Hollauer, C., Garcelan, J., Ragam, N., Vaish, T., **Asensio, O. I.** (2024). Generative AI and discovery of preferences for single-use plastics regulations. In *Proceedings of the 2023 AAAI Symposium Series on Artificial Intelligence and Climate, AAAI.* 2(1): 68-77.
13. Chaturvedi, S., Chen, E. W., Sharma, I. P., **Asensio, O. I.** (2024) A generative AI approach to pricing mechanisms and consumer behavior in the electric vehicle charging market. In *Proceedings of the 2023 AAAI Symposium Series on Artificial Intelligence and Climate, AAAI.* 2(1): 54-61