

# Nikolaos (Nikos) Ziropiannis

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-Updated November 2023-

## Professional Appointments

**Assistant Professor**, Paul O'Neill School of Public and Environmental Affairs, Indiana University Bloomington, 2020 to present

**Affiliated Faculty**, Environmental Resilience Institute, Indiana University Bloomington, 2019 to present

**Affiliated Faculty**, Integrated Program in the Environment, Indiana University Bloomington, 2015 to present

**Assistant Scientist**, Paul O'Neill School of Public and Environmental Affairs, Indiana University Bloomington, 2015 to 2020

**Visiting Assistant Professor**, School of Public and Environmental Affairs, Indiana University Bloomington, 2013 to 2015

## Education

**Ph.D. Resource Economics**, University of Massachusetts Amherst, 2013

**M.S. Resource Economics**, University of Massachusetts Amherst, 2008

**M.Sc. Environmental Sustainability**, University of Edinburgh, U.K., 2006

**B.A. Business Administration**, Athens University of Economics and Business, Greece, 2003

## Fields of interest

Applied Econometrics, Environmental and Natural Resource Economics, Environmental Policy, Energy Policy, Water Policy.

## Research

### Peer Reviewed Papers

(Asterisks indicate graduate student co-authors)

21. **Ziropiannis, N.**, \*Byrne, A., Hollingsworth, A.J., and, Konisky, D.M (2023) Polluting under the radar: Emissions, inequality and Concrete Batch Plants in Houston. *Environmental Science and Technology* 57, 11410-11419 <https://doi.org/10.1021/acs.est.3c04412>
20. Hollingsworth, A.J., Konisky, D.M., and **Ziropiannis, N.** (2023). Excess emissions: Environmental impacts, health effects, and policy debate. *Review of Environmental Economics and Policy* 17(1) <https://doi.org/10.1086/723885>
19. Hollingsworth, A.J., Konisky, D., and **Ziropiannis, N.** (2021). The Health Consequences of excess emissions: Evidence from Texas. *Journal of Environmental Economics and Management* 108 <https://doi.org/10.1016/j.jeem.2021.102449> .
18. **Ziropiannis, N.**, Simon, D., and Hollingsworth, A. (2020). Estimating Co-Pollutant Benefits from Climate Change Policies in the Electricity Sector: An Empirical Approach. *Energy Economics* 90 <https://doi.org/10.1016/j.eneco.2020.104863> .
17. Stranlund, J.K., Murphy, J.J., Spraggon, J.M., and **Ziropiannis, N.** (2019) Tying enforcement to prices in emissions markets: An experimental evaluation. *Journal of*

16. \*Li, Z., Konisky, D., and **Zirotgiannis, N.** (2019). Racial, Ethnic and Income Disparities in Air Pollution: A Study of Excess Emissions in Texas. *PLOS ONE*  
<https://doi.org/10.1371/journal.pone.0220696>
15. Carley, S., **Zirotgiannis, N.**, Siddiki, S., Duncan, D., and Graham, J.D. (2019) Overcoming the Shortcomings of Plug-In Electric Vehicle Policies. *Renewable and Sustainable Energy Reviews* 113: 109291 <https://doi.org/10.1016/j.rser.2019.109291>
14. Carley, S., **Zirotgiannis, N.**, Duncan, Siddiki, S., and Graham, J. D. (2019) The Macroeconomic Effects of the 2017-2025 Federal Fuel Economy and Greenhouse Gas Emissions Standards. *Journal of Policy Analysis and Management*, 38(3): 732-763  
<https://doi.org/10.1002/pam.22132>
13. **Zirotgiannis, N.**, Duncan, D., Carley, S., Siddiki, S., and Graham, J. D. (2019). The Effect of Corporate Average Fuel Economy Standards on Vehicle Sales Projections: A Total Cost of Ownership Approach. *Transport Policy*, 75: 70-87  
<https://doi.org/10.1016/j.tranpol.2019.01.006>
12. **Zirotgiannis, N.**, Krutilla, K., Tripodis, Y., and \*Fledderman, K. (2019). Human Development Over Time: An Empirical Comparison of a Dynamic Index and the Standard HDI. *Social Indicators Research*, 142(2): 773-798  
<https://doi.org/10.1007/s11205-018-1926-z>
11. Duncan, D., \*Ku, A., \*Julian, A., Carley, S., Siddiki, S., **Zirotgiannis, N.**, and Graham, J.D. (2019). Most Consumers Don't Buy Hybrids: Is Rational Choice a Sufficient Explanation? *Journal of Benefit-Cost Analysis*, 10(1): 1-38  
<https://doi.org/10.1017/bca.2018.24>
10. Jenn, A., Hardman, S., Carley, S., **Zirotgiannis, N.**, Duncan, D., and Graham, J.D. (2019). Cost Implications for Automaker Compliance with Zero Emissions Vehicle Requirements. *Environmental Science and Technology*, 53(2): 564-574  
<https://doi.org/10.1021/acs.est.8b03635>
9. Carley, S. Davies, L., Spence, D., and **Zirotgiannis, N.** (2018). Empirical Evaluation of the Stringency and Design of Renewable Portfolio Standards. *Nature Energy* 3: 754-763  
<https://doi.org/10.1038/s41560-018-0202-4>
8. Siddiki, S., Carley, S., **Zirotgiannis, N.**, Duncan, and Graham, J. D. (2018). Does Dynamic Federalism Yield Compatible Policies? A Study of the Designs of Federal and State Vehicle Policies. *Policy Design and Practice* 1(3): 215-232  
<https://doi.org/10.1080/25741292.2018.1505186>
7. **Zirotgiannis, N.**, Hollingsworth, A., and Konisky, D. (2018). Understanding Excess Emissions from Industrial Facilities: Evidence from Texas. *Environmental Science and Technology* 52(5): 2482-2490 <https://doi.org/10.1021/acs.est.7b04887>
6. **Zirotgiannis, N.**, and Tripodis, Y. (2018). Dynamic Factor Analysis for Short Panels: Estimating Performance Trajectories for Water Utilities. *Statistical Methods and Applications* 27(1): 131-150 <https://doi.org/10.1007/s10260-017-0394-y>
5. Tripodis, Y., Alosco, M.L., **Zirotgiannis, N.**, Gavett, B.E., Chaisson, C., Martin, B., McClean, M.D., Mez, J., Kowall, N., and Stern, R.A. (2017). The effect of traumatic brain injury history with loss of consciousness on rate of cognitive decline among older adults with normal cognition and Alzheimer's disease dementia. *Journal of Alzheimer's Disease* 59 (1): 251-263 <https://doi.org/10.3233/2FJAD-160585>

4. Timmons, D., **Zirotgiannis, N.** and \*Lutz, M. (2016). Location matters: Population density and Carbon Emissions from U.S. Residential Building Energy Use, *Energy Research and Social Science* 22: 137-146 <https://doi.org/10.1016/j.erss.2016.08.011>
3. **Zirotgiannis, N.**, \*Alcorn, J., Rupp, J., Carley, S., and Graham, J.D. (2016) State regulations of unconventional gas development in the U.S.: An empirical evaluation. *Energy Research and Social Science* 11: 142-154 <https://doi.org/10.1016/j.erss.2015.09.009>
2. **Zirotgiannis, N.**, \*Alcorn, J., \*Piepenburg, J. and Rupp, J. (2015) I want in on that: Community-level Policies for Unconventional Gas Development in New York. *Agricultural and Resource Economics Review* 44 (2): 164-194 <https://doi.org/10.1017/S1068280500010273>
1. Tripodis, Y. and **Zirotgiannis, N.** (2015) Dynamic Factor Analysis for Multivariate Time Series: An Application to Cognitive Trajectories. *International Journal of Clinical Biostatistics and Biometrics* 1 (1): 1-8 <https://doi.org/10.23937%2F2469-5831%2F1510001>

## Book Chapters

Konisky, D.M., **Zirotgiannis, N.**, and Carley, S. (2022). Building Resilience to the Energy Transition in Indiana, in *Climate Change and Resilience: Lessons for Hoosiers and Beyond*, McCabe, J.G., Filippelli, G.M., Novick, K.A., and Shanahan, J., eds. Indiana University Press.

## Work in progress

**Zirotgiannis, N.**, and Hollingsworth, A.J. (2022). Housing market impacts of proximity to small industrial polluters: Evidence from Concrete Batch Plants.

Ortega, A. and **Zirotgiannis, N.** (2022). The short-term and long-term impacts of air pollution on educational attainment.

## Peer Reviewed Policy Reports

Carley, S., Duncan, D., Graham, J. D., Siddiki, S., and **Zirotgiannis, N.**, 2017. “A Macroeconomic Study of Federal and State Automotive Regulations: With Recommendations for Analysts, Regulators, and Legislators.” [Peer-reviewed document]. Published by SPEA.

Carley, S., Duncan, D., Esposito, D., Graham, J. D., Siddiki, S., and **Zirotgiannis, N.**, 2016. “Rethinking Auto Fuel Economy: Technical and Policy Suggestions for the 2016-17 Midterm Reviews.” [Peer-reviewed document]. Published by SPEA.

## Op-Eds, Public Comments

Hollingsworth, A.J., Konisky, D., and **Zirotgiannis, N.** (2023). Public comments to the US Environmental Protection Agency on the Revisions to the Air Emissions Reporting Requirements (Docket ID No EPA–HQ–OAR–2004–0489) [link](#)

**Zirotgiannis, N.**, Hollingsworth, A., and Konisky, D. (2023). Comments to the Texas Commission on Environmental Quality on the 2023 Amendment to the Concrete Batch Plant Standard Permit (Non-Rule Project No. 2022-033-OTH-NR)

**Zirotgiannis, N.** (2022). “Regulatory Agencies can Improve Excess Emissions Tracking to Protect Health” Key Findings Brief, Scholars Strategy Network [link](#)

Hollingsworth, A.J., Konisky, D., and **Zirotgiannis, N.** (2019). Public comments submitted to the US Environmental Protection Agency on the Withdrawal of Finding of Substantial

- Inadequacy of Implementation Plan and of Call for Texas State Implementation Plan Revision-Affirmative Defense Provisions (Docket ID No EPA–R06–OAR–2018–0770).
- Zirotgiannis, N.**, Hollingsworth, A.J., and Wing, C. (2018) “Where did all the health benefits go? Evaluating EPA’s repeal of the Clean Power Plan”, SPEA Advance.
- Zirotgiannis, N.**, Hollingsworth, A.J., and Konisky, D.M. (2018). “Air pollution from industrial shutdowns and startups worse than thought”, The Conversation [link](#)  
Reprinted in the Chicago Tribune (2/14/18), and the Houston Chronicle (2/14/18)

## Grants

- “The Educational Consequences of Excess Emissions” Co-PI with Alberto Ortega. Spencer Foundation Small Grants Program. \$49,500. 2023-2028
- “Community Air Quality Networks and Health Outcomes: A comparison of two study sites” PI with Co-PIs Alex Hollingsworth, David Konisky and Gabriel Filippelli. Indiana University Faculty Research Support Program-Seed Funding. \$26,670. 2021-2022
- “Study of the macro-economic impact of the light-duty vehicle corporate average fuel economy, greenhouse gas and zero-emission vehicle standards: Phases II and III” Co-PI with John Graham (PI), Sanya Carley, Denvil Duncan and Saba Siddiki. Alliance for Automobile Manufacturers. \$590,000. 2016-2017

## Invited Talks, Webinars, Panel Presentations

- Excess emissions: Environmental impacts, health effects, and policy debate.  
Webinar presentation at the Environmental Protection Agency, National Center for Environmental Economics, November 2<sup>nd</sup> 2023.  
Department of Resource Economics, University of Massachusetts, Amherst, September 29<sup>th</sup> 2023.
- The environmental and health impacts of excess emissions: Evidence from Texas. Webinar presentation at the Environmental Protection Agency, Office of Air and Radiation, Aug. 19<sup>th</sup> 2021
- State regulations of unconventional gas development in the U.S.: An empirical evaluation.  
Invited talk at the IU Geography Department, December 4<sup>th</sup> 2015.

## Selected Conference Presentations

- Zirotgiannis, N.**, \*Byrne, A., Hollingsworth, A.J., and, Konisky, D. Emitting under the radar: The Environmental Justice implications of Concrete Batch Plants in Houston,  
2023: Northeast Agricultural and Resource Economics Association Conference, June 11-13, Annapolis, Maryland  
2022: Association for Public Policy Analysis and Management Fall Conference, November 17-19, Washington D.C.  
2022: Association of Environmental and Resource Economists Annual Summer conference, June 1-3, Miami, Florida
- Hollingsworth, A.J., Konisky, D., and **Zirotgiannis, N.** The Health Consequences of excess emissions: Evidence from Texas,  
2021: 85<sup>th</sup> Annual Midwest Economics Association Conference (Virtual), March 24<sup>th</sup>;  
AAEA & WAEA Joint Annual Meeting (Hybrid) August 1-3 Austin, Texas  
2020: Mid-West Applied Microeconomics Workshop, Purdue University, February 28, Lafayette IN

- 2019 (poster): Association of Environmental and Resource Economists Annual Summer conference, May 30-31, Incline Village, NV
- Zirotiannis, N., Duncan, D., Carley, S., Siddiki, S., and D., Graham, J. D. (2017).** The Effect of Corporate Average Fuel Economy Standards on Vehicle Sales Projections: A Total Cost of Ownership Approach. Association of Environmental and Resource Economists Annual Meeting May31-June 2, Pittsburgh, PA
- Zirotiannis, N., Hollingsworth, A., and Konisky, D. (2017).** An Empirical Analysis of Excess Emissions from Industrial Facilities, Northeastern Agricultural and Resource Economics Association meeting June 11-13 2017, Washington, DC
- Simon, D. and **Zirotiannis, N. (2015).** Greenhouse gas emissions and criteria air co-pollutants: Evidence from US Power Plants. Northeastern Agricultural and Resource Economics Association meeting June 28-30 2015, Newport, RI

## Publicity and Media Mentions

- Strott, S. (2023) Fine Particulates Kill Thousands of Texans a Year. It's Likely to Get Worse, Public Health Watch ([link](#))
- Resources Radio (2023). "Consequences of Unplanned and Under-Measured Air Pollution, with Nikos Zirotiannis", Podcast Interview ([link](#))
- Martinez, A. (2023). "Senator's Bill Would Fine Texans for Multiple Environmental Complaints that don't lead to enforcement", The Texas Tribune ([link](#))
- Bikoff, K. (2023). "O'Neill Researchers Urge EPA to Review Regulations Surrounding Excess Emissions", O'Neill School blog ([link](#))
- Strott, S. (2022). "There are 'No Real Consequences' for Toxic Emissions Events" Texas Observer ([link](#))
- Levy, M. G. (2021). "How Many People Die When Polluters Exceed their Limits?" WIRED ([link](#))
- IU Newsroom (2018). "States Boost Renewable Energy and Economic Development When Utilities Adopt Renewable Standards", July 23<sup>rd</sup> ([link](#))
- Fogel, B. (2018), "News Roundup: Researchers Estimate Impact of Excess emissions on Texans' Health", Texas Standard, Feb. 16<sup>th</sup> ([link](#))
- IU Newsroom (2018). "Excess emissions make significant contribution to air pollution, study finds", Feb. 14<sup>th</sup> ([link](#))
- Reilly, S. (2018). All states must track "excess emissions" – study, E&E News, Feb. 15<sup>th</sup> ([link](#))

## Teaching

- P710 (co-taught): **PhD Seminar in Environmental Policy**, Spring 2023
- R674: **Energy Economics and Policy**, Spring 2021-2023
- R532: **Water Policy and Economics**, Fall 2014, Spring 2016, Fall 2018-2023
- E400/R535: **International Environmental Policy**, Spring 2014-2015, Fall 2020-2023
- E183: **Environment and People**, Spring 2014, Fall 2014, Spring 2019-2023
- INTL-I 300 (Honors): **International Energy Markets: Environmental, Economic and Health Aspects**, Fall 2018-2019
- INTL-I 300 (Honors): **Global Environmental Institutions and Development**, Fall 2016-2017

## **Professional Service**

### **Referee and Reviewer Service**

Ecological Economics, Economic Inquiry, Energy Economics, Energy Journal, Energy Research and Social Science, Environmental Pollution, Environmental and Resource Economics, Journal of the Association of Environmental and Resource Economists, Journal of Environmental Economics and Management, Journal of Policy Analysis and Management, USDA Agriculture and Food Research Initiative Grant Review Panel Member

### **School and University Service**

Member, Executive Committee of the Integrated Program for the Environment, IU Bloomington, 2021-present

Coordinator of O'Neill School Environmental Policy Seminar Series, 2020-present

SPEA 183 Environment and People lead instructor, O'Neill SPEA, 2020-present

Advisory Board Member, Campus Writing Program, IU Bloomington, 2016-2020

Member, Dual Degree Curriculum Committee, SPEA IU Bloomington, 2016-present

Member, PhD qualifying exam committee in Environmental Policy, SPEA, IU Bloomington, 2013-2015, 2020-present

Member, Master's in Public Affairs Admissions Committee, SPEA IU Bloomington, 2019

### **Professional Development**

Northeastern Agricultural and Resource Economics Association Career Mentoring Program, 2023-2025 cohort (mentor)

Social Science Network & Robert Wood Johnson Foundation Health Equity Scholars Program 2021-2022 cohort (mentee)

Northeastern Agricultural and Resource Economics Association Career Mentoring Program, 2015-2017 cohort (mentee)

Course Development Institute, Center for Innovative Teaching and Learning, Indiana University Bloomington, June 2014

### **Honors and Awards**

Trustees Teaching Award, O'Neill SPEA, IU Bloomington, 2022

Graduate Teaching Award, O'Neill SPEA, IU Bloomington, 2021

### **Consulting**

Short-term consultant for the World Bank, Washington, DC, August 2010-March 2011

### **Professional Society Memberships and Affiliations**

Association for Public Policy Analysis and Management

Association of Environmental and Resource Economists

Northeastern Agricultural and Resource Economics Association