

Philip J. Barnes, Ph.D.

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EDUCATION

Doctor of Philosophy, Urban Affairs and Public Policy University of Delaware, <i>Newark, Delaware</i>	2015
Master of Science in Engineering, Civil Engineering University of Michigan, <i>Ann Arbor, Michigan</i>	2003
Bachelor of Science in Engineering, Civil and Environmental Engineering University of Michigan, <i>Ann Arbor, Michigan</i>	2002

ACADEMIC AND PROFESSIONAL EXPERIENCE

Assistant Professor The Biden School, University of Delaware	2016 - present
Lead Policy Scientist Institute for Public Administration, University of Delaware	2025 - present
Faculty Director University of Delaware Semester in D.C. Program	2021 - present
Affiliated Faculty Stavros Niarchos Foundation Ithaca Initiative, The Biden School	2023 - present
Policy Scientist Institute for Public Administration, University of Delaware	2019 - 2025
Faculty Director Stavros Niarchos Foundation Ithaca Initiative, The Biden School	2021 - 2022
Associate Policy Scientist Institute for Public Administration, University of Delaware	2016 - 2019
Post-Doctoral Researcher Institute for Public Administration, University of Delaware	2015 - 2016
Research Associate Center for Energy and Environmental Policy, University of Delaware	2011 - 2012
Research Assistant Kumasi Institute of Technology and Environment	2010

PEER-REVIEWED PUBLICATIONS

- Barnes, P.**, Pierce, A.L., & Jackson, C.S. (2025). How practitioners conceptualize and operationalize transportation equity in Delaware's capital expenditure process. *Transportation Research Interdisciplinary Perspectives*, 32, 101528.
- Barnes, P.**, Morris, M.P., Pierce, A.L., & Shaffer, T.J. (2023). Answering the call: Offering and analyzing civil discourse opportunities in undergraduate public affairs education. *Journal of Public Affairs Education*, 29(2), 213-231.
- Grasso, S., **Barnes, P.**, & Chavis, C. (2020). Bikeshare equity for underrepresented groups: Analyzing barriers to system usage in Baltimore, MD. *Sustainability*, 12(8), 7600.
- Nickkar, A., Banerjee, S., Chavis, C., Bhuyan, I.A., & **Barnes, P.** (2019). A spatial-temporal gender and land use analysis of bikeshare ridership: The case study of Baltimore City. *City, Culture and Society*, 18, 100291.
- Bhuyan, I.A., Chavis, C., Nickkar, A., & **Barnes, P.** (2019). GIS-based equity gap analysis: Case study of Baltimore bike share program. *Urban Science*, 3(2), 42.
- Barnes, P.**, & Sarzynski, A. (2019). Mobilizing communities to confront global challenges: A phronetic inquiry. In J. Kendra, S. G. Knowles, & T. Wachtendorf (Eds.), *Disaster research and the second environmental crisis* (pp. 117-135). New York, NY: Springer.
- Barnes, P.** (2015). The political economy of localization in the transition movement. *Community Development Journal*, 50(2), 312-326.

RESEARCH REPORTS AND BRIEFS

- Barnes, P.** (2025). Identifying Senate Bill 237 implementation challenges and providing program options to Energize Delaware. Newark, DE: Institute for Public Administration.
- Barnes, P.**, Pierce, A.L., Jackson, C.S. (2024). How agency practitioners understand and implement transportation equity in Delaware's capital expenditure process. Baltimore, MD: Sustainable Mobility and Accessibility Regional Transportation Equity Research Center.
- Barnes, P.** (2024). The financial and policy impact of electric vehicles and improved fuel economy on Delaware's motor vehicle fuel tax revenue. Newark, DE: Institute for Public Administration.
- Barnes, P.**, & Reitz, J. (2022). Lewes executive committee on resiliency: A resilient community partnership. Newark, DE: Institute for Public Administration.
- Barnes, P.**, Hernandez-Limon, H., & Sikora, V. (2021). Electric vehicle policy brief series: Why communities should support electric vehicles; Technology primer; Hosting charging stations; Local policy options; Financial, technical, and informational support. Newark, DE: Institute for Public Administration.

Barnes, P. (2021). Climate mitigation planning, stakeholders, and research in Delaware. Newark, DE: Institute for Public Administration.

Barnes, P., O'Hanlon, J., & Matera, M. (2021). Green > grey: Challenges, opportunities, and policy implications of green infrastructure for Delaware green infrastructure landscape. Newark, DE: Institute for Public Administration.

Barnes, P., & Akiba, K. (2020). Delaware's climate change programming: Evaluating its effectiveness and impact on local resiliency. Newark, DE: Institute for Public Administration.

Barnes, P., Duran, K., & Akiba, K. (2019). A gap analysis of Delaware's federal consistency policies. Newark, DE: Institute for Public Administration.

Barnes, P., Swan, B., & Kelly, C. (2018). Connected and automated vehicles policy brief series: Technology primer; Economic and employment impacts; Privacy challenges; Fiscal impacts; Enhanced mobility; Parking and land use impacts. Newark, DE: Institute for Public Administration.

Chavis, C., **Barnes, P.,** Grasso, S., Bhuyan, I., & Nickkar, A. (2018). Bicycle justice or just bicycles?: Analyzing equity in Baltimore's bike share program. Charlottesville, VA: Mid-Atlantic Transportation Sustainability University Transportation Center.

Barnes, P. (2017). Climate-conscious comprehensive planning in Delaware: Developing and piloting a planning process in Milford, DE. Newark, DE: Institute for Public Administration.

Barnes, P. (2017). Coastal resiliency needs assessment in Sussex County. Newark, DE: Institute for Public Administration.

Barnes, P., & Turkel, E. (2017). Autonomous vehicles in Delaware: Analyzing the impact and readiness for the first state. Newark, DE: Institute for Public Administration.

Scott, M., Li, M., **Barnes, P.,** Stavru, W., Dayan, S., Jones, C., & Cragle, J. (2016). The use of smartgrowth scorecards/assessment tools to advance sustainable land-use practices. Charlottesville, VA: Mid-Atlantic Transportation Sustainability University Transportation Center.

FUNDED RESEARCH

FY26 state support for infrastructure policy forum and research. Delaware Department of Transportation, 07/25 – 06/26, Co-Principal Investigator, \$120,000

Local government outreach and assistance with implementation of Delaware Senate Bill 237 – Phase 2: Outreach, education, and information exchange. Energize Delaware, 04/25 – 10/25, Principal Investigator, \$29,700

Local government outreach and assistance with implementation of Delaware Senate Bill 237 – Phase 1: Stakeholder engagement and information gathering. Energize Delaware, 08/24 – 01/25, Principal Investigator, \$21,000

Sustainable Mobility and Accessibility Regional Transportation Equity Research (SMARTER) Center. Federal Department of Transportation, 09/23 – 08/28, Co-Principal Investigator, \$15,000,000

FY24 state support for infrastructure policy forum and research. Delaware Department of Transportation, 07/23 – 06/24, Co-Principal Investigator, \$120,000

Research support for phase II of the 2021 resilient community partnership. Delaware Coastal Programs, 07/21 – 03/22, Principal Investigator, \$35,500

FY22 state support for infrastructure policy forum and research. Delaware Department of Transportation, 07/21 – 06/22, Co-Principal Investigator, \$112,500

Research support for phase I of the 2021 resilient community partnership. Delaware Coastal Programs, 01/21 – 06/21, Principal Investigator, \$38,800

Information gathering on climate mitigation planning, stakeholders, and research in Delaware. Delaware Sustainable Energy Utility, 09/01/20 – 10/30/20, Principal Investigator, \$9,100

Research on the effectiveness of Delaware's local climate change programming. Delaware Coastal Programs, 02/01/20 – 08/31/20, Principal Investigator, \$43,400

Sea level rise success story symposium. Sustainable Coastal Communities Initiative, 10/19 – 05/20, Principal Investigator, \$5,500

Center for energy-efficient sociotechnical systems. University of Delaware Energy Institute, 02/19 – 01/21, Co-Principal Investigator, \$208,000

Research for federal consistency policy gap analysis. Delaware Coastal Programs, 06/19 – 09/19, Principal Investigator, \$27,300

FY2018 – FY2019 On-call planning and policy support for connected-automated vehicles and smart cities. Delaware Department of Transportation, 01/18 – 06/18, Principal Investigator, \$62,000

Bicycle justice or just bicycles?: Analyzing equitable access to Baltimore's bike sharing program. Mid-Atlantic Transportation Sustainability University Transportation Center, 06/17 – 08/18, Co-Principal Investigator, \$96,000

Research for coastal resiliency needs assessment in Sussex County. Delaware Coastal Programs, 01/17 – 05/17, Principal Investigator, \$22,700

Newark transit improvement partnership. DART First State, 01/17 – 10/17, Principal Investigator, \$9,600

Research on methods to assess and incorporate climate vulnerability into municipal comprehensive plans. Delaware Department of Natural Resources and Environmental Control, 10/16 – 09/17, Principal Investigator, \$28,000

Planning for autonomous vehicle impacts in Delaware. Delaware Department of Transportation, 09/15 – 05/17, Principal Investigator, \$40,000

Developing a resource guide for funding community resilience in Delaware. Delaware Coastal Programs, 10/15 – 05/16, Principal Investigator, \$35,000

UNFUNDED RESEARCH

Food waste valorization through biological-chemical modular processing. National Science Foundation EFRI-DChEM, 02/01/20 – 01/31/22, co-Principal Investigator, \$2,000,000 (unfunded)

A socially-adaptable and policy-driven mobility for smart cities. National Science Foundation SCC-IGR, 04/01/20 – 03/31/24, co-Principal Investigator, \$2,195,000 (unfunded)

Enhancing resiliency in Delaware: Analyzing local sea level rise policy to improve public services to vulnerable coastal communities. Delaware Sea Grant, 02/01/20 – 01/31/22, Principal Investigator, \$342,000 (unfunded)

A sociotechnical systems and institutional framework for energy-efficient mobility of connected communities. National Science Foundation SCC, 02/01/19 – 01/31/23, co-Principal Investigator, \$2,000,000 (unfunded)

CONFERENCE AND SYMPOSIUM PRESENTATIONS

How Agency Practitioners Understand and Implement Transportation Equity in Delaware's Capital Expenditure Process. (April, 2025). International Conference on Urban Affairs, Vancouver, BC.

Lessons learned: Public engagement for climate resiliency in Lewes, DE. (October, 2022). American Planning Association Delaware Conference, Virtual.

Land grant impact: Civic engagement at the Biden School. (June, 2022). National Academy of Public Administration Social Equity Leadership Conference, Virtual.

New methods in crystal ball gazing: Reading a social history of the elevator to anticipate future policy challenges of connected and automated vehicles. (July, 2019). American Control Conference, Philadelphia, PA.

Attempting the impossible: Predicting social impacts of connected and automated vehicles. (November, 2018). Institute of Electrical and Electronics Engineers International Conference on Intelligent Transportation Systems, Maui, HI.

Climate change and public health: Developing and piloting a planning process in Milford, DE. (October, 2018). American Planning Association Regional Conference, Rehoboth Beach, DE.

Connected and automated vehicle happenings in Delaware. (October, 2018). American Planning Association Regional Conference, Rehoboth Beach, DE.

A spatial-temporal analysis of Baltimore bikeshare ridership. (January, 2018). Transportation Research Board Conference, Washington, DC.

Smart state research and administration in Delaware. (November, 2017). University of Delaware Smart Cities and Sustainable Energy Symposium, Newark, DE.

Building local capacity for climate change planning in Delaware: An analysis of practices, lessons learned, and future opportunities. (October, 2016). American Planning Association MD/DE Regional Conference, Towson, MD.

Transition initiatives and confrontational politics: Guidelines, opportunities, and practices. (March, 2016). Western Political Science Association Conference, San Diego, CA.

How green is our valley?: Exploring the theory-practice disconnect in planned sustainable communities. (October, 2015). Precarious Alliance Symposium, Doylestown, PA.

Teaching in the social sciences. (August, 2014). University of Delaware Graduate Teaching Assistant Conference, Newark, DE.

The academic eportfolio: An asset in the academic job market. (May, 2014). Lilly International Teaching Conference on College and University Teaching and Learning, Bethesda, MD.

Material dreams: Or, reevaluating the 'more stuff' storyline. (April, 2014). New Visions for Public Affairs Symposium, Newark, DE.

Skilling up for powerdown: The technology and energy implications of reskilling in the transition movement. (April, 2014). Precarious Alliance Symposium, Doylestown, PA.

Beyond the grad student CV: Academic eportfolios. (January, 2014). Temple University Faculty Conference on Teaching Excellence, Philadelphia, PA.

Effecting community change: A political economy of the transition movement. (November, 2013). Northeast Conference on Public Administration, Newark, DE.

Active learning: Engaging students and making learning fun. (August, 2013). University of Delaware Graduate Teaching Assistant Conference, Newark, DE.

(Mis)adventures in the epistemology of uncertainty: The complexity-energy relationship. (June, 2011). Association for Environmental Studies and Sciences Conference, Burlington, VT.

INVITED PRESENTATIONS

The financial and policy impact of electric vehicles and improved fuel economy on Delaware's motor fuel tax system. (February, 2025). American Society of Highway Engineers – First State Section, Newark, DE.

Equity in DE capital expenditures on infrastructure. (November, 2024). Delaware Department of Transportation Executive Management Team Meeting, Dover, DE.

Equity in Delaware capital expenditures on infrastructure. (October, 2024). Wilmington Area Planning Council Technical Advisory Committee, Newark, DE.

Advancing local climate adaptation policy in Lewes, DE. (July, 2023). Green Drinks Seminar Series, Virtual

Bicycle justice or just bicycles?: Analyzing equity in Baltimore's (now shuttered) bikeshare program. (June, 2023). Women in Transportation Seminar Series, Virtual.

Insights on developing local climate policies. (November, 2022). New Castle County Youth Planning Board, Virtual

Cede Control and Trust the Process: Light-handed climate policy development in Lewes, DE. (October, 2022). Biden School Seminar Series, Newark, DE.

Developing policies for sea level rise resiliency in Lewes, DE. (July, 2022). Delaware Floodplain Conference, Lewes, DE.

Whiz, not bang: Policies to support EVs in your community. (September, 2021). Institute for Public Administration Training Series, Newark, DE.

The rising tide: Are we prepared?. (August, 2021). Ocean Currents Lecture Series, Virtual

Oh crap!: Climate change, flooding, and sea level rise in New Castle County? (January, 2021). New Castle County Youth Planning Board, Virtual.

Research and analysis of local climate knowledge and policy action in Delaware. (December, 2020). Biden School Seminar Series, Newark, DE.

Sea level rise in Delaware: What is the challenge and what can we do about it? (April, 2020). Delaware Power Dialog, Virtual.

The connected and automated vehicle gambit: Technological panacea or road to perdition? (September, 2018). Civil Engineering Department Seminar Series, Newark, DE.

The promises and perils of the autonomous vehicle revolution. (February, 2018). Geography Department Seminar Series, Newark, DE.

Sea level rise in Delaware, and what it means for Milton. (January, 2018). Town of Milton Sustainable Communities Planning Workshop, Milton, DE.

Connected-automated vehicle research at the University of Delaware. (December, 2017). Governor Carney's Advisory Council on Connected and Automated Vehicles, Dover, DE.

Planning for autonomous vehicles in Delaware. (December, 2017). Wilmington Area Planning Council Public Advisory Committee, Newark, DE.

Ideology versus reality: The political economy of climate change policy non-decisions. (October, 2017). University of Seoul Smart Cities Faculty Exchange, Seoul, South Korea.

Smart city research and administration in Newark, Delaware. (October, 2017). University of Seoul Smart Cities Faculty Exchange, Seoul, South Korea.

Autonomous vehicles in Delaware. (September, 2017). Wilmington Area Planning Council Technical Advisory Committee, Newark, DE.

Resources to help your community become flood ready. (May, 2017). Institute for Public Administration Flood Ready Communities Training, Dover, DE.

Vulnerability to climate change in Milford, DE: Assessing threats, recommending action. (April, 2017). Mason Dixon Task Force, Inc., Newark, DE.

Can an effective social movement avoid politics?: Analysis and insight from the transition movement. (December, 2016). School of Public Policy and Administration Seminar Series, Newark, DE.

The politics of climate change. (September, 2016). DuPont Interdisciplinary Science Learning Laboratory Lecture Series, Newark, DE.

The transition movement: Who, what, where, why, when, and how. (November, 2014). Delaware Technical College Sustainability Symposium, Stanton, DE.

Qualitative methods in policy research. (October, 2014). Delaware Valley University, Doylestown, PA.

COURSES TAUGHT

- SPPA400 – Civil Discourse
- UAPP433/POSC483 – Washington, D.C. Policy Practicum
- UAPP406/GEOG434 – Planning Sustainable Communities & Regions
- UAPP325 – Public Policy Analysis
- UAPP300/POSC498 – Public Policy Field Experience/Capstone Internship
- UAPP220 – Citizens, Civility, & Change
- UAPP110 – Introduction to Public Policy (Honors and Regular sections)
- UNIV101 – First Year Seminar
- CEE211 – Statics and Dynamics (at the University of Michigan)

BIDEN SCHOOL AND UNIVERSITY OF DELAWARE SERVICE

Committee Member Biden School Undergraduate Program Committee	2023 - present
Biden School Faculty Liaison Presidential School Consortium	2023 - 2024
Faculty Advisor The Lattice Project – University of Delaware Chapter	2021 - 2023

Faculty Search Committee Member Department of Geography	2022
Faculty Advisor Climate Reality Project – University of Delaware Chapter	2019 - 2022
Faculty Advisor buildOn – University of Delaware Chapter	2017 - 2021
Faculty Search Committee Member Stavros Niarchos Foundation Chair	2021
Committee Member Sustainability Task Force	2016 - 2020
Committee Member Ad-Hoc Committee on Joint and Secondary Appointments	2018
Organizing Committee Member Smart Cities and Sustainable Energy Symposium	2018
Committee Member Green Grants Committee	2012 - 2018
Associate Editor Student Journal <i>New Visions for Public Affairs</i>	2012 - 2015
Ph.D. Student Guidebook Author School of Public Policy and Administration	2013
Committee Member Creating an Undergraduate Honors Program for SPPA	2012

COMMUNITY SERVICE, OUTREACH, AND ENGAGEMENT

Board Member Claymont Renaissance Development Corporation	2019 - present
Member WILMAPCO Governor Printz Boulevard Monitoring Committee	2022 - present
Member WILMAPCO Claymont Area Master Plan Committee	2024 - present
Volunteer Transition Town Media, <i>Media, Pennsylvania</i>	2012 - 2020

Member Governor Carney’s Advisory Council on Connected and Autonomous Vehicles – Main Council and Technology, Security, and Privacy Subcommittee	2017 - 2018
Co-Founder and Steering Committee Member Resilient and Sustainable Communities League (RASCL) of Delaware	2015 - 2018
Radio Talk Show Host and Producer for “Beyond Rhetoric” 91.3FM, WVUD - The Voice of the University of Delaware, <i>Newark, Delaware</i>	2013

PROFESSIONAL DEVELOPMENT

Participant – Climate Change Professional Certification Program Association of Climate Change Officers, <i>Virtual</i>	2022 - 2023
Participant – Summer Institute on Teaching University of Delaware, <i>Newark, DE</i>	2021, 2025
Participant – Lilly International Teaching Conference International Teaching Learning Cooperative, <i>Bethesda, MD</i>	2014
Participant – Faculty Conference on Teaching Excellence Temple University, <i>Philadelphia, PA</i>	2014
Fellow – Higher Education Teaching Certification Program University of Delaware, <i>Newark, DE</i>	2012 - 2013
Participant – Grant Writing Workshop University of Delaware, <i>Newark, DE</i>	2012
Participant – Responsible Conduct of Research Seminar University of Delaware, <i>Newark, DE</i>	2011

PROFESSIONAL EXPERIENCE

Structural Engineer Walsh Design Group, <i>Kinsale, Ireland</i>	2010
Structural Engineer / Research and Development Assistant Fusion Building Systems, <i>Ringaskiddy, Ireland</i>	2006 - 2010
Soil Mechanics Laboratory Assistant University of Engineering and Rural Development, <i>Ouagadougou, Burkina Faso</i>	2005
Primary School English Teacher Primary Schools Aristide Briand, Jean-Cavaillès, and La Citadelle, <i>Bayonne, France</i>	2005 - 2006

Middle School Mathematics Teacher 2003 - 2005
United States Peace Corps, *Kirsi, Burkina Faso*

Structural Engineer 2002
Albert Kahn Associates, *Detroit, MI*

AWARDS AND HONORS

Public Administration Fellow 2013, 2014
Institute for Public Administration, *Newark, Delaware*

University of Delaware Teaching Assistant Fellow 2013, 2014
Center for the Advancement of Teaching and Learning, *Newark, Delaware*

Director's Citation 2013
School of Public Policy and Administration, *Newark, Delaware*

James B. Angell Scholar 2001
University of Michigan, *Ann Arbor, Michigan*

MANUSCRIPT PEER REVIEWS

- *Community Development Journal*
- *Energy, Sustainability, and Society*
- *Environmental Sociology*
- *Frontiers in Environmental Science*
- *Journal of Public Affairs Education*
- *Journal of Transport and Health*
- *Review of Policy Research*
- *Urban Science*

PROFESSIONAL AFFILIATIONS

- American Society for Public Administration
- American Planning Association