KYUNGMIN LEE

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RESEARCH FOCUS

Developing AI and remote sensing techniques to explore human-environment-policy questions.
Areas: Environmental Policy, Energy Policy, AI, Computational Social Science, Health, Sustainability

EMPLOYMENT

Research Fellow, University of Connecticut, USA   Oct 2025 - Present
Department of Public Health Sciences

EDUCATION

Ph.D., Energy and Environmental Policy, University of Delaware, USA   2025
M.C.P., Environmental Studies, Seoul National University, South Korea   2018
B.A., Economics, Sungshin Women's University, South Korea   2014

PUBLICATIONS

† corresponding authors, ∗ equal contribution

Peer Reviewed Journal Articles

4. Wijaya, B. N., Park, Y., Jeung, J. H., & **Lee, K**[†]. (2026). Exploring the relationship between air quality and happiness in South Korea using artificial neural networks. *Environmental Impact Assessment Review*, 117, 108135. https://doi.org/10.1016/j.eiar.2025.108135 [Online First]

3. **Lee, K.**, Yun, S.J.[†], & Park, S.A. (2025) Varied Drivers for Reducing CO_2 Emissions in Countries with Legislated Carbon Neutrality Targets: A Kaya Identity Clustering Analysis. *Environment, Development and Sustainability.* Doi: https://doi.org/10.1007/s10668-025-06223-2
   - Awarded the Best Student Paper Award from the NECoPA 2023 Fall Conference.
   - Awarded the 2022 Excellence Research Award from the Korea Safety Health and Environment Foundation.

2. Arjunan, P., Dobler, G., **Lee, K.**, Miller, C., Biljecki, F., & Poolla, K.[†] (2021, November). Operational characteristics of residential air conditioners with temporally granular remote thermographic imaging. In *Proceedings of the 8th ACM international conference on systems for energy-efficient buildings, cities, and transportation* (pp.184-187). Doi: https://doi.org/10.1145/3486611.3486659

1. **Lee, K.**, & Yun, S.J.[†] (2018). Positive Effects and Problematic Conditions of Adopting the Benefit Sharing Mechanism in Renewable Energy Projects: Focusing on the Case of Onshore Wind Farms in Jeju Island. *Space & Environment*: Vol.65. (pp.227~270). Doi: https://doi.org/10.19097/kaser.2018.28.3.227
   - Featured in the *Monthly Electrical Technology & Information* 2019 January [CrossRef]

Papers Under Review

1. **Lee, K.**, Yun, S.J.[†], & Myeong, J.Y. (2025) Proposing a Value-Sharing Mechanism for Wind Power: Impact of Benefit-sharing and Community Engagement on Acceptance and Environmental Awareness. *Energy Research & Social Science* (The 2nd Revised and Resubmitted).

Work in Progress

7. **Lee, K.**, & Dobler, G.[†] A Novel Approach to Assessing the Efficacy of Policy-driven Urban Energy Demand Reduction via Proximal Infrared Remote Sensing. *[Dissertation: In preparation for journal submission in Fall 2025]*
   - Awarded the Third Place Student Paper Award from the KAPS-APPAM 2024.

6. **Lee, K.**, Powers, T., & Dobler, G.[†] Privacy-preserving Spatio-temporal Data Aggregation for Energy-End Use in City. *[Dissertation: In preparation for journal submission in Fall 2025]*

5. **Lee, K.**, & Dobler, G.[†] A Machine Learning Approach to Mapping Urban Heat Resilience with Satellite Image Analysis in Wilmington, Delaware. *[Dissertation: In preparation for journal submission in Winter 2025-Spring 2026]*

4. Myeong, J.Y., Yun, S.J.[†], & **Lee, K.** A Systematic Review of Intergovernmental Environmental Governance.

3. **Lee, K**, Jung, J.[†], Jo, Y.[†]. A Machine Learning Approach to Evaluating the Impacts of Long-COVID19.

2. **Lee, K**, A Systematic Review of Energy and Environmental Policy Using Machine Learning Approach.

1. **Lee, K.**, & Kim, H.[†] Analyzing Corporate Emission Trajectories and Climate Liability Using Machine Learning Approaches.

Policy Reports

4. Cho, H., Lim, Y., Kim, S., Jeong, H., & **Lee, K.** (2019) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala Project, D4.1 Report on the Results of Climate Change Risk and Vulnerability Assessment. CTCN Requests No. 2018000009 Vol 3. UN Climate Technology Centre and Network, & Korea Environment Institute.

3. Cho, H., Rubio, C., Jeong, H., **Lee, K.**, & Odawa, S. (2019) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala Project, D4.2 Climate Change Risk Assessment Guidelines. CTCN Requests No. 2018000009 Vol 4. UN Climate Technology Centre and Network, & Korea Environment Institute.

2. Kim, G., & **Lee, K.** (2016). A Comparative Study of Humanitarian Programs for Climate Refugees. *Enerzine Focus*: Vol.69 Energy Climate Policy Institute; Republic of Korea.

1. Kim, T., Maeng, J., Park, J., & **Lee, K.** (2014). A Study on Environmental Assessment Guideline for Site Selection of Offshore Wind Farm Project. Korea Environment Institute.

(SELECTED) PRESENTATIONS

Conference Panel Paper/Poster Presentations

2025   Public Management Research Conference (**PMRC**) [Accepted]
        American Society for Public Administration (**ASPA**) [Accepted]

2024   Conference on Neural Information Processing Systems (**NeurIPS**)
        Association for Public Policy Analysis & Management (**APPAM**)
        Association for Research on Nonprofit Organizations and Voluntary Action (**ARNOVA**)
        Chungnam National University Conference of Advanced Technology (**CCAT**)
        Northeast Conference on Public Administration (**NECoPA**)
        Association for Research on Nonprofit Organizations and Voluntary Action (**ARNOVA**)-Asia.
        Urban Association Affairs (**UAA**).

2023   Association for Public Policy Analysis & Management (**APPAM**)
        Northeast Conference on Public Administration (**NECoPA**)

Invited Lectures/Guest Speakers

2025   School of Digital Humanities and Computational Social Sciences, Korea Advanced Institute of Science and Technology (KAIST)

2024   Biden School of Public Policy and Administration, University of Delaware

2023   Department of Public Administration, Chungnam National University

2021   Department of Public Administration, Chungnam National University
2020   Department of Public Administration, Chungnam National University

Symposiums
2024   DARWIN Symposium, University of Delaware
2023   Data Science Symposium, University of Delaware
2021   Data Science Symposium, University of Delaware

Keynote Speeches
2024   Institute of Peace Studies, Jeju National University
2023   Data Science Initative, Harvard University
2022   Debriefing Conference, NAIOTH

HONORS AND AWARDS

Scholarships & Fellowships
2023-24   University of Delaware, Doctoral Fellowship for Excellence 2023–2024 (~$30,000)
2022   University of Delaware, Summer Doctoral Fellowship ($4,500)
2019-23   University of Delaware, Tuition & Assistantships
2015-16   Seoul National University, Merit-based & Work-Study Scholarships
2011-13   Sungshin Women's University, Merit-based Scholarships

Grants & Awards
2025   Peter A. Larson Prize ($1,000)
2024   Third Place Student Paper Award, Korean Association for Policy Studies (**KAPS**)-Association for Public Policy Analysis & Management (**APPAM**) ($50)
    UD Travel Grant Awards ($3,000)
2023   Best Student Paper Award, Northeast Conference on Public Administration (**NECoPA**) ($140)
2022   Research Excellence Award, Korea Safety Health and Environment Foundation (**KSHEF**) Environmental Research Forum ($250)
2015   Research Grant Competition Award, Korea Energy Climate Policy Institute (**KECPI**) ($1,550)

Government & International Recognitions
2024   Climate Change AI In-Person Summer School ($1000)
2022   Aspen Institute, Future Leaders Climate Summit Cohort (Travel Award)
2016   Ministry of Environment of Korea & Korea Environment Corporation, Global Environmental Leaders Program, UN Internship Support (~$6,000)
2016   Korea Meteorological Administration, International Meteorological Expert Program, UN Internship Support (~$3,600)
2014   Korea National Assembly Climate Change Forum, Climate Change Academy, Excellence Award (Travel Award, UNFCCC COP20 Observer)

TEACHING EXPERIENCE

University of Delaware   (Expected) Spring 2026
Graduate Level Course, Instructor
    Machine Learning for Public Policy (SPPA722)

Undergraduate Level Courses, *Teaching Assistant*   Aug. 2019 – Dec. 2022
    Crafting Public Policy (UAPP225)
        Non-Governmental Actors: Interest Groups   Spring 2022
        Environmental and Energy Policy   Spring 2021
        Policy Implementation and Regulatory Rule-Making   Spring 2020
    Introduction to Energy and Environmental Policy (ENEP250)
        Global Environmental Law and Policy/Climate Policy/Seminar   Fall 2022
        Study Team Workshop   Spring 2022

Environmental Law and Policy	Fall 2020

Political Economy of the Environment (ENEP410)

Global Capitalism and the Environment	Fall 2021

Environmental Sustainability: Political and Economic Analysis (ENEP410)

Global Financing: Climate Change and the Least Developed Countries	Fall 2019

PROFESSIONAL EXPERIENCE

Research/Teaching Assistant, **University of Delaware**, USA	Aug 2019 – Aug 2025
Research Assistant, **Korea Environment Institute**, South Korea	Apr 2019 – May 2019
International Affairs Specialist, **Korea Marine Environment Management Corporation**, South Korea	Jun 2018 – Sep 2018
Green Growth Knowledge Platform Intern, **UNEP**, Switzerland	Mar 2017 – Aug 2017
Environmental Affairs Intern, **UNESCAP-ENEA**, South Korea	Sep 2016 – Feb 2017
Research Assistant, **Seoul National University**, South Korea	Sep 2015 – Aug 2016
Research Intern, **Korea Environment Institute**, South Korea	Aug 2014 – Dec 2014

SERVICE ACTIVITIES

Journal Review
Quality & Quantity (Q&Q) 2025
Policy Studies Journal (PSJ) 2023

Conference Service
ASPA Section on Professional and Organizational Development, Board Member at Large, 2025-2027
ARNOVA-Asia, Session Moderator, June 2024
APPAM Data Science Community, Member, 2023-2024

Department and University Service
UD Climate Change Hub, Climate Fellow, 2023-2025
UD Data Science Institute, Graduate Fellow, 2021-2025
UD Computational Social Science Association, Acting President, 2022-2023
UD Biden School Student Association, Secretary, 2021-2022
UD Korean Graduate Student Association, Officer, 2021-2022
UD Energy and Environmental Policy Student Association, Alumni Chair, 2020-2021

Community Service
UD Center for Global Programs & Services, Korean Culture Night, Volunteer, 2024
NAIOTH, Research & Thesis Writing Training Program Mentor, 2023-Present
Annual Delaware Korean Festival, Volunteer, 2021
BigWave - Korean Youth Climate Change Network, Co-founder & Steering Committee, 2016-2019

TRAINING

Summer Institute in Computational Social Science (SICSS)-Korea 2024, KAIST- KDI School
Climate Change AI In-Person Summer School 2024, Mila-Québec AI Institute

LANGUAGES

English (Fluent), Korean (Native), French (Basic)

SKILLS

Programming & Tools: Python (Main), R, STATA, SPSS, ArcGIS, LaTeX
Quantitative Methods: Artificial Intelligence/Computer Vision (Main), Geospatial Analysis, Statistics
Qualitative Methods: Survey Design, In-depth Interviews