

# Kyungmin Lee

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<https://kleerresearch.github.io/>

## EDUCATION

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**University of Delaware** – Delaware, U.S.A.

(Expected) 2024

**Ph.D. in Energy and Environmental Policy**

- Thesis Title: The Impact of Human Behaviors and the Built Environment on Energy Use and Heat in Cities
- Committee: Dr. Gregory Dobler (Chair), Dr. Kalim Shah, Dr. Thomas Powers, and Dr. Clayton Miller

**Seoul National University** – Seoul, South Korea

2018

**M.C.P. in Environmental Studies, Environmental Management**

**Sungshin Women's University** – Seoul, South Korea

2014

**B.A. in Economics**

## RESEARCH FOCUS

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**Area of Interest:** Energy Policy, Environmental Policy, Evidence-Based Policy, Urban Planning, Data Science, Machine Learning, Computer Vision, Quantitative and Qualitative Analysis

## PUBLICATIONS

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### Peer-reviewed Articles

2. Pandarasamy Arjunan, Gregory Dobler, **Kyungmin Lee**, Clayton Miller, Filip Biljecki, and Kameshwar Poolla. "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. 2021. doi: 10.1145/3486611.3486659 [[CrossRef](#)]
1. **Kyungmin Lee**, and Sunjin Yun (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. *Journal: Space & Environment: Vol.65.* (pp.227~270). doi: 10.19097/kaser.2018.28.3.227 (in Korean) [[CrossRef](#)]
  - Featured in the *Monthly Electrical Technology & Information*. 2019 January (in Korean) [[CrossRef](#)]

### White Papers and Policy Reports

4. Hanna Cho, Youngsin Lim, Seungwoo Kim, Hyelim Jeong, and **Kyungmin Lee** (2019, September). Climate Technology Centre and Network (CTCN) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala. D4.1 Report on the Results of Climate Change Risk and Vulnerability Assessment. CTCN Requests No. 2018000009 Vol 3. [[CrossRef](#)]
3. Hanna Cho, Christabel Jane Rubio, Hyelim Jeong, **Kyungmin Lee**, and Simon Peter Odawa (2019, August) Climate Technology Centre and Network (CTCN) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala. D4.2 Climate Change Risk Assessment Guidelines. CTCN Requests No. 2018000009 Vol 4. [[CrossRef](#)]
2. Geunha Kim, and **Kyungmin Lee** (2016). A Comparative Study of Humanitarian Programs for Climate Refugees. *Energy Climate Policy Institute. ENERZINE FOCUS: Vol.69* (in Korean) [[CrossRef](#)]

1. Taeyun Kim, Junho Maeng, Jeongil Park, and **Kyungmin Lee** (2014). A Study on Environmental Assessment Guideline for Site Selection of Offshore Wind Farm Project. Sejong: *Korea Environment Institute*. (in Korean) [[CrossRef](#)]

## Thesis

1. **Kyungmin Lee** (2018). An Influence of the Benefit Sharing Mechanism to the Local Acceptance and Environmental Awareness: A Case Study from Onshore Wind Farms in Jeju Island. Master Thesis. Graduate School of Environmental Studies, Seoul National University.

## PRESENTATIONS & COLLOQUIA

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### Conference Proceedings & Presentations

4. **Kyungmin Lee**, Gregory Dobler, Pandarasamy Arjunan, Clayton Miller, Filip Biljecki, & Kameshwar Poolla (2021, November). Extraction of Air Conditioner Unit Indicators from Proximal Infrared Remote Sensing of Buildings. Poster presented at *the 2021 University of Delaware Data Science Symposium*, Virtual presentation.
3. **Kyungmin Lee**, and Sunjin Yun (2018, June). An Influence of the Benefit Sharing Mechanism to the Local Acceptance and Environmental Awareness: Focusing on the Case of Onshore Wind Farms in Jeju Island. Poster session presented at *the 2nd International conference on Bio-resources, Energy, Environment, and Materials Technology*, Hongcheon, Republic of Korea.
2. **Kyungmin Lee**, and Sunjin Yun (2018, February). An Exploratory Study on Positive Effects of and Problematic Conditions of adopting the Benefit Sharing Mechanism: Focusing on the Case of Onshore Wind Farms in Jeju Island. Paper presented at *the 2018 Spring Session of the Korea Environmental Policy and Administration Society Conference*, Seoul, Republic of Korea. (in Korean)
1. **Kyungmin Lee** & Suyoung Jung (2016, June). A Study on Impacts from Price Subsidy and Tax Policy of EVs in South Korea. Paper presented at *the 2016 International Conference on Climate Change and Sustainable Innovation of Korea Environmental Economics Association*, Incheon, Republic of Korea. (in Korean)

### Colloquia, Seminars & Talks (Selected)

2. **Kyungmin Lee** (2021, November). Overview of Data Science and Machine Learning Tools in Energy and Environmental Policy Field, Department of Public Administration, Chungnam National University, South Korea. Virtual Talk.
1. **Kyungmin Lee** (2020, October). A Case Study of Machine Learning Applications in Energy and Environmental Policy, Department of Public Administration, Chungnam National University, South Korea. Virtual Talk.

## RESEARCH GRANT AWARDS & FUNDINGS

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<b>Summer Doctoral Fellowship (\$4,500)</b> <i>Graduate College, University of Delaware</i>	2022
<b>Research Competition (\$1,500)</b> <i>Energy Climate Policy Institute</i>	2015

## HONORS

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Travel Award	<b>Future Leaders Climate Summit</b> <i>Aspen Institute</i>	2022
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Tuition Scholarship	<b>Teaching Assistantship</b> <i>Biden School of Public Policy and Administration, University of Delaware</i>	2019 – 2023
Fellowship	<b>Global Environmental Leaders Program</b> <i>Ministry of Environment</i>	2016
Fellowship	<b>International Meteorological Expert Program</b> <i>Korean Meteorological Administration</i>	2016
Scholarship	<b>Work-Study Scholarship, Merit-based Scholarship</b> <i>Seoul National University</i>	2015, 2016
Award	<b>Model UNFCCC COP20</b> <i>Korea National Assembly Climate Change Forum</i>	2014
Scholarship	<b>Sungshin Women Scholarship</b> <i>Sungshin Women's University</i>	2011 - 2013

## **TEACHING EXPERIENCE**

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**Teaching Assistant**, Biden School of Public Policy and Administration, University of Delaware

UAPP225	Crafting Public Policy	Spring 2020, 2021, 2022
ENEP250	Introduction to Energy and Environmental Policy	Fall 2020, 2022, Spring 2022
ENEP410	Political Economy of the Environment	Fall 2021
ENEP410	Environmental Sustainability: Political and Economic Analysis	Fall 2019

## **RESEARCH EXPERIENCE**

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**Korea Environment Institute** – Sejong, South Korea  
**Researcher** Apr. 2019 – May. 2019

*Korea Adaptation Climate Change Center*

- Assisted UNFCCC Climate Technology Centre Network Technical Assistance for the Development of a Climate Smart City in Kurunegala, Sri Lanka
- Supported climate change risk assessment, and climate change adaptation plan related to international development
- Supported administrative management of the international training workshop, seminar, etc.

**Seoul National University** – Seoul, South Korea  
**Graduate Research Assistant**

*Seoul National University Asia Center, Southeast Asia Center* Mar. 2016 – Aug. 2016

- Supported seminars for regional development and related projects in Southeast Asia
- Conducted management of press center, seminars, and workshops

*SAMSUNG Engineering's Environmental Education Development Project* Nov. 2015 – Dec. 2015

- Supported drafting of documents on current statement and management for water security, climate change, and recycling
- Engaged in the development of project for elementary environmental education

*Green Technology Center's Smart Green Cities Project* Sep. 2015 – Oct. 2015

- Supported analysis for the Smart Green City project focusing on Energy Living Lab Program
- Conducted case study of the smart green cities focusing on finance and citizen participation based on community development approach

**Korea Environment Institute** – Sejong, South Korea  
**Research Intern**

Apr. 2014 – Dec. 2014

*Environmental Assessment Division*

- Performed analytic research for selection of offshore wind farms sites using GIS and sustainability data
- Supported administrative management of the public research institute including typing and filing

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**WORK EXPERIENCE**

**Korea Marine Environment Management Corporation** – Seoul, Republic of Korea  
**International Affairs Specialist**

Jun. 2018 – Sep. 2018

*International Cooperation Team*

- Assisted the UNDP/GEF Yellow Sea Large Marine Environment (YSLME) Phase II Project
- Provided management support and related government and civil entities

**UNEP** – Geneva, Switzerland  
**Program Support Intern** Funded by the Ministry of Environment

Mar. 2017 – Aug. 2017

*Green Growth Knowledge Platform*

- Managed pipeline project database and drafted/prepared donor agreement documents
- Assisted with Behavioral Insights Committee in conducting research Changing Behaviors, Changing Policy: Evidence on behavioral insights for green growth

**UNESCAP-ENEA** – Songdo, Republic of Korea  
**Environmental Affairs Intern** Funded by the Korea Meteorological Administration

Sep. 2016 – Feb. 2017

*North-East Asian Subregional Program for Environmental Cooperation*

- Supported research project regarding transboundary air pollution platforms
- Led establishment of the G-Tower Intern Network and drafted Handbook

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**COMMUNITY SERVICE EXPERIENCE**

**UD Computational Social Science Association, Training session instructor**

2022 – Present

- Led training session for geospatial analysis using Python

**BigWave - Korean Youth Climate Change Network, Steering Committee Member**

2016 – 2019

- Co-founded non-profit organization and led international cooperation team

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**PROFESSIONAL & STUDENT ASSOCIATIONS**

**Professional Associations**

- Association for Public Policy Analysis and Management, *Member* 2019 – 2022
- American Planning Association, *Member* 2021 – 2022

**Student Associations**

- UD Computational Social Science Association, *Vice President* 2022 – Present
- UD Data Science Institute, *Graduate Fellow* 2022 – Present
- 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

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**SKILLS & CREDENTIALS**

Languages	Korean (Native), English (Fluent), French (Beginner)
Quantitative Skills	Computational Modeling ( <i>Python</i> ), Statistical Analysis ( <i>SPSS, R, JMP</i> ), Geospatial Analysis ( <i>ArcGIS</i> )
Qualitative Skills	Survey, Semi-structured Interview, Case Study Analysis