

## Dr. Yeong Jae Kim

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CONTACT INFORMATION  
KDI School of Public Policy and Management  
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Last updated: September 2022

PROFESSIONAL EXPERIENCE

Assistant Professor	08/2022 - Present
<b>KDI School of Public Policy and Management</b>	
Affiliated Scientist	08/2022 - Present
<b>RFF-CMCC European Institute on Economics and the Environment (EIEE)</b>	
Junior Scientist	02/2019 - 07/2022
<b>RFF-CMCC European Institute on Economics and the Environment (EIEE)</b>	
A research institute co-founded by <b>Resources for the Future (RFF)</b> and the <b>CMCC Foundation – Euro-Mediterranean Center on Climate Change (CMCC)</b>	
Visiting Professor	2021
<b>School of Management Engineering, KAIST</b>	
Senior Research Associate (Postdoc)	02/2017- 01/2019
<b>Tyndall Centre for Climate Change Research (HQ)</b>	
Research Assistant	03/2009- 06/2009
<b>Samsung Economic Research Institute, Seoul, South Korea</b>	
Analyst	12/2007- 03/2009
<b>American International Group, Inc., Seoul, South Korea</b>	
Analyst	01/2007- 11/2007
<b>Hyundai Motor Company, Headquarter, Seoul, South Korea</b>	

EDUCATION

Ph.D., Georgia Institute of Technology, Public Policy (Environmental Economics) (Dr. Marilyn Brown, Kaye Husbands Fealing, Erik Johnson, and Pat McCarthy)	05/2017
M.S., Texas A&M University, Agricultural Economics	08/2011
B.S., Hanyang University, Seoul, South Korea, Mechanical Engineering	02/2007
Exchange Student, University of Texas at Austin, Mechanical Engineering	08/2005-08/2006

RESEARCH INTERESTS

Environmental and Energy Economics, Economics of Innovation, Behavioral Economics, Applied Microeconometrics, and Program Evaluation

PEER REVIEWED  
ARTICLES

- [1] Kim, Y. J., Soh, M., Cho, S.-H. (2022). Identifying optimal financial budget distributions for the low-carbon energy transition between emerging and developed countries. *Applied Energy*, 326, 119967.  
<https://doi.org/10.1016/j.apenergy.2022.119967>
- [2] Kim, Y. J. (2022). The countervailing effects of stocks of knowledge on low-carbon innovation through international collaboration. *Energy Policy*, 170, 113217.  
<https://doi.org/10.1016/j.enpol.2022.113217>
- [3] Kim, Y. J., Cho, S.-H., & Sharma, B. P. (2021). Constructing efficient portfolios of low-carbon technologies. *Renewable and Sustainable Energy Reviews*, 150, 111515.  
<https://doi.org/10.1016/j.rser.2021.111515>
- [4] Hyun, M., Kim, Y. J., & Eom, J. (2020). Assessing the impact of a demand-resource bidding market on an electricity generation portfolio and the environment. *Energy Policy*, 147, 111918.  
<https://doi.org/https://doi.org/10.1016/j.enpol.2020.111918>
- [5] Kim, Y. J., & Wilson, C. (2019). Analysing Energy Innovation Portfolios from a Systemic Perspective. *Energy Policy*, 134 (2019) 110942.  
<https://doi.org/10.1016/J.ENPOL.2019.110942>
- [6] Kim, Y. J., & Wilson, C. (2019). Analysing Future Change in the EU's Energy Innovation System. *Energy Strategy Reviews*, 24C (2019) pp. 279-299.  
<https://doi.org/10.1016/j.esr.2019.04.012>
- [7] Kim, Y. J., & Brown, M. A. (2019). The impact of domestic energy-efficiency policies on foreign innovation: the case of lighting technologies. *Energy Policy*, 128, 539-552.  
<https://doi.org/10.1016/j.enpol.2019.01.032>
- [8] Kim, Y. J., Husbands Fealing, K., & Klochikhin, E. (2018). Patenting activity in the food safety sector. *World Patent Information*, 55, 27-36.  
<https://doi.org/10.1016/J.WPI.2018.08.005>
- [9] Brown, M. A., Baer, P., Cox, M., & Kim, Y. J. (2014). Evaluating the risks of alternative energy policies: a case study of industrial energy efficiency. *Energy Efficiency*, 7(1), 1-22.  
<https://doi.org/10.1007/s12053-013-9196-8>

BOOK CHAPTERS  
AND REPORTS

- [1] Verdolini, E., Reis, L. A., Drouet, L., Tavoni, M., Kim, Y. J., Bonacorsi, L., ... Edenhofer, O. (2021). The international dimension of the EU low-carbon transition.
- [2] Karakosta, C., Papapostolou, K., Granado, P. C. del, Egging, R., Welisch, M., Hartner, M., ... Johansen, U. (2019). Navigating the roadmap for clean, secure and efficient energy innovation: Final report on SET-Nav policy briefs
- [3] Granado, P. C. del, Welisch, M., Hartner, M., Resch, G., Lumbreras, S., Olmos, L., ... Ansari, D. (2019). Summary Report "SET-Nav-Integrative policy recommendations" Decarbonization the EU's Energy System
- [4] Global Innovation Index 2018 Report published by Cornell University, INSEAD, and the World Intellectual Property Organization: Technology-Specific Analysis of Energy Innovation Systems (with Charlie Wilson)
- [5] Kaye Husbands Fealing, Stanley Johnson, John L. King, and Julia Lane, New Pathways to Research Impact: Case of Food Safety, Cambridge University Press. Chap 9: patenting across businesses(with Evgeny Klochikhin and Kaye Husbands Fealing)

UNDER REVIEW	<p><b>The air quality effects of Uber</b> (with Luis Sarmiento)</p> <p><b>Local and Global Experience Curves for Lumpy and Granular Energy Technologies in Korea</b> (with Donghyun Choi)</p> <p><b>Feasibility trade-offs in decarbonisation of power sector with high coal dependence: A case of Korea</b> (with Jiyong Eom, Minwoo Hyun, Jessica Jewell, and Aleh Cherp)</p> <p>International and intertemporal knowledge spillovers in carbon-free and carbon-efficient technologies (with Elena Verdolini)</p> <p>Generalisable technology-specific indicators for analysing energy technology innovation systems</p> <p>How open are African inventors? Open green technologies and patenting activities in Africa (with Maruf Sanni)</p> <p>Responsiveness of scientific research systems to covid-19 pandemic: an empirical study at the country-level (with Taehyun Jung)</p> <p>Green Growth Policy Inputs and Outputs: A Machine-Aided Analysis of G-7 Countries (with Kyle Herman, Soheil Shayegh, and Jun Xiang)</p>
WORK IN PROGRESS	<p>Is the discovery of oil a blessing or curse in the era of climate change? (with Seong-Hoon Cho)</p> <p>Digitalization signal and corporate valuation (with Francesco Granella and Soheil Shayegh)</p> <p>Cross-sectoral spillovers of clean energy technologies (with Elena Verdolini, Panagiotis Fragkos, and Leonidas Paroussos)</p> <p>Endogenous R&amp;D on clean energy technologies in WITCH model (with Elena Verdolini, Lara Aleluia Reis)</p> <p>The effects of technological diversification and international collaboration on low-carbon innovation in Africa (with Maruf Sanni)</p> <p>Electricity awareness, peer effects, and the adoption of energy efficient lighting technologies (with Jungbae Lee)</p> <p>Carbon dioxide emissions embodied in international trade (with Elena Verdolini and Laura Bonacorsi)</p> <p>The impacts of temperature exposures on innovation (with Jiyong Eom)</p> <p>The impacts of forest fires on environmental voting behaviors (with Kyonggi Min)</p>
TEACHING INTERESTS	<p><b>Microeconomics, Energy Economics, Energy Policy, Environmental Economics, Environmental Policy, and Econometric Policy Evaluation</b></p>
TEACHING EXPERIENCE	<p><b>KDI School of Public Policy and Management</b>, Sejong, South Korea</p> <ul style="list-style-type: none"> <li>• Environmental and Climate Change Policy 09/2022</li> </ul> <p><b>Graduate School of Green Growth, KAIST</b>, Seoul, South Korea</p> <ul style="list-style-type: none"> <li>• STAT Prep 08/2022</li> <li>• STAT Prep/Environmental and Energy Data Analysis 08/2020</li> </ul> <p><b>Georgia Institute of Technology</b>, Atlanta, GA</p> <ul style="list-style-type: none"> <li>• Math and Stat Summer Prep 08/2016</li> </ul> <p><i>Teaching Assistant</i></p>

- PUBP8211: Microeconomics for Public Policy (Dr. Matej Drev) 01/2014-05/2014
- ECON8007: Microeconomics for Public Policy (Dr. Omer Baris) 01/2013-05/2013
- PUBP6116: Microeconomics Policy Analysis (Instructor: Jian Wang) 08/2012-12/2012
- PUBP8211: Microeconomics Theory (Dr. Doug Noonan) 01/2012-05/2012
- POL1101: Government of the U.S. (Dr. Julia Melkers) 08/2011-12/2011

**Texas A&M University**, College Station, TX

*Teaching Assistant*

- AGECE440: Agribusiness Strategic Analysis (Dr. Desmond Ng) 09/2010-12/2010
- AGECE314: Marketing Agricultural Products (Dr. S. Dharmasena) 06/2010-08/2010
- AGECE603: Land Economics (Dr. David Newburn) 01/2010-05/2010

FELLOWSHIPS,  
SCHOLARSHIPS,  
AND AWARDS

- Precourt Fellowship, Stanford Precourt Energy Efficiency Center 2016
- Anne Robinson Clough International Student Fund 2016
- Best Poster Award, Atlanta Conference on Science and Innovation Policy 2015
- National Science Foundation Travel Award (AWARD No. CBET-1539816) 2015
- Sam Nunn Security Program Fellowship, MacArthur Foundation 2014-2015
- Scholarship, Southeast Energy Efficiency Alliance Annual Conference 2014
- Scholarship, Southern Section of Air & Waste Management Association 2012
- National Scholarship in Energy, Ministry of Knowledge and Economy 2009-2011
- Departmental Scholarship, Texas A&M University 2009-2010
- Hanyang University Study Abroad Scholarship 2009

ACADEMIC  
PRESENTATIONS

- 2022
  - Energy Industrial R&D Policy by KAIST (Invited: Scheduled)
  - KDI School-World Bank DIME Conference on Impact Evaluation in Sustainable and Inclusive Development (Scheduled)
  - European Climate and Energy Modelling Platform (ECEMP) 2022 (Scheduled)
  - Korea Environment Institute (Invited) (Scheduled)
  - Empirical Methods in Environmental Economics Research by Sookmyung Women's University (invited)
  - GDLN Blended learning program: Climate Change Mitigation by KDIS and BLS (invited)
  - European Association of Environmental and Resource Economists (EAERE) 2022 (by co-author)
  - 40th International Energy Workshop (IEW), Freiburg, Germany
  - Berlin School of Economics (BSE) workshop on the Effectiveness and Distributional Impacts of Environmental Policy (by co-author)
  - Sustainability and Development Conference 2022 (University of Michigan)
- 2021
  - 2021 Annual SEEDS (Sustainability, Environmental Economics and Dynamics Studies) Workshop
  - 13th Korea Energy Modelling Forum (K-EMF)
  - 26th Annual Conference of the European Association of Environmental and Resource Economists Spatial Data Science Laboratory, University of Seoul (Invited)
  - IEA Workshop on R&D Data Collection and Mission Innovation Ministerial Side Event on Increasing the Efficiency of R&D Policies through Data and Analyses (Invited)
  - Mission Innovation Tracking Progress Workshop: Tracking Clean Energy Innovation Performance through Patent Indicators (Invited)
  - Laboratory for Sustainable Economy and Policy, Graduate School of Environmental Studies, Seoul National University (Invited)
  - 9th Annual Conference of the Italian Association of Environmental and Resource Economists,

## Italy

IRENA Invitation to the closed-door expert workshop, Tracking Innovation Impacts (Exploring the impacts of innovation on offshore wind) (Invited)  
Korea Energy Society, Seoul, South Korea (Invited)  
Green Technology Center (GTC), Seoul, South Korea (Invited)  
Graduate School of Science and Technology Policy, KAIST, Daejeon, South Korea (Invited)  
KAIST College of Business, KAIST, Seoul, South Korea (Invited)

- 2020

Thirteenth Integrated Assessment Modeling Consortium (IAMC) Annual Meeting 2020  
CLOSED-DOOR EXPERT WORKSHOP Tracking Energy Innovation Impacts Framework (TEIIF), IRENA (Invited)  
Korea Energy Economics Institute (KEEI), Ulsan, South Korea (Inviteds)  
Yonsei University, Seoul, South Korea (Invited speaker)  
Korea Institute of Energy Technology Evaluation and Planning (KETEP), Seoul, South Korea (Invited)  
4th Korea Energy Modelling Forum (K-EMF)  
25th Annual Conference of the European Association of Environmental and Resource Economists  
Graduate School of Technology & Innovation Management, Hanyang University, Seoul, South Korea (Invited)  
Exploring National and Global Actions to reduce Greenhouse gas Emissions (ENGAGE) project meeting  
Eighth Annual Conference of the Italian Association of Environmental and Resource Economists, Brescia, Italy

- 2019

Climate and Energy Policy & Strategy Research Group, KAIST College of Business, Seoul, South Korea (Invited) )  
INNOPATHS project meeting, Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany  
Exploring National and Global Actions to reduce Greenhouse gas Emissions (ENGAGE) kick-off meeting, IIASA, Vienna, Austria  
1st Workshop on Climate Economics, Innovation, and Policy: The Economics of Environmental Policy and Innovation, Ottawa, ON Canada (Hosted by Dr. Carolyn Fischer: Canada 150 Chair — Climate Economics, Innovation, and Policy)  
EAERE-FEEM European Summer School in Resource and Environmental Economics: Econometric Approaches for Environmental Policy Evaluation, Venice, Italy  
24th Annual Conference of the European Association of Environmental and Resource Economists (EAERE), Manchester, U.K.  
SET-NAV Final Conference, Brussels, Belgium

- 2018

IEA Innovation Team Meeting, International Energy Agency, Paris, France  
Energy Modelling Platform for Europe (EMP-E) 2018, Brussels, Belgium  
SET-Nav Internal Consortium Meeting, National Technical University of Athens, Athens, Greece  
6th World Congress of Environmental and Resource Economists(WCERE 2018), Gothenburg, Sweden  
41st International Association for Energy Economics(IAEE) Conference, Groningen, the Netherlands  
Enhancing Data Collection on Government and Private Sector Spending for Clean Energy Research and Innovation(Workshop organised in the context of tracking progress in Mission Innovation), Malmo, Sweden  
SET-Nav Internal Consortium Meeting, Comillas Pontifical University, Madrid, Spain

Innovation Indicators to Track Progress of Mission Innovation Workshop, Brussels, Belgium

- 2017
  - SET-Nav Internal Consortium Meeting, DIW Berlin, Berlin
  - Tyndall Assembly Day, Newcastle University, UK
  - International Association for Energy Economics (IAEE) European Conference, Vienna, Austria
  - 23rd Annual Conference of the European Association of Environmental and Resource Economists (EAERE), Athens, Greece
  - Doctoral seminar IAEE international conference (The Economics of Electricity Market), Groningen, the Netherlands
  - Colorado Technology Primer for Economists and Social Scientists (Summer School on the Electricity Grid), Golden, CO (Sloan Foundation)
  - The Centre on Innovation and Energy Demand (CIED) Summer School, University of Sussex, UK
  - 9th Annual Alliance for Research on Corporate Sustainability (ARCS) Research Conference, Rotterdam School of Management (RSM), the Netherlands
  - SET-Nav Internal Consortium Meeting, ETH Zurich, Swiss
  - International Forum on Disruptive Low Carbon Innovations, London, UK
- 2016
  - Association for Public Policy Analysis & Management Research Conference, Washington, DC
  - Grantham Research Institute on Climate Change and the Environment, London, U.K.
  - ETH Academy on Sustainability and Technology 2016, ETH Zurich, Swiss
  - 2016 Behavior, Energy and Climate Change (BECC) Conference, Baltimore, MD
  - Workshops on Original Policy Research (WOPR), Atlanta, GA
  - Energy Expo Georgia Tech, Atlanta, GA
  - Energy Chat: Georgia Tech Energy Club, Atlanta, GA
- 2015
  - Society for Risk Analysis 2015 Annual Meeting, Washington, DC
  - Association for Public Policy Analysis & Management Research Conference, Miami, FL
  - Atlanta Conference on Science, Technology and Innovation Policy, Atlanta, GA
  - International Symposium on Sustainable Systems and Technologies, Dearborn, MI
  - 56th Annual Transportation Research Forum, Atlanta, GA
- -2015
  - Guest Speaker of the PUBP 6201 (Public Policy Analysis: Dr. Marilyn Brown) titled Treatment of Uncertainties with Monte, Atlanta, GA
  - Air & Waste Management Association (A&WMA) Annual Meeting and Technical Conference, Biloxi, MS

STUDENT  
MENTORING &  
ADVISING

Trudie Dockerty, Thanh Doan, and Rhosanna Jenkins (University of East Anglia, Norwich, U.K.)  
Minwoo Hyun (KAIST & University of California - Santa Barbara)  
Donghyun Choi (KAIST & Georgia Institute of Technology)  
Jintae Kim (KAIST & Seoul National University)  
Moonwon Soh (University of Florida)  
Kyonggi Min (KDI School)

Tae Sung Yoon, Sangmin Lee, Moonyoung Kim, Kyrana Adithyaningrum, Alice Patrick Mfugale, Ingyung Jo (KDI School)

MILITARY SERVICE *Military Service, Auxiliary Police Officer, South Korea* 2002-2004

ACADEMIC SERVICES Guest Editor: PLOS ONE

Reviewer: Energy Economics; The Energy Journal; Environmental Research Letters; Energy Efficiency; Energy Policy; Economics of Innovation and New Technology; Environment, Development and Sustainability; Transportation Research Part D: Transport and Environment; Journal of Cleaner Production; International Journal of Environmental Research and Public Health; Renewable & Sustainable Energy Reviews; Journal of Energy Engineering; Sustainability

Expert Review of the First and Second Order Draft of the Working Group III (WGIII) Contribution to the IPCC Sixth Assessment Report (AR6), ACEEE Summer Study on Energy Efficiency in Buildings; Annual Alliance for Research on Corporate Sustainability (ARCS) Research Conference; Proceedings of ISSST(International Symposium on Sustainable Systems and Technologies); Mandela Washington Fellowship

FUNDING AND GRANTS Pyeongtaek Business Agency (PI: 20 Million KRW)

- PROFESSIONAL MEMBERSHIPS
- American Economic Association (AEA)
  - The European Association of Environmental and Resource Economists (EAERE)
  - Association of Public Policy Analysis and Management (APPAM)
  - The International Association for Energy Economics (IAEE)
  - Italian Association of Environmental and Resource Economists (IAERE)

REFERENCES AVAILABLE TO CONTACT

**Dr. Marilyn A. Brown**, Ph.D. Advisor

(e-mail: [Marilyn.Brown@pubpolicy.gatech.edu](mailto:Marilyn.Brown@pubpolicy.gatech.edu))

- Regents' and Brook Byers Professor, Climate and Energy Policy Laboratory, Georgia Institute of Technology
- D.M. Smith Building, 685 Cherry Street, Room 312, Atlanta, GA 30332

**Dr. Elena Verdolini**

(e-mail: [elena.verdolin@eiee.org](mailto:elena.verdolin@eiee.org))

- Senior Scientist & Professor at the Università degli Studi di Brescia, RFF-CMCC European Institute on Economics and the Environment (EIEE),
- Via Bergognone, 34, 20144 Milano (MI), Italy

**Dr. Charlie Wilson**

(e-mail: [charlie.wilson@eci.ox.ac.uk](mailto:charlie.wilson@eci.ox.ac.uk))

- Professor, Professor of Energy and Climate Change at the Environmental Change Institute, School of Geography and the Environment, and Jackson Senior Research Fellow at Oriel College,
- Oxford University Centre for the Environment, University of Oxford, South Parks Road, Oxford, OX1 3QY, United Kingdom

**Dr. Seong-Hoon Cho**

(e-mail: [scho9@utk.edu](mailto:scho9@utk.edu))

- Professor, Department of Agricultural and Resource Economics, University of Tennessee, Knoxville
- 314A Morgan Hall, Knoxville, TN 37996-451

**Dr. Jiyong Eom**

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