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NBER-Spelman College Mentoring Program，

Dear organizers,

My name is Huan Li, and I am an Assistant Professor of Economics at North Carolina Agricultural and Technical State University. My research field is environmental economics, with special focuses on environmental justice and environmental policy effectiveness. My research mainly relies on causal inference models using administrative data, secondary data, and satellite-retrieved data.

In the past, I applied for several grants to the NSF and other external organizations, including:

1. PI (with Co-PI: Khanna, N.), Excellence in Research: Environmental Justice and the Multigenerational Persistence of Environmental Exposure. NSF, ($443,186, 2021, under review)
2. Co-PI (with PI: Khanna, N.), Environmental Justice and the Multigenerational Persistence of Environmental Exposure. Washington Center for Equitable Growth, ($73,000, 2021, not funded)
3. Co-PI (with PI: Lee, S.; Co-PI: Liang, C.), Investigating Causes and Effects of Food Insecurity for Seniors in US Food Deserts. USDA – University of Kentucky Center for Poverty Research, ($250,000, 2020, not funded)
4. Co-PI (with PI: Liang, C.), AI Institute: Integrated Design for Equitable Agricultural System. NSF, ($20 million, 2020, not funded)

The contact information for the Dean:

Dr. Kevin L. James, CPA
Dean, Willie A. Deese College of Business and Economics
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Craig Hall 401
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Project Title: Environmental Justice and the Multigenerational Persistence of Environmental Exposure

Overview:
Air quality in the United States has improved substantially over time, yet there remains a systematic pattern in the spatial distribution of pollution: the most polluted neighborhoods from almost four decades ago still see relatively worse air quality (Colmer et al., 2020). There is ample evidence from the early 1980s (Bullard, 1983) through the present (Banzhaf et al., 2019; Zhang et al., 2021) that minority and low-income populations are disproportionately located in neighborhoods with poor environmental quality. This begs the question of multigenerational persistence in environmental exposure. Although the environmental equity literature documents disproportional exposures among different demographic groups it lacks a serious consideration of multigenerational persistence in exposure which limits its policy applications to improving social equity. This proposed project aims to fill this gap with an ultimate objective of informing public policy and suggesting tools that erode the multigenerational persistence of environmental inequality and trigger a way out of the low environmental quality trap that underprivileged communities face.

I have developed four short-term objectives to support the goals and incorporate research, education, and extension aspects: (1) document the multigenerational persistence of environmental exposure using approximately four decades of individual data; (2) examine whether there is a racial gap in the multigenerational persistence of environmental exposure, focusing on the gap between the African American and white community; (3) identify the underlying processes and factors that drive the racial disparities in environmental exposure over generations using an extension of a recent residential sorting model; and (4) record oral history to document lived experiences in the context of environmental justice u sing a pilot sample from the African American community in North Carolina. The long-term goals of our proposal are to (1) identify the factors underlying persistence in environmental inequities, with a view to discussing policy development in the context of environmental equity and intergenerational mobility; and (2) to demonstrate the value of documenting oral history vis-à-vis environmental justice.

Intellectual Merit:
This project will shed light on the extent to which the effects of childhood environmental inequities influence contemporary economic decisions and outcomes. Understanding the effect of childhood environmental experience on adulthood economic and environmental outcomes is fundamentally important because it can explain how people value local amenities when choosing residential location. This project expects to add that knowledge to the environmental and social inequality literature and thus inform public policies. The project also contributes to the extensive literature on intergenerational mobility, as a number of economic and epidemiological studies have suggested that elevated pollution exposure can translate into health, educational, and eventually income inequity.

Broader Impacts:
The broader impacts of this proposal fall into two aspects: (1) Educational Training and Social Equity: The proposed project will provide research and training opportunities in the social, behavioral, and economic sciences for several underrepresented minority and women students. In addition, the project team will include one underrepresented post-doctoral fellow. I will provide academic training to these team members for independent research in economics and public policy analysis. The proposed policy simulation and analysis is an important step toward improving the well-being of individuals in society and crucial for delivery of effective public policy aimed at reducing racial disparities in the United States. (2) Community Voices on Environmental Justice: The pilot oral history documentation of lived experiences in the context of environmental justice will form the basis for a subsequent national oral history project that documents the history of the environmental justice movement in the United State through individual experiences.

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ACADEMIC APPOINTMENTS

Assistant Professor of Economics, North Carolina A&T State University	2019 –
Faculty Affiliate, Center of Excellence in Entrepreneurship and Innovation	2020 –
Visiting Assistant Professor of Economics, SUNY Binghamton University	2018 – 2019
Postdoc Fellow, Agricultural Economics Department, Purdue University	2015 – 2018

EDUCATION

Ph.D. Economics, State University of New York at Binghamton, 2015
M.A. Economics, State University of New York at Binghamton, 2011

RESEARCH FIELDS

Primary: Environmental Economics and Justice
Secondary: Urban and Regional Economics

PUBLICATIONS

1. "The Environmental Justice and the COVID-19 Pandemic: Evidence from New York State," with Ruohao Zhang and Neha Khanna. **The Journal of Environmental and Economics Management**, 2021.

2. "The Effect of Blockchain Technology on Supply Chain Sustainability Performances," with Arim Park. **Sustainability**, 2020.

3. "Money Supply and Exports: A Greater Mekong Subregion Perspective," with David Chen. **Journal of Academy of Business and Economics**, 2020. (Outstanding Research Paper Award, IABE-2020).

4. "Does Voluntary Self-Regulation Provide Regulatory Relief? A Lesson from the Responsible Care Program in the United States," with Neha Khanna. **The Journal of Law & Economics**, 2018.

5. "The Effects of Third Party Certification on Voluntary Self-regulation of Accidents in the US Chemical Industry," with Neha Khanna and Martina Vidovic. **Journal of Regulatory Economics**, 2018.

6. "An Analysis of the ENERGY STAR Program in Alachua County, Florida," with Carmen Carrión-Flores. **Ecological Economics**, 2017.

WORKING PAPERS

1. "Spatial Spillovers in Pollution: Air Quality Impacts of Shale Gas Development in Pennsylvania," with Ruohao Zhang, Neha Khanna, Alan Krupnick, Elaine Hill, Daniel Sullivan. (*Journal of the Association of Environmental and Resource Economists: Revise and Resubmit*)

    - Media Coverages:
      Greensboro News & Record's; Resources for the Future; Environmental Health News; 12 NEWS WBNG-TV; Binghamton University News

2. "Firm Behavior Under Unanticipated Change in Regulation: Power Plant Emissions During the 2018 – 2019 Federal Government Shutdown," with Ruohao Zhang and Neha Khanna. (*The Journal of the Association of Environmental and Resource Economists: Revise and Resubmit*)

3. "Small Business Adaptation to Natural Disasters: the Role of Community Social Capital," with Maria Marshall.

4. "Environmental Justice and the Multigenerational Persistence of Environmental Exposure," with Ruohao Zhang and Neha Khanna.

5. "An Application of Spatially Harmonized U.S. Socioeconomic Database: A Case Study of Chicago," with I. Kumar, Y. Kim, L.Beaulieu, M. Delgado, R. Florax, T. Hertz, T. Smith, B. Waldorf, M. Wilcox, and A. Zhalnin

6. "Socioeconomic Heterogeneity of Racial Income and Mobility Gaps in the U.S.," with M. Delgado, R. Florax, B. Waldorf, T. Smith, & I. Kumar

7. "Mobility in Economic Status Among People and Places," with M. Delgado, R. Florax, B. Waldorf, T. Smith, & I. Kumar

WORK IN PROGRESS

1. "Public Voluntary Programs and ESG Performance" with Arim Park

2. "The Environmental Justice of Public Water Quality" with Huayan Geng.

3. "The Consequences of the COVID-19 Pandemic on Self-Employment Amongst Hispanics" with Alfredo A. Romero.

GRANTS

1. PI (with co-PI: Khanna, N.), Excellence in Research: Environmental Justice and the Multigenerational Persistence of Environmental Exposure. NSF, ($443,186, 2021, under review)
2. Co-PI (with PI: Khanna, N.), Environmental Justice and the Multigenerational Persistence of Environmental Exposure. Washington Center for Equitable Growth, ($73,000, 2021, not funded)
3. PI, Food Deserts and Food Security among Seniors in the United States. NC A&T State University Seed Grant, ($5,000, 2020, funded)
4. Co-PI (with PI: Lee, S.; Co-PI: Liang, C.), Investigating Causes and Effects of Food Insecurity for Seniors in US Food Deserts. USDA – University of Kentucky Center for Poverty Research, ($250,000, 2020, not funded)
5. Co-PI (with PI: Liang, C.), AI Institute: Integrated Design for Equitable Agricultural System. NSF, ($20 million, 2020, not funded)

AWARDS

1. Summer Research Grant Award, Deese College of Business and Economics, NC A&T State University (2021)
2. Research Competition Award (with Park, A.), The Effect of Blockchain Technology on Supply Chain Sustainability Performances, The FinTech Center at Morgan State University Blockchain Research Center, (2020)
3. Funded Professional Activity, Inter-university Consortium for Political & Social Research, University of Michigan, (2016)
4. Research Excellence Award in Sustainable Communities Trans-disciplinary Area, Binghamton University, (2014)
5. Young Professional and Graduate Student Travel Award, American Agricultural Economic Association, (2014)

CONFERENCE & WORKSHOP

2022 American Economic Association (AEA) Virtual;

2021 American Agricultural Economic Association (AAEA) Virtual;

Northeastern Agricultural and Resource Economics Association (NAREA) Virtual;

The American Economic Association CSWEP CeMENT Workshop, January 5-7, 2021 virtual;

AERE-session at the Midwest Economic Association meetings, March 22-28, 2021 virtual*;

2020 "The Geography of Health: Hunger and Nutrition in America" at the Centers of Excellence Research Symposium, December 11;

Invited Panelist by NAREA–"Advice on Engaging with the COVID-19 Crisis through Our Work"

Association of Environmental and Resource Economists (AERE) Virtual ×2;

Northeastern Agricultural and Resource Economics Association (NAREA) Virtual ×2;

Western Economic Association International (WEAI)-AERE Virtual*;

American Agricultural Economic Association (AAEA) Virtual;

Southern Economic Association (SEA) Virtual

2019 American Agricultural Economic Association (AAEA), Atlanta, GA*;

Northeastern Agricultural and Resource Economics Association (NAREA), Portsmouth, NH*

2018 Invited by RUPRI–Rural Poverty Fifty Years After *The People Left Behind*, A Research Conference Looking Backward and Forward, Washington DC;

IBM Blockchain Workshop Certification, Binghamton University, NY;

Heartland Environmental and Resource Economics Workshop, UIUC, IL**

2017 Association of Environmental and Resource Economists (AERE), Pittsburgh, PA

2016 Workshop of China Multi-generational Panel Datasets, UCLA, CA**;

NARSC Special Sessions of Poverty: People, Places, and Policy, Minneapolis, MN;

Advanced Topics in Space, Health and Population Economics Seminar, Purdue University, IN

2015 Applied Economics Regional & Urban Studies, Graduate Student Summit, UIUC, IL;

Advanced Topics in Space, Health and Population Economics Seminar, Purdue University, IN

2014 Southern Economic Association (SEA) – AERE Session, Atlanta, GA;

American Agricultural Economic Association (AAEA), Minneapolis, MN;

Eastern Economic Association (EEA), Boston, MA

*paper presented by coauthors; **participated as an attendee

TEACHING

- *At NC A&T State University*

ECON 200 – Principles of Microeconomics	Fall 2019 – Spring 2022
ECON 485 – Environmental Economics	Fall 2020
ECON 606 – Economics Foundations for Graduate Students	Spring and Fall 2021
ECON 311 – Intermediate Microeconomics Theory	Fall 2021

SERVICE

- *To the Discipline:*

  Master's Thesis Award Committee, Northeastern Agricultural and Resource Economics Association 2020–2023

- *Journal Referee for:*

  Journal of Environmental Economics and Management; Empirical Economics; Sustainability; Economics Bulletin; Journal of Regulatory Economics

- *To the Department and University*

  Economics Departmental Journal Ranking Committee, 2021

  Deese COBE Research Committee, 2021 –

  Assurance of Learning Committee, College of Business and Economics, 2021–2026

  New Faculty of Economics Search Committee, 2021

  Co-advisor of Aggie Economic Association, 2020–

  Economics Curriculum and Course Revision Committee, 2019

  Early Adopter for the UNC System's Course Enhancement Initiative, Fall 2020

MEMBERSHIP

American Economic Association; Association of Environmental and Resource Economists; American Agricultural Economic Association; Southern Economic Association; Northeastern Agricultural and Resource Economics Association; Omicron Delta Epsilon (OΔE) Faculty Member