Yining Wang

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EDUCATION

M.Policy (Expected), Duke University 08/2022-05/2024

- ✓ **Program |** International Master of Environmental Policy: Duke Kunshan University
- ✓ **Scores |** GPA 4.00/4.00 (By the third semester); **TOEFL:** 113 (R30, L29, W29, S25); **GRE:** 326 (V159, Q167)
- ✓ **Courses |** Environmental Economics, Environmental GIS, Stats and Program Evaluation, Environmental Policy Analysis, Environmental Economics Policy Practicum, etc.
- ✓ **Research Interest |** Environmental economics and policy, economics of technological change.

B.Eng, South China University of Technology (SCUT) 09/2018-07/2022

- ✓ **Major |** Environmental Engineering (Full English Class)
- ✓ **Scores | GPA:** 3.61/4.00; **Ranking:** 5/13
- ✓ **Courses |** Environmental Science, Environmental Economics, Design and Installation of Environmental Engineering, Calculus, Linear Algebra, Probability and Mathematical Statistics, Physical Chemistry, etc.
- ✓ **Undergraduate Thesis |** *Distributive economic efficiency of air pollution total emission control system in China: an empirical study based on unit abatement cost.* Used Stata for econometric analysis (Vector autoregression and quantile regression) and visualization of end-of-pipe air pollution control cost in China's industrial sector between 2003-2015. Discussed the heterogeneity among provinces using unit abatement cost as an indicator. Awarded excellent graduation thesis (15%).

RESEARCH EXPERIENCE

Research Assistant | Prof. Jingbo Cui | Duke Kunshan University (DKU) 01/2023-Now

- ✓ *Working paper: Global Trend in the Innovation of Carbon Capture, Utilization and Storage (CCUS) Technology.* Analyzed the alignment of current global invention and diffusion in CCUS with the net-zero transition pathway. Constructed a unique panel of patent data by application sector and technological readiness level using machine learning technique (Random Forest classification model, Python). Estimated the drivers of CCUS innovation on country level using regression analysis (Stata). Visualized data and results (Stata, R).

Research Intern | Green Finance Forum of 60 | Duke Kunshan University 07/2022-01/2023

- ✓ *Carbon market report*. Reviewed literature and the status quo of financial derivatives application in Chinese carbon market for the published report *The Development and Improvement of the Financial Attributes of the ETS Market*. Drafted a systematic analysis on the potential opportunities and risks of each derivative.
- ✓ *ESG Indicator system*. Led a group of 6 student interns to construct a petrochemical industry-specific, quantitative ESG indicator system for Chinese firms as a component of a client-based project. Established project timeline, labor division and technical framework. Reviewed, compared and analyzed domestic ESG reports in petrochemical industry. Presented an indicator spreadsheet and a 15-page report to the client.

Research Assistant | Environmental Economics Research Group | SCUT 10/2020-07/2022

The research group is led by Prof. Li Liu and Prof. Dan Wu, which focuses on the efficiency and inequality issues in energy economics.

- ✓ *Cost-estimation.* Independently conducted the cost-estimation module of the government project *Cost-Benefit Analysis of Air Pollution Control Strategies in Chengdu Province (2018-2020)*. Collected the investment and O&M cost of pollution control devices from literature and project reports. Constructed a cost-estimation module using Excel for industrial, transportation, and residential sectors. Performed sensitivity analysis and marginal pollutant abatement cost analysis using Monte-Carlo analysis and quantile regression. Cooperated with two graduates, and contributed one-third to a 105-page report.
- ✓ *Weekly seminar.* Presented literature review and methodology presentation in weekly group seminars. Supported the knowledge base of the group by sorting the discussed research methods into written documents. Responsible for reporting frontier progresses in quantile-quantile regression method. Assisted group members in data collection and literature reviews.

Research Intern | Mangrove Conservation Foundation (MCF) | Online 05/2021-06/2022

MCF is the first non-governmental public funding environmental foundation in China, aiming at wetland conservation. Hydrological engineering is an often-overlooked issue in mangrove restoration which China specifically lacks experience in.

- ✓ *Case study.* Searched and sorted the cases of hydrological engineering from global practice, including websites, manuals, guidelines, literature and governmental reports. Constructed the knowledge base for MCF by classifying the principles, restoration design methods and construction experiences.
- ✓ *Technical report.* Independently drafted a 21-page technical guideline for MCF. Presented the theoretical basis of hydrological restoration methods. Demonstrated the logic to choose among different hydrological restoration approaches according to the degree of data availability. The guideline is put into practice as a methodology reference for future MCF restoration projects in Southeast Asia.
- ✓ *Equipment design*. Designed the prototype of an environmentally friendly and cost-effective seed barrier for a restoration program in Fucheng, Zhanjiang city to prevent invasion species using local green materials.

Lab Assistant | Research group of Prof. Yuan Ren | SCUT 03/2020-03/2021

- ✓ *Lab experiments.* Main contributor of zebrafish breeding, anatomy and motor behavior analysis in the project *The toxicology effect of Pharmaceuticals and Personal Care Products (PPCPs) on zebrafish*. Kept maintenance of the breeding system, dissected the organs of adult zebrafishes, and took microscopic photos of larvae.
- ✓ *Literature review.* Reviewed the research methods and results of relevant literature about PPCPs toxicology experiments on zebrafish. Specifically researched on the toxicological effect of citalopram on the morphology of zebrafish embryo and larvae and concluded into a 7-page document.

OTHER

Leadership

Project Leader | Mangrove Conservation Project of FRESH Environmental Association 08/2019-08/2020

- ✓ Awarded Guangdong Outstanding Volunteer Project in 2019 and 2020. The team carries out three regular activities: Mangrove lectures for local elementary students in Xinzao school, three phases of mangrove field trips for college students, and a "breeding & replanting" event of mangrove propagules.

Teaching Experience

Teaching Assistant | ECON 201 & 202: Intermediate Microeconomics | DKU 01/2023-12/2023

- ✓ Held recitation sessions and office hours. Wrote TA review notes for students and provided resources for extra exercise. Responsible for homework and exam grading.

Highlighted Course Projects

- ✓ Environmental GIS: Estimated the potential mitigation of storm surge losses through mangrove restoration in Guangzhou, China using ArcGIS Pro. Presented maps of storm risk and restoration potential areas.
- ✓ Environmental Policy Analysis: Led a 4-member team. Conducted policy analysis and proposed policy alternatives for emission abatement of waste-to-energy plants in Beijing. Constructed a simple integrated assessment model for quantitative cost-benefit analysis and outcome projection for each alternative.
- ✓ Environmental Sciences: Led a 5-member team. Performed meta-analysis on the environmental risk of different carbon storage technologies. Identified research frontier, gap and heterogeneity across technologies.

Languages

- ✓ Mandarin Chinese (Native), Cantonese (Native), English (Academic), Japanese (Fluent)

Software skills

- ✓ *Programming:* Python (sklearn, NumPy, selenium, geopy), R (caret, Keras)
- ✓ *Data analysis:* Stata, R, ArcGIS Pro, Excel
- ✓ *Engineering drawings:* SolidWorks, AutoCAD
- ✓ *Presentation tools:* LaTeX, Tableau, R Markdown