Yuanjian Zhang

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EDUCATION

Peking University, Beijing, CN

Bachelor of Science in Environmental Science *Sep. 2019 - Jul. 2023 (expected)*

- Research Interests:
  Air Pollution Modeling, Exposure Assessment, Atmospheric Chemistry, Aerosol-Climate Interaction
- GPA: 3.68/4.0 (average before 4th grade)

RESEARCH EXPERIENCE

Georgia Institute of Technology, Atlanta, GA *School of Civil and Environmental Engineering*

Laboratory for Atmospheric Modeling, Diagnostics and Analysis, LAMDA(λ)

(Prof. Armistead Russell's Group, co-advised by Prof. Amir Hakami [Carleton University])

RA: CO_2-reduction's co-benefit quantification for China using CMAQ-Adjoint *Aug. 2022 - Present*

- Learnt the concept of Adjoint model and its implementation
- Evaluated CMAQ-Adjoint model forward running results with observation in China
- Extrapolated province-level baseline mortality rate data for 2017
- Running backward sensitivity Adjoint model regarding health impact endpoint

Peking University, Beijing, CN *College of Urban and Environmental Sciences*

Numerical Modeling of Environmental Pollution (Course Work, Advised by Prof. Jianmin Ma)

Course Work: Spatial and temporal analysis of North-China air quality in summer *Mar. 2021 - Jun. 2021*

- Learnt to use CMAQ model to simulate regional air quality
- Conducted time-series evaluation of modeling results with observation in simulated region
- Compared the performance of WRF-Chem and CMAQ modeling on North-China air quality in summer

Peking University, Beijing, CN *College of Urban and Environmental Sciences*

Laboratory for Earth Surface Processes (Prof. Shu Tao's Group)

Leading: Sector-wise simulation of air quality and its health impact in South Asia *Oct. 2020 - Present*

- Integrated PKU-Fuel emission inventory for model input and analyzed data with MATLAB and R
- Evaluated modeling results with observation, satellite assimilation and literature data
- Simulated contributions of sector-wise emission to ambient $PM_{2.5}$ in South Asia with WRF-Chem model
- Estimated premature deaths caused by $PM_{2.5}$ exposure using IER, GEMM-5COD and GEMM-NCD model

ACADEMIC PROGRAM & AWARDS

Academic Programs:

- POPs and CEACs in the Arctic under Climate Change [IAS-HIT-eSummer] *Jul. 2021 - Aug. 2021*
- China's National Basic Discipline Elite Cultivation Program *Oct. 2020 - Apr. 2023 (expected)*

Awards:

- Award for Academic Excellents [Peking University] *Dec. 2021*
- Silver medal for 32th Chinese Chemistry Olympiad [32th CChO] *Dec. 2018*

SKILLS

Program Skills: MATLAB, Python, R, QGIS, TensorFlow

Numerical Models: WRF-Chem, CMAQ

Language: TOEFL 108, GRE 332 + 3.5