**Madankui Tao**

Lamont-Doherty Earth Observatory (LDEO)

Department of Earth and Environmental Sciences

Columbia University, New York, NY 10027, USA

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**Education**

**Columbia University, New York, NY, USA** Sep. 2019 - May 2024 (Expected)

*Doctor of Philosophy*, Earth and Environmental Sciences

**University of Wisconsin-Madison, Madison, WI, USA** Sep. 2015 - May 2019

*Bachelor of Science with Honors*, Environmental Science

*Certificate*, German

*Senior Thesis*, Comparison of TROPOMI NO2 retrievals to ground-based measurements in Los Angeles

**Awards and Honors**

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| 2019 | Dean’s Fellowship of Columbia University |
| Sep. 2015 - May 2019 | Dean’s List of University of Wisconsin-Madison |
| 2018 | Undergraduate Air Quality Research Award |
| 2018 | Hilldale Undergraduate/Faculty Research Fellowship |
| 2017 | Pisk and Ronda Broatch Family Award for German Studies |

**Research Experience**

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| Sep. 2019 - Present | Graduate Research Assistant (Advisor: Arlene Fiore), Columbia University |
| Aug. 2017 - May 2019 | Undergraduate Research Assistant (Advisor: Tracey Holloway), University of Wisconsin-Madison |
| Jan. 2017 - May 2017 | Undergraduate Research Assistant (Advisor: Ankur Desai), University of Wisconsin-Madison |

**Teaching Experience**

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| Fall 2020 | Teaching Assistant, Research Computing in Earth Sciences, Columbia University |
| Summer 2016 | Teaching Assistant, Introductory Biology, Sichuan University |

**Work Experience**

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| Sep. 2016 - May 2019 | Office Assistant and Facilitator, Wisconsin Union Training Resource Center, Madison, WI, USA |
| Aug. 2017 - Sep. 2017 | Orientation Assistant, UW-Madison International Student Services, Madison, WI, USA |
| Jan. 2016 - July 2017 | Campus Representative, Sichuan University & Xi’an Jiaotong University Summer School, Madison, WI, USA |

**Publications**

***Published***

1. Abel, A., Holloway, T., Martínez-Santos, J., Harkey, M., **Tao, M.**, Kubes, C. & Hayes, S. (2019). The air quality-related health benefits of energy efficiency in the United States. *Environmental Science & Technology*. 53. doi: 10.1021/acs.est.8b06417.

**Presentations**

***Invited Talks***

1. Investigate summertime ozone sensitivity over northeast U.S., *Solutions for Pollutions Seminar*, Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY, USA, July 2020.
2. Investigating changes in ozone formation chemistry during summertime pollution events over the Northeastern U.S., *OWLETS Tag up call* organized by Maryland Department of the Environment, August 2020.

***Conference Presentations***

1. Study tropospheric ozone formation from space (oral), *First Year Graduate Colloquium*, Lamont-
2. Doherty Earth Observatory, Columbia University, Palisades, NY, USA, April 2020.
3. Comparison of TROPOMI NO2 retrievals with ground-based measurements in Los Angeles (poster), *2019 UW-Madison Annual Undergraduate* *Symposium*, Madison, WI, USA, April 2019.
4. Comparison of TROPOMI NO2 retrievals with ground-based measurements in California (poster), *AGU Fall 2018 Meeting*, Washington D.C., USA, December 2018.
5. Relating energy efficiency with air quality and health in the United States (poster), *NASA HAQAST4 Meeting*, Madison, WI, USA, July 2018.
6. Predicting the role of plant functional type on net forest productivity and mortality using ecosystem models and informatics in the Predictive Ecosystem Analyzer (PEcAn) (poster), *2017 UW-Madison Annual Undergraduate Symposium*, Madison, WI, USA, April 2017.

**Skills**

**Languages:** Chinese (Native); English (Professional); German (Conversational)

**Programming Languages:** Python (Professional); MATLAB (Intermediate); R (Intermediate)

**Earth Science Data Analysis**: NCAR Command Language (Professional); ArcGIS (Professional); Interactive Data Language (Intermediate); Environment for Visualizing Images (Basic)