

## CURRICULUM VITAE

### Mike Zhongyu He

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#### **PERSONAL DATA**

Department of Environmental Medicine and Public Health  
Icahn School of Medicine at Mount Sinai  
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#### **EDUCATION**

2020/Present	Icahn School of Medicine at Mount Sinai, New York, New York <b>Postdoctoral Fellow, Environmental Medicine and Public Health</b> Advisors: Drs. Itai Kloog and Maayan Yitshak-Sade
2015/2020	Columbia University, New York, New York <b>Doctor of Philosophy, Environmental Health Sciences</b> <b>Columbia Climate and Health Program</b> Advisors: Drs. Marianthi-Anna Kioumourtzoglou and Patrick L. Kinney Dissertation title: <i>Air pollution and adverse health effects: Assessing exposure windows and sensitivity to modeling choices</i>
2015/2018	Columbia University, New York, New York <b>Master of Philosophy, Environmental Health Sciences</b>
2014/2015	Johns Hopkins University, Baltimore, Maryland <b>Graduate Certificate, Risk Sciences and Public Policy</b>
2014/2015	Johns Hopkins University, Baltimore, Maryland <b>Master of Health Science, Environmental Health Sciences</b> Advisor: Dr. Ana Navas-Acien
2013/2013	Johns Hopkins University, Baltimore, Maryland <b>Certificate, Advanced Health Sciences Chinese</b>
2010/2014	Johns Hopkins University, Baltimore, Maryland <b>Bachelor of Arts with Honors</b> Majors: Public Health Studies/Earth & Planetary Sciences Minors: Music/Global Environmental Change & Sustainability

## **HONORS AND AWARDS**

- 2015 Induction to the Delta Omega Honorary Society, Alpha Chapter, Johns Hopkins Bloomberg School of Public Health
- 2015 Recipient of the AAAS/Science Program for Excellence in Science, American Association for the Advancement of Science

## **FUNDING**

- 2020 Travel Award (Registration Fee Waiver), 32<sup>nd</sup> Annual Conference of the International Society for Environmental Epidemiology
- 2019 Student Conference and Leadership Experience Award (\$800), Columbia Mailman School of Public Health
- 2019 HAQAST5 Travel Award (\$1,500), NASA Health and Air Quality Applied Sciences Team Meeting
- 2018 Teaching Observation Fellowship (\$2,000), Center for Teaching and Learning, Columbia University
- 2018 Student Conference Travel Award (\$900), Columbia Mailman School of Public Health
- 2018 Ruth L. Kirschstein National Research Service Award (F31; \$60,272), National Institute of Environmental Health Sciences  
Title: *Assessing Current and Future Health Impacts of Fine Particulate Matter in China and the United States*
- 2017/2019 Sasakawa Young Leaders Fellowship (\$3,750), The Ryoichi Sasakawa Young Leaders Fellowship Fund
- 2016 Weatherhead Fellowship (\$1,500), Weatherhead East Asian Institute, Columbia University
- 2011/2014 Bloomberg Scholarship (\$117,550), Johns Hopkins University

## **PUBLICATIONS**

### *Peer-Reviewed Research Articles*

20. Ma R, Ban J, Wang Q, Zhang Y, Yang Y, He MZ, Li S, Li S, Shi W, Li T: Random Forest Model based Fine Scale Spatiotemporal O<sub>3</sub> Trends in the Beijing-Tianjin-Hebei region in China, 2010 to 2017. Environmental Pollution 116635. **2021**.

19. Liu S, Xing J, Westervelt DM, Liu S, Ding D, Fiore AM, Kinney PL, Zhang Y, **He MZ**, Zhang H, Sahu SK, Zhang F, Zhao B, Wang S: Role of emission controls in reducing the 2050 climate change penalty for PM<sub>2.5</sub> in China. Science of the Total Environment 765: 144338. **2021**.
18. Sun Z, Chen C, Yan M, Shi W, Wang J, Ban J, Sun Q, **He MZ**, Li T: Heat wave characteristics, mortality and effect modification by temperature zones: a time-series study in 130 counties of China. International Journal of Epidemiology. **2020**.
17. Fang X, Liu W, Ai J, **He M**, Wu Y, Shi Y, Shen W, Bao C: Forecasting incidence of infectious diarrhea using random forest in Jiangsu Province, China. BMC Infectious Diseases 20:222. **2020**.
16. **He MZ**, Kinney PL, Li T, Chen C, Sun Q, Ban J, Wang J, Liu S, Goldsmith J, M-A Kioumourtoglou: Short- and intermediate-term exposure NO<sub>2</sub> and mortality: A multi-county analysis in China. Environmental Pollution 261: 114165. **2020**.
15. Zhang Y, Li T, Ma R, Yin Z, Wang J, **He MZ**, Xu D, Gao X, Wang Q, Kraus VB, Lv Y, Zhong Y, Kinney PL, Shi X: Long-term exposure to ambient fine particulate matter and fasting blood glucose level in a Chinese elderly cohort. Science of the Total Environment 717: 137191. **2020**.
14. Chen C, Li T, Wang L, Qi J, Shi W, **He MZ**, Sun Q, Wang J, Zhu H, Shi X: Short-term Exposure to Fine Particles and Risk of Cause-Specific Mortality – China, 2013-2018. China CDC Weekly 1(1): 8-12. **2019**.
13. Jin X, Fiore AM, Civerolo K, Bi J, Liu Y, van Donkelaar A, Martin RV, Al-Hamdan M, Zhang Y, Insaf TZ, Kioumourtoglou M-A, **He MZ**, Kinney PL: Comparison of multiple PM<sub>2.5</sub> exposure products for estimating health benefits of emission controls over New York State, USA. Environ Res Lett 14 084023. **2019**.
12. Westervelt DM, Ma C, **He MZ**, Fiore AM, Kinney PL, Kioumourtoglou M-A, Wang S, Xing J, Ding D, Correa G: Mid-21<sup>st</sup> century ozone air quality and health burden in China under emissions scenarios and climate change. Environ Res Lett 14 074030. **2019**.
11. Yang Y, **He MZ**, Li T, Yang X: MRI combined with PET-CT of different tracers to improve the accuracy of glioma diagnosis: a systematic review and meta-analysis. Neurosurg Rev 42: 185-195. **2019**.
10. Li T, Guo Y, Liu Y, Wang J, Wang Q, Sun Z, **He MZ**, Shi X: Estimating mortality burden attributable to short-term PM<sub>2.5</sub> exposure: A national observational study in China. Environment International 125: 245-251. **2019**.
9. Chen C, Xu D, **He MZ**, Wang Y, Du Z, Du Y, Qian Y, Ji D, Li T: Fine particulate constituents and mortality: a time-series study in Beijing, China. Environ Sci Technol 52, 11378-11386. **2018**.
8. Zhang Y, Cui L, Xu D, **He MZ**, Zhou J, Han L, Li X, Li T: The association of ambient PM<sub>2.5</sub> with school absence and symptoms in schoolchildren: a panel study. Pediatric Research 84: 28-33. **2018**.
7. Sun Q, Wang W, Chen C, Ban J, Xu D, Zhu P, **He MZ**, Li T: Acute effect of multiple ozone metrics on mortality by season in 34 Chinese counties, 2013-2015. Journal of Internal Medicine 283 (5), 481-488. **2018**.
6. Wang Q, Wang J, **He MZ**, Kinney PL, Li T: A county-level estimate of PM<sub>2.5</sub> related chronic mortality risk in China based on multi-model exposure data. Environment International 110: 105-112. **2018**.

5. Liu W, **He MZ**, Wang Y, Wang Y, Zhou Y, Wu M, Tang Z, Dai Y, Yuan B, Zhen S, Cheskin LJ: Differences in health-related behaviors between middle school, high school, and college students in Jiangsu province, China. Asia Pacific J Clin Nutr 26(4): 731-737, **2017**.
4. Ban J, Xu D, **He MZ**, Sun Q, Chen C, Wang W, Zhu P, Li T: The effect of high temperature on cause-specific mortality: A multi-county analysis in China. Environment International 106: 19-26. **2017**.
3. **He MZ**, Zeng X, Zhang K, Kinney PL: Fine Particulate Matter Concentrations in Urban Chinese Cities, 2005-2016: A Systematic Review. Int J Environ Res Public Health 14(2), 191. **2017**.
2. Ban J, Huang L, Chen C, Guo Y, **He MZ**, Li T: Integrating new indicators of predictors that shape the public's perception of local extreme temperature in China. Science of the Total Environment 579: 529-536. **2017**.
1. Achey MA, **He MZ**, Akst LM: Vocal Hygiene Habits and Vocal Handicap Among Conservatory Students of Classical Singing. J of Voice 30(2): 192-197, **2016**.

#### *Other Publications*

2. **He MZ**: Singing for science. Science 364 (6439), 506, **2019**.
1. **He MZ**: China's Health Care System: A Summer Experience. Epidemic Proportions 11: 34-35, **2014**.

#### **CONFERENCE PRESENTATIONS AND POSTERS**

19. **He MZ**, Kinney PL, Fiore AM, Do V, Jin X, Liu S, DeFelice N, Bi J, Liu Y, Insaf T, Kioumourtoglou M-A: Short-term PM<sub>2.5</sub> and cardiovascular admissions in NY State: assessing sensitivity to exposure model choice. Oral Presentation. American Geophysical Union 2020 Fall Meeting (online). December **2020**.
18. Zhang L, **He MZ**, Perera F, Lovasi G, Clougherty J, Carrión D, Burke K, Kioumourtoglou M-A: Evaluating the impact of the Clean Heat Program on air pollution levels in New York City. Poster Presentation. International Society for Environmental Epidemiology 2020 Conference (online). August **2020**.
17. **He MZ**, Kioumourtoglou M-A, Kinney PL, Fiore A, Jin X, Do V, Liu S, Insaf T, Michalski A: Fine particulate matter and cardiovascular admissions in NY State: an assessment of exposure model choice sensitivity and spatial-temporal effect modification. Oral Presentation. New Applications in the Use of Satellite Data Monitoring for Population Health. Huntsville, Alabama. October **2019**.
16. **He MZ**, Do V, Liu S, Kinney PL, Fiore A, Jin X, DeFelice N, Kioumourtoglou M-A: Short-term PM<sub>2.5</sub> and cardiovascular admissions in NY State: assessing sensitivity of exposure model choice. Oral Presentation. International Society for Environmental Epidemiology 2019 Conference, Utrecht, Netherlands. August **2019**.
15. **He MZ**, Kioumourtoglou M-A, Kinney PL, Fiore A, Jin X, Do V, Liu S, Insaf T, Michalski A: Fine particulate matter and respiratory admissions: an assessment of short-term exposure model choice sensitivity for health studies. Oral Presentation. NASA Health and Air Quality Applied Sciences Team 6<sup>th</sup> Biannual Meeting, Pasadena, California. July **2019**.

14. Jin X, Fiore AM, Civerolo K, Johnson S, Bi J, Liu Y, van Donkelaar A, Martin R, Al-Hamdan M, Zhang Y, Insaf T, Kioumourtzoglou M-A, **He MZ**, Kinney P: Quantifying health benefits of emission reduction over New York State using multiple PM<sub>2.5</sub> products. Oral Presentation. New York State Energy Research and Development Authority Energy-Related Air Quality and Health Effects Workshop. Albany, New York. April **2019**.
13. **He MZ**, Kioumourtzoglou M-A, Kinney PL, Fiore A, Jin X, Do V, Liu S, Insaf T, Michalski A: Short-Term PM<sub>2.5</sub> and Cardiovascular Admissions in NY State: Assessing Sensitivity of Exposure Model Choice. Oral Presentation. NASA Health and Air Quality Applied Sciences Team 5<sup>th</sup> Biannual Meeting, Phoenix, Arizona. January **2019**.
12. Jin X, Fiore A, Civerolo K, Johnson S, Bi J, Liu Y, Martin R, van Donkelaar A, Zhang Y, Kinney PL, Kioumourtzoglou M-A, **He MZ**: Quantifying health benefits of emission reduction over New York State using multiple PM<sub>2.5</sub> products. Oral Presentation. NASA Health and Air Quality Applied Sciences Team 5<sup>th</sup> Biannual Meeting, Phoenix, Arizona. January **2019**.
11. Westervelt D, Ma CT, Fiore AM, Kinney PL, **He MZ**, Xing J, Wang S: The impact of emissions scenarios and climate change over China on ozone air quality in China and the United States. Oral Presentation. American Geophysical Union 2016 Fall Meeting, Washington DC. December **2018**.
10. **He MZ**, Li T, Kinney PL, Chen C, Sun Q, Ban J, Wang J, Liu S, Goldsmith J, Kioumourtzoglou M-A: Short- and Intermediate-Term Exposure to NO<sub>2</sub> and Mortality: A Multi-County Analysis. Oral Presentation. Columbia University Air Pollution Extremes Workshop, New York, New York. November **2018**.
9. Du Z, **He MZ**, Ban J, Wang Q, Li T. The Research on National Heat Vulnerability Assessment of China. Poster Presentation. International Society for Environmental Epidemiology-Exposure Sciences 2018 Conference, Ottawa, Canada. August **2018**.
8. **He MZ**, Li T, Kinney PL, Kioumourtzoglou M-A: Short- and Intermediate-Term Exposure to NO<sub>2</sub> and Mortality in 42 Chinese Counties. Poster Presentation. International Society for Environmental Epidemiology-Exposure Sciences Asia Chapter 2018 Conference, Taipei, Taiwan. June **2018**.
7. Ma C, Westervelt D, Fiore A, Kinney PL, **He MZ**, Rieder H, Wang S, Correa G: Impact of Future Emissions and Climate Change on Surface Ozone over China. Oral Presentation. American Geophysical Union 2017 Fall Meeting, New Orleans, Louisiana. December **2017**.
6. Jin X, Fiore A, Civerolo K, Ku M, Insaf T, Kinney PL, Kioumourtzoglou M-A, **He MZ**, Curci G, Lyapustin A, Wang Y, Martin R, van Donkelaar A: Combining satellite data and CMAQ model to map PM<sub>2.5</sub> exposure over the Northeast U.S.A. Oral Presentation. NASA Health and Air Quality Applied Sciences Team 3<sup>rd</sup> Annual Meeting, Palisades, New York. November **2017**.
5. **He MZ**, Kioumourtzoglou M-A, Kinney PL, Fiore A, Jin X, Insaf T, Michalski A: Associations between Air Pollution and Hospital Admissions in New York State. Oral Presentation. NASA Health and Air Quality Applied Sciences Team 3<sup>rd</sup> Biannual Meeting, Palisades, New York. November **2017**.
4. Wang Q, Wang J, **He MZ**, Kinney PL, Li T: A county-level estimate of PM<sub>2.5</sub> related chronic mortality risk in China based on multi-model exposure data. Oral Presentation. International Society for Environmental Epidemiology 2017 Conference, Sydney, Australia. September **2017**.

3. **He MZ**, Li T, Kinney PL, Kioumourtzoglou M-A: Short- and Intermediate-Term Exposure to NO<sub>2</sub> and Mortality: A Multi-County Analysis in China. Poster Presentation. International Society for Environmental Epidemiology 2017 Conference, Sydney, Australia. September **2017**.
2. **He MZ**, Zeng X, Zhang K, Kinney PL: Regional Differences in Fine Particulate Matter Concentrations in Urban Chinese Cities: A Systematic Review. Oral Presentation. 2016 Symposium on Public Health in Asia, Baltimore, Maryland. February **2016**.
1. Meyer-Fong T, Johnson Y, **He MZ**, Meyer C: Language Study and Research on Public Health in Asia. Oral Presentation. 2015 Symposium on Public Health in Asia, Baltimore, Maryland, February **2015**.

### **SOCIETY MEMBERSHIP**

2020/Present	American Geophysical Union
2017/Present	International Society for Environmental Epidemiology
2015/Present	American Association for the Advancement of Science
2015/Present	Delta Omega Honor Society, Alpha Chapter
2014/Present	Sigma Gamma Epsilon Honor Society, Alpha Kappa Chapter

### **LEADERSHIP**

2021/Present	Department Representative, Postdoctoral Executive Committee, Icahn School of Medicine at Mount Sinai
2019/2020	Vice President of Administration, University PhD Council, Columbia University
2018/2019	School Representative, University PhD Council, Columbia University
2016/2018	Department Representative, Graduate Student Advisory Council, Columbia University

### **INVITED PRESENTATIONS**

May 2020	<i>Evaluating the Impact of the Clean Heat Program on Air Pollution Levels in New York City</i> , EHS Department Seminar, Columbia Mailman School of Public Health, New York, New York (Host: Joseph Graziano)
Apr 2020	<i>Applying to PhD &amp; Doctoral Programs</i> , Office of Career Services, Columbia University Mailman School of Public Health, New York, New York (Host: Heather Krasna)

Jul 2019	<i>Five Ways of Telling the Same Story: Assessing Sensitivity of Exposure Model Choice in Air Pollution Studies</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)
Apr 2019	<i>Five Ways of Telling the Same Story: Assessing Sensitivity of Exposure Model Choice in Air Pollution Studies</i> , EHS Department Seminar, Columbia Mailman School of Public Health, New York, New York (Host: Joseph Graziano)
Nov 2018	<i>Climate Change and Health</i> , Workshop for the Johns Hopkins Center for Talented Youth, New York, New York (Host: Gail Garbowski)
Jul 2018	<i>Facts and Alternative Facts: Approaches to Communicating Climate Change</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)
Mar 2018	<i>Air Pollution, Climate Change, and Health in China: A Multi-County Study</i> , EHS Department Seminar, Columbia Mailman School of Public Health, New York, New York (Host: Joseph Graziano)
Nov 2017	<i>Climate Change and Health</i> , Workshop for the Johns Hopkins Center for Talented Youth, New York, New York (Host: Gail Garbowski)
Sep 2017	<i>A Brief Introduction to Missing Data</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)
Sep 2017	<i>Directed Acyclic Graphs as a Tool for Epidemiology</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)
Mar 2017	<i>Air Pollution, Classical Music, and Everything in Between</i> , EHS Department Seminar, Columbia Mailman School of Public Health, New York, New York (Host: Joseph Graziano)
Jul 2016	<i>The Effects of Air Purifiers and Education on the Jinan Children's Cohort: Preliminary Study Design</i> , Chinese Center for Disease Control and Prevention Workshop on Air Pollution and Health, Beijing, China (Host: Tiantian Li)
Jul 2016	<i>A Tale of Two Disciplines: Public Health in Classical Music</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)
Jun 2016	<i>Fine Particulate Matter Concentrations in Six Regions of China: A Systematic Review and Evaluation of Satellite-Derived Data</i> , Chinese Center for Disease Control and Prevention, Beijing, China (Host: Tiantian Li)

- Apr 2016 *Environment and Health Connections: Stories from the Deep Interior to the Ends of the Earth*, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Host: Ruth Quinn)
- Apr 2016 *Regional Differences in Fine Particulate Matter Concentrations in Urban Chinese Cities: A Systematic Review*, EHS Department Seminar, Columbia Mailman School of Public Health, New York, New York (Host: Joseph Graziano)
- Aug 2015 *Systematic Review and Meta-Analysis: The Basics*, Jiangsu Provincial Center for Disease Control and Prevention, Nanjing, China (Host: Shiqi Zhen)
- Jul 2015 Presenter, *Model Selection in Biostatistics: Techniques and Application*, Jiangsu Provincial Center for Disease Control and Prevention, Nanjing, China (Host: Shiqi Zhen)

## **PROFESSIONAL SERVICE**

### *Journal Referee*

Applied Economics, Applied Sciences, Atmosphere, BMC Public Health, Chemosphere, Environmental Health, Environmental Pollution, Environmental Research, Environmental Research Communications, Environmental Research Letters, GeoHealth, International Journal of Environmental Research and Public Health, Mathematics, PeerJ, Sustainability, The Innovation, Urban Climate, Urban Science, Vaccines, and Viruses

### *Conference Abstract Reviewer*

- 2020 International Society for Environmental Epidemiology 2020 Conference  
 2019 Applications in the Use of Satellite Data Monitoring for Population Health  
 2019 International Society for Environmental Epidemiology 2019 Conference

2018/2019 Co-organizer, Columbia Climate and Health Seminar Series (13 seminars)

## **TEACHING**

### *Columbia University*

- 2019 Teaching Scholar, Atmospheric and Climate Science for Public Health, P8301
- 2017/2019 Teaching Scholar, Public Health Impacts of Climate Change (3x), P8304

### *Johns Hopkins University*

- 2015 Teaching Assistant, Statistical Methods in Public Health IV, PH.140.624
- 2015 Teaching Assistant, Statistical Methods in Public Health III, PH.140.623
- 2015 Teaching Assistant, Introduction to the Risk Sciences, PH.317.600
- 2014 Teaching Assistant, Statistical Methods in Public Health II, PH.140.622



2014	Teaching Assistant, Statistical Methods in Public Health I, PH.140.621
2014	Course Designated Tutor, Fundamentals of Epidemiology, AS.280.350
2014	Course Mentor, General Biology II, AS.020.152
2013/2014	Teaching Assistant, Probability and Statistics for the Life Sciences (2x), EN.550.211
2013	Teaching Assistant, Statistical Analysis I, EN.550.111
2013	Course Mentor, General Biology I, AS.020.151
2013	Teaching Assistant, General Biology Lab I, AS.020.153
2012/2014	Teaching Assistant, Public Health Biostatistics (3x), AS.280.345
<i>Certifications</i>	
2020	Teaching Development Program (Advanced Track), Columbia Center for Teaching and Learning
2019	Teaching Observation Fellowship, Columbia Center for Teaching and Learning
2018	Innovative Teaching Summer Institute, Columbia Center for Teaching and Learning
2018	Reflective Teaching Seminar, Columbia Center for Teaching and Learning
<i>Guest Lectures</i>	
Mar 2021	<i>A Brief History of Air Pollution and Health</i> , Epidemiology II: Epidemiologic Methods and Design, Icahn School of Medicine at Mount Sinai, New York, New York (Host: Maayan Yitshak-Sade)
Feb 2020	<i>Air Pollution, Health, and Climate Change</i> , Public Health Impacts of Climate Change Course, Columbia University Mailman School of Public Health, New York, New York (Host: Micaela Martinez)
Oct 2019	<i>A Brief History of Air Pollution and Health</i> , Atmospheric and Climate Science for Public Health Course, Columbia University Mailman School of Public Health, New York, New York (Host: Jeffrey Shaman)

Apr 2019	<i>Air Pollution and Climate Change: A Public Health Perspective</i> , Introduction to Atmospheric Chemistry Course, Columbia University, New York, New York (Host: Arlene Fiore)
Feb 2019	<i>Air Pollution, Health, and Climate Change</i> , Public Health Impacts of Climate Change Course, Columbia University Mailman School of Public Health, New York, New York (Host: Micaela Martinez)
Jan 2019	<i>Air Pollution and Health in 2018: Case-Studies from China and the United States</i> , Diamond Bar High School, Diamond Bar, California (Host: Angela Jensvold)
Mar 2018	<i>Air Pollution, Health, and Climate Change</i> , Public Health Impacts of Climate Change Course, Columbia University Mailman School of Public Health, New York, New York (Host: Jeffrey Shaman)
Mar 2017	<i>Air Pollution, Health, and Climate Change</i> , Public Health Impacts of Climate Change Course, Columbia University Mailman School of Public Health, New York, New York (Host: Jeffrey Shaman)
Jan 2017	<i>The Physics of Climate Change</i> , Diamond Bar High School, Diamond Bar, California (Host: Angela Jensvold)
Jan 2017	<i>Air Pollution and Particulate Matter: Concepts and Recent Developments</i> , Diamond Bar High School, Diamond Bar, California (Host: Angela Jensvold)
Jan 2016	<i>PM<sub>2.5</sub>: Overview and Case Study</i> , Diamond Bar High School, Diamond Bar, California (Host: Angela Jensvold)
Jan 2015	<i>Environmental Health and Air Pollution</i> , Diamond Bar High School, Diamond Bar, California (Host: David Hong)