Yun Hang, PhD, MS

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EDUCATION

2020-23 Postdoc, Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA, USA
Focus: Application of Remote Sensing and Machine Learning in Environmental Exposure Modeling

2017-20 PhD, Environment and Resources, Nelson Institute for Environmental Studies | Atmospheric and Oceanic Sciences, College of Letters and Science, University of Wisconsin, Madison, WI, USA
Dissertation: New Light on Earth's Energy Budget and Its Implication for Solar Energy Potential

EMPLOYMENT HISTORY

2023- Tenure-Track Assistant Professor, Department of Environmental and Occupational Health Sciences, Department of Biostatistics and Data Science (Jointly Appointed), School of Public Health, University of Texas Health Science Center at Houston

2021-23 Course Instructor, Rollins School of Public Health, Emory University

2020-23 Postdoctoral Research Fellow (40% with Emory Climate and Health Research Incubator, 60% with Gangarosa Department of Environmental Health), Emory University

2020 Instructor, Nelson Institute for Environmental Studies, University of Wisconsin-Madison

TEACHING

University of Texas Health Science Center

2025- PHM/D 2362 Environmental Epidemiology - Instructor

2024- PHM 2110 Public Health Ecology and Human Environment - Instructor

2023 PHD 2105 Environmental and Occupational Health Sciences Doctoral Research Seminar - Guest Lecturer

Emory University

2021-23 EH 586 Advanced Seminar in Climate Change and Health: Research and Policy - Co-Instructor

University of Wisconsin-Madison

2020 ES 956 Advanced Environmental Remote Sensing - Co-Instructor

2019 AOS 101 Climate and Weather Lab - Instructor
AOS 100 Climate and Weather - Teaching Assistant
AOS 102 Climate and Climate Change - Teaching Assistant

RESEARCH

Peer-Reviewed Publications

*** Role as First or Corresponding Author**

1. Ye X, Yigitcanlar T, Xu Y, Head M, **Hang Y**, Sanchez T, Gong W, and Niyogi D, Urban planning with IPCC for climate resilience, 2025. *Environment and Planning B: Urban Analytics and City Science*, in press.
2. Zhang R, Chen S, **Hang Y**, Liu C, Chen K, 2025. Health impact reduction design strategies according to circulation pattern of indoor $PM_{2.5}$ using computational fluid dynamic models. *Indoor and Built Environment*, in press.
3. **Hang Y,*** Pu Q, Zhu Q, Meng X, Jin Z, Laing F, Tian H, Li T, Wang T, Cao J, Fu Q, Dey S, Li S, Huang K, Kan H, Shi X, Liu Y, 2025. Estimating long-term particulate organic carbon pollution in China using multi-angle space-borne observations and Super Learner models. *Science of The Total Environment,* 958, 177883. Link
4. Romanello M, Walawender M, Hsu S-C, Moskeland A, Palmeiro-Silva Y, Scamman D, Ali Z, Ameli N, Angelova D, Ayeb-Karlsson S, Basart S, Beagley J, Beggs P J, Blanco-Villafuerte L, Cai W, Callaghan M, Campbell-Lendrum D, Chambers J D, Chicmana-Zapata V, Chu L, Cross T J, van Daalen K R, Dalin C, Dasandi N, Dasgupta S, Davies M, Dubrow R, Eckelman M, Ford J D, Freyberg C, Gasparyan O, Gordon-Strachan G, Grubb M, Gunther S H, Hamilton I, **Hang Y**, Hänninen R, Hartinger S, He K, Heidecke J, Hess J J, Jamart L, Jankin S, Jatkar H, Jay O, Kelman I, Kennard H, Kiesewetter G, Kinney P, Kniveton D, Kouznetsov R, Lampard P, Lee J K W, Lemke B, Li B, Liu Y, Liu Z, Llabrés-Brustenga A, Lott M, Lowe R, Martinez-Urtaza J, Maslin M, McAllister L, McMichael C, Mi Z, Milner J, Minor K, Minx

J, Mohajeri N, Momen N C, Moradi-Lakeh M, Morrisey K, Munzert S, Murray K A, Obradovich N, O'Hare M B, Oliveira C, Oreszczyn T, Otto M, Owfi F, Pearman O L, Pega F, Perishing A J, Pinho-Gomes A-C, Ponmattam J, Rabbaniha M, Rickman J, Robinson E, Rocklöv J, Rojas-Rueda D, Salas R N, Semenza J C, Sherman J D, Shumake-Guillemot J, Singh P, Sjödin H, Slater J, Sofiev M, Sorensen C, Springmann M, Stalhandske Z, Stowell J D, Tabatabaei M, Taylor J, Tong D, Tonne C, Treskova M, Trinanes J A, Uppstu A, Wagner F, Warnecke L, Whitcombe H, Xian P, Zavaleta-Cortijo C, Zhang C, Zhang R, Zhang S, Zhang Y, Zhu Q, Gonga P, Montgomerya H, Costelloa A, 2024. The 2024 report of the Lancet Countdown on health and climate change. *The Lancet*, 404(10465), 1847-1896. Link

5. Xi Y, Wettstein ZS, Kshirsagar AV, Liu Y, Zhang D, **Hang Y**, Rappold AG, 2024. Elevated ambient temperature associates with increased CVD-risk among hemodialysis patients, *Kidney International Reports*. Link
6. Huang H, Lu Z, Fan X, Zhai W, Zhang L, Xu D, Liu Z, Li Y, Ye X, Qin H, Lanza K, **Hang Y,*** 2024. Urban heatwave, greenspace, and mental health: a review based on environmental health risk assessment framework. *Science of The Total Environment*, 174816. Link
7. Zhao W, Zhao Y, Zheng Y, Chen D, Xin J, Li K, Che H, Li Z, Ma M, **Hang Y**, 2024. Long-term variability in black carbon emissions constrained by gap-filled absorption aerosol optical depth and associated premature mortality in China. *Atmospheric Chemistry and Physics*, 24(11), 6593-6612. Link
8. **Hang Y,*** Meng X, Xi Y, Zhang D, Lin X, Liang F, Tian H, Li T, Wang T, Cao J, Fu Q, Dey S, Li S, Huang K, Kan H, Shi X, Liu Y, 2023. Atmospheric elemental carbon pollution and its regional health disparities in China. *Environmental Research Letters*, 18 124017. Link
9. Xi Y, Wettstein ZS, Kshirsagar AV, Liu Y, Zhang D, **Hang Y**, Rappold AG, 2023. Exposure to elevated temperature is associated with elevated risk for cardiovascular disease (CVD) outcomes and mortality among hemodialysis patients in the United States: TH-PO277. *Journal of the American Society of Nephrology* 34(11S):p 167-168. Link
10. Romanello M, Napoli CD, Green C, Kennard H, Lampard P, Scamman D, Walawender M, Ali Z, Ameli N, Ayeb-Karlsson S, Beggs PJ, Belesova K, Ford LB, Bowen K, Cai W, Callaghan M, Campbell-Lendrum D, Chambers J, Cross TJ, Daalen K, Dalin C, Dasandi N, Dasgupta S, Davies M, Dominguez-Salas P, Dubrow R, Ebi KL, Eckelman M, Ekins P, Freyberg C, Gasparyan O, Gordon-Strachan G, Graham H, Gunther SH, Hamilton I, **Hang Y**, Hänninen R, Hartinger S, He K, Heidecke J, Hess J, Hsu SC, Jamart L, Jankin S, Jay O, Kelman I, Kiesewetter G, Kinney P, Kniveton D, Kouznetsov R, Larosa F, Lee J, Lemke B, Liu Y, Liu Z, Lott M, Batista M, Lowe R, Sewe M, Martinez-Urtaza J, Maslin M, McAllister L, McMichael C, Mi Z, Milner J, Minor K, Minx J, Mohajeri N, Momen NC, Moradi-Lakeh M, Morrissey K, Munzert S, Murray KA, Neville T, Nilsson M, Obradovich N, O'Hare MB, Oliveira C, Oreszczyn T, Otto M, Owfi F, Pearman O, Pega F, Pershing A, Rabbaniha M, Rickman J, Robinson EJZ, Rocklöv J, Salas RN, Semenza JC, Sherman JD, Shumake-Guillemot J, Silbert G, Sofiev M, Springmann M, Stowell JD, Tabatabaei M, Taylor J, Thompson R, Tonne C, Treskova M, Trinanes JA, Wagner F, Warnecke L, Whitcombe H, Winning M, Wyns A, Yglesias-González M, Zhang S, Zhang Y, Zhu Q, Gong P, Montgomery H, Costello A, 2023. The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *The Lancet*, 402(10419). Link
11. Zhang D, Wang W, Xi Y, Bi J, **Hang Y**, Zhu Q, Pu Q, Chang H, Liu Y, 2023. Wildland fires worsened population exposure to $PM_{2.5}$ pollution in the contiguous United States. *Environmental Science & Technology*. Link
12. Meng X, **Hang Y,*** Lin X, Li T, Wang T, Cao J, Fu Q, Dey S, Huang K, Liang F, Kan H, Shi X, Liu Y, 2023. A satellite-driven model to estimate long-term particulate sulfate levels and attributable mortality burden in China. *Environment International*, 107740. Link
13. Napoli CD, Romanello M, Minor K, Chambers J, Dasgupta S, Escobar LE, **Hang Y**, Hänninen R, Liu Y, Batista ML, Lowe R, Murray KA, Owfi F, Rabbaniha M, Shi L, Sofiev M, Tabatabaei M, Robinson EJZ, 2023. The role of global reanalyses in climate services for health: Insights from the Lancet Countdown. *Meteorological Applications*, 30(2), e2122. Link
14. Wu S, Zhang J, Li J, Chen Z, **Hang Y**, Niu M, Kuang Y, Hu R, 2023. The reduced Siberian spring snow cover modulation on southward northernmost margin of East Asia Summer Monsoon. *Climate Dynamics*, 1-16. Link
15. Shi S, Wang W, Li X, **Hang Y**, Lei J, Kan H, Meng X, 2023. Optimizing modeling windows to better capture the long-term variation of $PM_{2.5}$ concentrations in China during 2005-2019. *Science of the Total Environment*, 158624. Link
16. Romanello M, Napoli CD, Drummond P, Green C, Kennard H, Lampard P, Scamman D, Arnell N, Ayeb-Karlsson S, Ford LB, Belesova K, Bowen K, Cai W, Callaghan M, Campbell-Lendrum D, Chambers J, Daalen KR, Dalin C, Dasandi N, Dasgupta S, Davies M, Dominguez-Salas P, Dubrow R, Ebi KL, Eckelman M, Ekins P, Escobar LE, Georgeson L, Graham H, Gunther SH, Hamilton I, **Hang Y**, Hänninen R, Hartinger S, He K, Hess J, Hsu SC, Jankin S, Jamart L, Jay O, Kelman I, Kiesewetter G, Kinney P, Kjellstrom T, Kniveton D, Lee JKW, Lemke B, Liu Y, Liu Z, Lott M, Batista ML,

Lowe R, MacGuire F, Odhiambo SM, Martinez-Urtaza J, Maslin M, McAllister L, McGushin A, McMichael C, Mi Z, Milner J, Minor K, Minx JC, Mohajeri N, Moradi-Lakeh M, Morrissey K, Munzert S, Murray KA, Neville T, Nilsson M, Obradovich N, O'Hare MB, Oreszczyn T, Otto M, Owfi F, Pearman O, Rabbaniha M, Robinson EJZ, Rocklöv J, Salas RN, Semenza JC, Sherman JD, Shi L, Shumake-Guillemot J, Silbert G, Sofiev M, Springmann M, Stowell J, Tabatabaei M, Taylor J, Trinanes J, Wagner F, Wilkinson P, Winning M, Yglesias-González M, Zhang S, Gong P, Montgomery H, Costello A, 2022. The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels. *The Lancet*, 400(10363). Link

17. **Hang Y,*** Meng X, Li T, Wang T, Cao J, Fu Q, Dey S, Li S, Huang K, Liang F, Kan H, Shi X, Liu Y, 2022. Assessment of long-term particulate nitrate air pollution and its health risk in China. *iScience*, p.104899. Link
18. Dzambo AM, Mooney M, Handlos ZJ, Lindstrom S, **Hang Y,** Ackerman SA, 2021. Improving Climate Literacy through an Interactive Online Undergraduate Course. *Bulletin of the American Meteorological Society*, 102(6), 501-506. Link
19. Dzambo AM, Mooney M, Handlos ZJ, Lindstrom S, **Hang Y,** Ackerman SA, 2020. An interactive online course in climate and climate change: Advancing climate literacy for non-atmospheric science majors. *Bulletin of the American Meteorological Society*, 101(10). Link
20. **Hang Y,*** 2020. New light on Earth's energy budget and its implication for solar energy potential. The University of Wisconsin-Madison. Link
21. **Hang Y,*** L'Ecuyer TS, Henderson DS, Matus AV, Wang Z, 2019. Reassessing the effect of cloud type on Earth's energy balance in the age of active spaceborne observations. Part II: Atmospheric heating. *Journal of Climate*, 32(19). Link
22. L'Ecuyer TS, **Hang Y,*** Matus AV, Wang Z, 2019. Reassessing the effect of cloud type on Earth's energy balance in the age of active spaceborne observations. Part I: Top of atmosphere and surface. *Journal of Climate*, 32(19). Link
23. **Hang Y,*** 2016. The Effect of Cloud Type on Earth's Energy Balance. The University of Wisconsin-Madison. Link
24. Lu M, Tan G, Chen H, **Hang Y,** Chen Q, 2013. The relationship between summer rainfall anomalies in Yangtze-Huaihe valley and atmospheric circulation anomalies over the western Indian Ocean. *Journal of Meteorological Sciences*, 33. Link

Policy Brief and Report

25. Houston's Future: Climate Change and Health Care, 2024. Link
26. A Guide for Applying to Tenure-Track Assistant Professor Positions, 2024. Link
27. Lancet Countdown on Health and Climate Change, Policy Brief for the United States of America, 2021. Link