

EDUCATION AND TRAINING

Professional Degrees and Postdoctoral Training

- 2023 Postdoc, Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA, USA
Topic: Application of remote sensing and machine learning in community co-designed environmental exposure modeling
- 2020 PhD, Environment and Resources, Nelson Institute for Environmental Studies; Atmospheric and Oceanic Sciences, College of Letters & Science, University of Wisconsin, Madison, WI, USA
Dissertation: New light on Earth's energy budget and its implications for solar energy potential

EMPLOYMENT HISTORY

- 2023- Director, Health-Atmosphere Nexus Group, University of Texas Health Science Center at Houston (UTHealth)
- 2023- Tenure-Track Assistant Professor, Department of Environmental and Occupational Health Sciences, Department of Biostatistics and Data Science (Jointly Appointed), School of Public Health, UTHealth
- 2021-23 Course Instructor, Rollins School of Public Health (RSPH), Emory University
- 2020-23 Climate and Health Postdoctoral Research Fellow (40% with Emory Climate and Health Research Incubator, 60% with Gangarosa Department of Environmental Health), RSPH, Emory University
- 2020 Instructor, Nelson Institute for Environmental Studies, University of Wisconsin-Madison (UW)

PUBLICATIONS

Peer-Reviewed Publications

* Role as First or Corresponding Author; # denotes supervised trainees

1. Romanello MB, Walawender M, Israelsson J, Hasan MM, Battaglia F, Dutta A, et al., including **Hang Y**, 2026. The 2026 Report of the Lancet Countdown on Health and Climate Change, *The Lancet*, accepted.
2. Tong DQ, Gorris ME, Abadi AM, Anenberg S, Ardon-Dryer K, Bratburd JR, Cromar K, **Hang Y**, Harp RD, Hoffman-Hall A, Horwell CJ, Kerr GH, Ma Y, Ryan SJ, Stowell JD, Usmani M, Wimberly MC, Zaitchik BF, Chen K, 2026. Calling for a GeoHealth Decadal Survey: Accelerating solution-oriented research and applications to address environmental and health problems, *GeoHealth*, 10, e2026GH002024. [Link](#).
3. Nwanaji-Enwerem J, Perez-Cruet J, Sprague N, Uong S, Obi C, Peterson S, Mustapha A, Tiako MJN, Hassan S, **Hang Y**, Oluseyi T, Mason LR, Ekenga C, 2026. Extreme weather events and mental health impacts in West Africa: A systematic review highlighting the paucity of evidence, *Journal of Public Health in Africa*. [Link](#).
4. **Cui Z[#]**, **Mei A[#]**, Xu K, Liu Y, Abid MR, Xiao Q, **Hang Y^{*}**, 2026. Daily 1 km satellite-based PM_{2.5} exposure estimates in Bangladesh, 2020–2025: Spatiotemporal patterns and implications for environmental health, *Environmental Pollution*, 129051. [Link](#).
5. Pavlovic NR, Malings CA, Huang M, He Y, Diez S, Bratburd J, Mahmoud H, Schnell J, **Hang Y**, Anderson L, Grodzinsky G, deSouza P, Mead MI, Rao Y, Velho R, Davignon D, Munde S, Sayeed A, Aekakkarungroj A, Joshi A, Olayinka O, Dingam Rondouba H, Pant P., 2026. Satellite-derived air quality data can effectively support health needs when use cases, Earth observing capabilities, and capacities align, *Journal of the Air & Waste Management Association*, 1-27. [Link](#)
6. **Mei A[#]**, **Cui Z[#]**, North KE, Highland H, Aguilera J, Liu Y, Liu X, Xiao Q, **Hang Y^{*}**, 2026. Geostationary satellite observation-informed modeling of ozone dynamics along the US–Mexico border, *Environmental Science & Technology Air*. [Link](#).
7. **Cui Z[#]**, **Mei A[#]**, Liu YJ, Liu Y, and **Hang Y^{*}**, 2026. A spatiotemporal decomposition framework for temporal persistence and regional transport in PM_{2.5} variability, *Environmental Science & Technology*, 60(26), 18789-18799. [Link](#).

8. Wang W, Liu H, Li Q, Dou Y, Huang K, Liu F, Li J, Chen S, Yin Z, **Hang Y**, Shen C, Yang X, Chen J, Liu X, Cao J, Yu L, Lu F, Wu X, Mo X, Hu D, Huang J, Fu JS, Ebelt S, Alonso A, Chang HH, Lu X, Liang F, Gu D, Liu Y, 2026. Long-term exposure to PM_{2.5} constituents and coronary heart disease risk in China, *Journal of the American College of Cardiology*. [Link](#).
9. **Zhou S[#]**, Zhou S, Mei A, Phung K, Ye Y, Govindswamy U, Li Z, Huang Q, Goodchild MF, **Hang Y***, and Ye X, Revealing time-sensitive latent public health and emotional distress topics in Reddit discourse during the 2025 Southern California wildfires, 2026. *International Journal of Disaster Risk Reduction*, 106167. [Link](#).
10. Abadi AM, Brumfield KD, Usmani M, Jiang G, Chakraborty TC, Wang Y, Zhou Z, He C, Qiu M, Stowell JD, Fritz D, Kumar S, Guo Q, Xiong Y, Destouni G, Xiao Q, Hu XC, Fong KC, **Hang Y**, Nielsen-Gammon J, Habre R, Bratburd JR, Tessum CW, Jutla A, Colwell RR, Filippelli GM, and Nguyen TH, Developing scenario-based strategies for health, climate, and environmental preparedness: The One Health, One Earth approach, 2026. *GeoHealth*, 10(4), e2025GH001674. [Link](#).
11. Gao J, Idris MA, Ademu LO, Griffin BC, Zhang Y, **Hang Y**, and Gallegos GA, Food delivery services for enhancing participation in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in the United States: Bridging the WIC access gap, 2026. *Frontiers in Public Health*, 14, 1756682. [Link](#).
12. Zhang R, **Hang Y**, Chen Y, Lian L, & Zhao D, 2026. The Cooling Needs to Reduce Indoor Humid-Heat Risks for Global Low-Income Populations Should Be Incorporated into Global Carbon Emission Reduction Plans. *ACS ES&T Air*. [Link](#)
13. Nair AKS, Adamu Y, Montgomery H, Kaur G, Singh M, Sudharsan N, & **Hang Y**, 2026. Climate Change, Environmental Degradation, and Human Health: A Converging Crisis. *Habitable Planet*, 2(1), 108-127. [Link](#)
14. Ardakani J, Shahid I, Gullapelli R, Ahmed E, Bose B, Hahad O, Nicolas J, Javed Z, Dong W, Maddock J, **Hang Y**, Sadhu A, Nasir K, Al-Kindi S, 2026. Transportation noise exposure and incident type 2 diabetes: A retrospective cohort study in a large U.S. healthcare system. *Diabetes, Obesity and Metabolism*, 28(4), 3105-3114. [Link](#)
15. Romanello M, Walawender M, Hsu S-C, Moskeland A, Palmeiro-Silva Y, Scamman D, Smallcombe J W, Abdullah S, Ades M, Al-Maruf A, Ameli N, Angelova D, Ayeb-Karlsson S, Ballester J, Basagaña X, Bechara H, Beggs P J, Cai W, Campbell-Lendrum D, Charnley G E C, Courtenay O, Cross T J, Dalin C, Dasandi N, Dasgupta S, Davies M, Eckelman M, Freyberg C, Garcia Corral P, Gasparyan O, Giguere J, Gordon-Strachan G, Gumy S, Gunther S H, Hamilton I, **Hang Y**, Hänninen R, Hartinger S, He K, Heidecke J, Hess J J, Jankin S, Jay O, Kelman I, Kennard H, Kiesewetter G, Kinney P, Kniveton D, Koubi V, Kouznetsov R, Lampard P, Lee J K W, Lemke B, Li B, Liu Y, Liu Z, Lowe R, Maslin M, McAllister L, McMichael C, Mi Z, Milner J, Minor K, Minx J, Mohajeri N, Momen N C, Moradi-Lakeh M, Morrissey K, Munzert S, Murray K A, Obradovich N, Owfi F, Pearman O L, Pega F, Pershing A J, Pinho-Gomes A-C, Ponmattam J, Rabbaniha M, Rojas-Rueda D, Salas R N, Semenza J C, Sherman J D, Shumake-Guillemot J, Singh P, Sjödin H, Sofiev M, Sorensen C, Springmann M, Stowell J D, Tabatabaei M, Taylor J, Tonne C, Treskova M, Trinanes J A, Uppstu A, Wagner F, Watts N, Whitcombe H, Wood R, Yang P, Zhang Y, Zhang S, Zhu Q, Gong P, Montgomery H, Costello A, 2025. The 2025 report of the Lancet Countdown on health and climate change: Climate change action offers a lifeline. *The Lancet*, 406(10512). [Link](#)
16. 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*, 23998083251330940. [Link](#)
17. Zhang R, Chen S, **Hang Y**, Liu C, Chen K, 2025. Health impact reduction design strategies according to the circulation pattern of indoor PM_{2.5} using computational fluid dynamics models. *Indoor and Built Environment*, 1420326X251324368. [Link](#)
18. **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](#)
19. 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, Morrissey 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, Pershing 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, Montgomery H, Costelloa A, 2024. The 2024 report of the Lancet Countdown on health and climate change. *The Lancet*, 404(10465), 1847-1896. [Link](#)
20. 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](#)
 21. **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](#)
 22. 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](#)
 23. **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](#)
 24. 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](#)
 25. 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](#)
 26. 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](#)
 27. 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](#)
 28. 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](#)
 29. 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](#)
 30. 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](#)
 31. 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](#)
32. **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](#)
 33. 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](#)
 34. 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](#)
 35. **Hang Y***, 2020. New light on Earth's energy budget and its implication for solar energy potential. The University of Wisconsin-Madison. [Link](#)
 36. **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](#)
 37. 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](#)
 38. **Hang Y***, 2016. The Effect of Cloud Type on Earth's Energy Balance. The University of Wisconsin-Madison. [Link](#)
 39. 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, Report, and Others

40. Wildfires Topic Expert Group on United Kingdom Office for National Statistics Standards for Official Statistics on Climate-Health Interactions, 2026. [Link](#)
41. Houston's Future: Climate Change and Health Care, 2024. [Link](#)
42. A Guide for Applying to Tenure-Track Assistant Professor Positions, 2024. [Link](#)
43. Lancet Countdown on Health and Climate Change, Policy Brief for the United States of America, 2021. [Link](#)

TEACHING

University of Texas Health Science Center

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| 2025 | Industrial Hygiene Seminar Series - From Rising Temps to Rising Risk: Climate Change and Worker Safety (Guest Speaker)
PH1400 (graduate-level): Planetary Health (Guest Speaker)
PH 2499 (graduate-level): Individual Study - Environmental and Occupational Health (Instructor) |
| 2025- | PHM 2362 (graduate-level): Environmental Epidemiology (Instructor) |
| 2024- | PHM 2110 (graduate-level): Public Health Ecology and Human Environment (Instructor) |
| 2023 | PHD 2105 (graduate-level): Environmental and Occupational Health Sciences Doctoral Research Seminar (Guest Speaker) |

Emory University

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| 2021-23 | EH 586 (graduate-level): Advanced Seminar in Climate Change and Health (Co-Instructor) |
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University of Wisconsin-Madison

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| 2020 | ES 956 (graduate-level): Advanced Environmental Remote Sensing (Co-Instructor) |
| 2019 | AOS 101 (undergraduate-level): Climate and Weather Lab (Instructor)
AOS 100 (undergraduate-level): Climate and Weather (Teaching Assistant)
AOS 102 (undergraduate-level): Climate and Climate Change (Teaching Assistant) |