

ANGEL HSU

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EDUCATION

- 2013 Ph.D., Environmental Studies
Yale School of Forestry and Environmental Studies
- 2006 Master of Philosophy, Environmental Policy
University of Cambridge, Department of Land Economy
- 2005 Bachelor of Science in Biology and Bachelor of Arts in Political Science
Magna cum laude, Phi Beta Kappa, with honors in Political Science
Wake Forest University

PROFESSIONAL EXPERIENCE

- 1/2021 - UNIVERSITY OF NORTH CAROLINA-CHAPEL HILL
Assistant Professor of Public Policy and Environment, Ecology, and Energy (E3P)
- 8/2019-7/2020 UNIVERSITY OF NORTH CAROLINA-CHAPEL HILL
Research Assistant Professor, Department of Public Policy
- 9/2018-3/1/2019 BLAVATNIK SCHOOL OF GOVERNMENT, OXFORD UNIVERSITY
British Academy Visiting Scholar
- 7/2015 - YALE-NUS COLLEGE, SINGAPORE
Assistant Professor of Environmental Studies
Affiliated faculty of Urban Studies and Global Affairs
Director and Founder, Data-Driven EnviroLab (Data-Driven Lab)
- 7/2015 -7/2019 YALE SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES
Assistant Professor Adjunct
- 7/2014 – 7/2015 YALE UNIVERSITY
Associate Research Scientist and Lecturer,
School of Forestry and Environmental Studies
- 7/2013 – 7/2014 YALE UNIVERSITY
Post-doctoral associate, Urbanization and Global Change Group.
Advisor: Karen C. Seto

- 7/2011 – 6/2016 YALE CENTER FOR ENVIRONMENTAL LAW AND POLICY
Director and Principal Investigator, Environmental Performance
Measurement Program and Environmental Performance Index
- 9/2010-8/2011 TSINGHUA UNIVERSITY, Beijing, China
Senior Scholar, School of Environment. Advisors: Yi Liu and Yuxuan Wang.
- 9/2006-9/2008 WORLD RESOURCES INSTITUTE, Washington, D.C.
Research Analyst, Climate Change and Energy Program

PEER-REVIEWED PUBLICATIONS

Book chapters

Hsu, A. (2018). Governance by Numbers: The Environmental Performance Index in China, Viet Nam, and Malaysia. In Simon Bell (Ed). *Routledge Handbook of Sustainability Indicators and Indices*. London: Routledge.

Hsu, A. Measuring Policy Analytical Capacity for the Environment: A Case for Engaging New Actors” in Michael Howlett, Wu Xun and M Ramesh (Eds). *Policy Capacity and Governance: Assessing Governmental Competences and Capabilities in Theory and Practice*, 2017. Palgrave.

Hsu, A. Seeing through the Smog: China’s Air Pollution Challenge for East Asia. (2015). In Paul G. Harris and Graeme Lang (Eds.), *Routledge Handbook of Environment and Society in Asia*. London: Routledge.

Edited volumes

Hsu, A., H. Hung, N. Pirrone, J. Engel-Cox and K.W. Bowman, eds. (2013). Special Issue Section: Toward the Next Generation of Air Pollutant Monitoring and Indicators. *Atmospheric Environment*, vol. 80.

Journal articles

Thomas, R., **Hsu, A.**, and Weinfurter, A. Sustainable and Inclusive - Evaluating urban sustainability indicators’ suitability for measuring progress towards SDG-11. *Environment and Planning B: Urban Analytics and City Science*.

Hale, T., S. Chan, **A. Hsu**, A. Clapper, C. Elliot, P. Faria, T. Kuramochi, S. McDaniel, M. Morgado, M. Roelfsema, M. Santaella, N. Singh, I. Tout, C. Weber, A. Weinfurter, O. Wideberg. Assessing the progress, implementation, and impact of subnational and non-state climate action. *Climate Change Policy*.

Lui, S., Kuramochi, T., Smit, S., Roelfsema, M., **A. Hsu**, Weinfurter, A., Chan, S., Hale, T., Fekete, H., Lütkehermöller, K., Maria Jose de Villafranca Casas , Leonardo Nascimento , Sebastian Sterl & Niklas Höhne (2020): Correcting course: the emission reduction potential of international cooperative initiatives, *Climate Policy*, [DOI: 10.1080/14693062.2020.1806021](https://doi.org/10.1080/14693062.2020.1806021)

Hsu, A. Tan, J., Ng, Y.M., Vanda, R. and N. Goyal. (2020). Performance determinants show European cities are delivering on climate mitigation. *Nature Climate Change*.

Hsu, A., Khoo, W., Goyal, N., and M. Wainstein. (2020). Next-generation Digital Ecosystem for Climate Data Mining and Knowledge Discovery: A Review of Digital Data Collection Technologies, in Special Issue: Innovations and Perspectives in Data Mining and Knowledge Discovery. *Frontiers in Big Data*.

Chakraborty, T.C., Hsu, A., D. Manya and G. Sheriff. (2020). A Spatially Explicit Satellite-Derived Surface Urban Heat Island Database for the United States: Characterization, Uncertainties, and Possible Applications. *ISPRS Journal of Photogrammetry and Remote Sensing*.

Hsu, A., Yeo, Z.Y., Rauber, R., Sun, J., Kim, Y., Raghavan, S., Chin, N., Namdeo, V., and Weinfurter, A. (2020). ClimActor, a harmonized dataset of 10,000+ city and region transnational climate network participation. *Nature Scientific Data*.

Takeshi Kuramochi, Mark Roelfsema, **Angel Hsu**, Swithin Lui, Amy Weinfurter, Sander Chan, Thomas Hale, Andrew Clapper, Andres Chang & Niklas Höhne (2020): Beyond national climate action: the impact of region, city, and business commitments on global greenhouse gas emissions, Climate Policy, DOI: 10.1080/14693062.2020.1740150.

Hsu, A., Z.Y. Yeo, and A. Weinfurter. Emerging Digital Environmental Governance in China: The Case of Black and Smelly Waters in China, in “Data, Digitization and Environmental Governance in China” edited by G. Kotska, X. Zhang. (2019). *Journal of Environmental Management and Planning*, DOI: [10.1080/09640568.2019.1661228](https://doi.org/10.1080/09640568.2019.1661228).

Fritz, S., L. See, T. Carlson, M. Haklay, J.L. Oliver, D. Fraisl, R. Mondarini, M. Brocklehurst, L. Shanley, S. Schade, U. When, T. Abrate, J. Anstee, S. Arnold, M. Billot, J. Campbell, J. Espey, M. Gold, G. Hager, S. He, L. Hepburn, **A. Hsu**, D. Long, J. Maso, I. McCallum, M. Muniafu, I. Moorthy, M. Obersteiner, A. Parker, M. Weissplug, and S. West. Citizen Science and the United Nations Sustainable Development Goals. (2019). *Nature Sustainability*. DOI: 10.1038/s41893-019-0390-3.

Hsu, A. J. Brandt, O. Widerberg, S. Chan & A. Weinfurter. (2019). Assessing Linkages Between Non-State Actors and Nationally-Determined Contributions in special issue ‘Making climate action more transparent and ambitious: lessons learned from the first Nationally Determined Contributions (NDCs),’ *Climate Policy*, DOI: [10.1080/14693062.2019.1624252](https://doi.org/10.1080/14693062.2019.1624252).

Chakraborty, T., **A. Hsu**, D. Manya, and G. Sherriff. (2019). Disproportionately Higher Exposure to Urban Heat in Lower-income Neighborhoods: a Multi-City Perspective in “Urban Sustainability Solutions” special issue of *Environmental Research Letters*, DOI: <https://doi.org/10.1088/1748-9326/ab3b99>.

Hsu, A., Höhne, N., Kuramochi, T., Roelfsema, M., Weinfurter, A., Xie, Y., Lütkehermöller, K., Chan, S., Corfee-Morlot, J., Drost, P., Faria, P., Gardiner, A., Gordon, D.J., Hale, T., Hultman, N.E., Moorhead, J., Reuvers, S., Setzer, J., Singh, S., Weber, C., Widerberg, O. (2019). A Research Roadmap for Quantifying Non-State and Subnational Climate Action. *Nature Climate Change*, **9**: 1–17.

Hsu, A., A. Weinfurter, J. Tong and Y. Xie. Black and Smelly Waters: How Citizen-Generated Transparency Addressing Gaps in China's Environmental Management, in "Disclosing Sustainability: The Transformative Power of Transparency?" A. Gupta, I. Boas, and P. Oosterveer, Eds. *Journal of Environmental Policy and Planning*. (2019). Journal of Environmental Policy & Planning, DOI: 10.1080/1523908X.2019.1654365.

Berrang-Ford, L., Biesbroek, R., Ford, J.D., Lesnikowski, A., Tanabe, A., Wang, F., Chen, C., **Hsu, A.**, Hellmann, J., Pringle, P., Grecequet, M., Amado, J.C., Huq, S., Lwasa, S., Heymann, S.J. Tracking global climate change adaptation among governments. *Nature Climate Change*, 9(6), 440.

Hsu, A., Weinfurter, A.J. & Xu, K. Aligning Sub-national Climate Actions for the Post-Paris Regime. *Climatic Change* (2017). doi:10.1007/s10584-017-1957-5.

Hsu, A., Y. Cheng, A. Weinfurter, K. Xu, and C. Yick. (2016). Track climate pledges of cities and companies. *Nature* 532: 303-305.

Hsu, A., A.S. Moffat, A.J. Weinfurter, and J.D. Schwartz. "Towards a New Climate Diplomacy." *Nature Climate Change* 5, 501–503 (2015).

Chan, S., van Asselt, H., Hale, T., Abbott, K., Beisheim, M., Hoffmann, M., Guy, B., Höhne, **Hsu, A.**, Pattberg, P., Pauw, P., Ramstein, C., and Widerberg, O. (2015). Reinvigorating international climate policy: A comprehensive framework for effective nonstate action. *Global Policy*, 6(4), 466-473.
Recognized as one of Global Policy's Top-10 cited papers.

Hsu, A. (2015). Measuring Policy Analytical Capacity for the Environment: A Case for Engaging New Actors. *Policy and Society*. <http://doi:10.1016/j.polsoc.2015.09.003>

Malik, O., **A. Hsu**, L. Johnson, and A. de Sherbinin. (2015) An Indicator of Global Wastewater Treatment to Inform the Sustainable Development Goals. *Environmental Science and Policy*, 48: 172-185.

Hsu, A. (2013). Limitations and Challenges of Provincial Environmental Protection Bureaus in China's Environmental Monitoring, Reporting, and Verification. *Environmental Practice*, 15(3): 280-292.

Hsu, A., A. de Sherbinin, and H. Shi. (2012). Seeking truth from facts: the challenge of environmental indicator development in China. *Environmental Development*. 3: 39-51. <http://dx.doi.org/10.1016/j.envdev.2012.05.001>.

Hsu, A., A. Lloyd, and J.W. Emerson. (2013). What progress have we made since Rio? The 2012 Environmental Performance Index (EPI) and Pilot Trend EPI. *Environmental Science and Policy*, vol 33:171 – 185. <http://dx.doi.org/10.1016/j.envsci.2013.05.011>.

Hsu, A. A. Reuben, D. Shindell, A. de Sherbinin, and M. Levy. (2013). Toward the Next Generation of Air Quality Monitoring. *Atmospheric Environment*, 80:561-570. <http://www.sciencedirect.com/science/article/pii/S1352231013005578>.

Peer-reviewed articles under review

Brandt, J., Goyal, N., M. Moroney, S. Janaskie, and **A. Hsu**. Air pollution-induced Micromigrations: Impacts on Consumer Spending. *Environmental Research Letters*, revise and resubmit. **Thematic**

award winner in UN Data for Climate Action Challenge incorporating big data to address climate change.

Hsu, A. G. Sheriff, Chakraborty, T., and D. Manya. Urban Heat Island Inequalities by Race and Income in Major U.S. cities. *Nature Communications*, revise and resubmit.

Hsu, A., Tirthankar Chakraborty, Ryan Thomas, Diego Manya, Amy Weinfurter, Nicholas Chin, Nihit Goyal and Andrew Feerman. Measuring what matters, where it matters: A spatially explicit Urban Environment and Social Inclusion Index for the Sustainable Development Goals. *Frontiers in Sustainable Cities*, revise and resubmit.

Hsu, A., and Rauber, R. Are Climate Actors Connected and Coordinated? Large-scale text analysis of Multi-level Climate Actions. *Nature Communications Earth & Environment*, revise and resubmit.

Hsu, A., Wang, J., Xu, K., Zhang, W., and Yan, C. Data and Transparency Key for China's pollution clean-up. *Ecological Economics*, in review.

Book reviews

Hsu, A. (2014). China's Environmental Policy and Urban Development, edited by Joyce Yanyun Man. *Journal of Regional Science*, 54:4: 719-721.

Editorials and Commentaries

Ford, J. D., Tilleard, S. E., Berrang-Ford, L., Araos, M., Biesbroek, R., Lesnikowski, A. C., **Hsu, A.** ... & Bizikova, L. (2016). Opinion: Big data has big potential for applications to climate change adaptation. *Proceedings of the National Academy of Sciences*, 113(39), 10729-10732.

Hsu, A. K. Xu, and A. Moffat. (2015). Correspondence: China's emissions are a mystery. *Nature*: 523:158 (09 July 2015).

Hsu, A., O. Malik, L. Johnson, and D.C. Esty. (2014). Mobilize citizens to track sustainability. *Nature*, vol. 508:33-35.

Scientific Committee Reports

NewClimate Institute & Data-Driven EnviroLab. (2020). Navigating the Nuances of Net-Zero. Research report prepared by the team of: Thomas Day, Silke Mooldijk and Takeshi Kuramochi (NewClimate Institute) and Angel Hsu, Elwin Lim, Zhi Yi Yeo, Amy Weinfurter, Yin Xi Tan, Ian French, Vasu Namdeo, Odele Tan, Sowmya Raghavan, and Ajay Nair (Data-Driven EnviroLab).

Data-Driven EnviroLab & NewClimate Institute. (2020). Accelerating Net Zero: Exploring Cities, Regions, and Companies' Pledges to Decarbonise. Research report prepared by the team of: **Angel Hsu,** Zhi Yi Yeo, Amy Weinfurter, Yin Xi Tan, Ian French, Vasu Namdeo, Odele Tan, Sowmya Raghavan, Elwin Lim, and Ajay Nair (Data-Driven EnviroLab) and Thomas Day, Silke Mooldijk, Niklas Höhne, and Takeshi Kuramochi (NewClimate Institute).

NewClimate Institute, Data-Driven Lab, PBL, German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE), Blavatnik School of Government, University of Oxford. 2019 edition. Research report prepared by the team of: Takeshi Kuramochi, Swithin Lui, Niklas Höhne, Sybrig Smit, Maria Jose de Villafranca Casas, Frederic Hans, Leonardo Nascimento, Paola

Tanguy, **Angel Hsu**, Amy Weinfurter, Zhi Yi Yeo, Yunsoo Kim, Mia Raghavan, Claire Inciong Krummenacher, Yihao Xie, Mark Roelfsema, Sander Chan, Thomas Hale.

Hsu, A., N. Alexandre, J. Brandt, T. Chakraborty, S. Comess, A. Feierman, T. Huang, S. Janaskie, D. Manya, M. Moroney, N. Moyo, R. Rauber, G. Sherriff, R. Thomas, J. Tong, Y. Xie, A. Weinfurter, Z. Yeo (in alpha order), (2018). The Urban Environment and Social Inclusion Index. New Haven, CT: Yale University. Available: datadrivenyale.edu/urban.

Hsu, A.; Widerberg, O.; Weinfurter, A.; Chan, S.; Roelfsema, M.; Lütkehermöller, K. and Bakhtiari, F. (2018). Bridging the emissions gap - The role of nonstate and subnational actors. In The Emissions Gap Report 2018. A UN Environment Synthesis Report. United Nations Environment Programme. Nairobi.

Data Driven Yale, NewClimate Institute, PBL 2018: Global climate action of regions, states and businesses. Research report published by Data Driven Yale, NewClimate Institute, PBL Netherlands Environmental Assessment Agency, prepared by project team of **Angel Hsu**, Amy Weinfurter, Andrew Feierman, Yihao Xie, Zhi Yi Yeo, Katharina Lütkehermöller, Takeshi Kuramochi, Swithin Lui, Niklas Höhne, Mark Roelfsema. Available at <http://bit.ly/yale-nci-pbl-global-climate-action>.

Mission2020: The Climate Turning Point. <http://www.mission2020.global/>

UN Environment Programme (UNEP) and Ministry of Environment, Norway. (2016). Renewable energy and energy efficiency in developing countries: contributions to global emissions reductions. Second report of the 1 Gigaton Coalition. Lead author.

UN Environment Programme (UNEP). (2016). The 2016 Emissions Gap Report. Contributing author to Chapter 4: Non-state actors.

Hsu, A. et al. (2016). The 2016 Environmental Performance Index. Yale University: New Haven, CT. Available: <http://epi.yale.edu>.

Hsu, A., Y. Cheng, A. Weinfurter, and C. Yick (2016). Understanding NAZCA: Challenges and Future of the World's Largest Voluntary Climate Action Platform. Yale Data-Driven Environmental Solutions Group: New Haven, CT. Available: http://datadriven.yale.edu/files/2016/06/Yale_ADEME_Report-1317eu8.pdf.

Hsu, A. N. Hoehne, Y. Cheng, A. Weinfurter, M. Hagemann, A. Moffatt and K. Xu. (2015). Inaugural Report of the 1 Gigaton Coalition: Filling the Gap – Renewable Energy and Energy Efficiency. Available: <http://www.1gigatoncoalition.org/wp-content/uploads/2015/12/1-gigaton-coalition-key-findings-and-executive-summary.pdf>.

Hsu A., K. Xu, A. Weinfurter, and S. Wnuck. (2015). The Global Impact of Sub-national Climate Action. White paper with R-20 Regions for Climate Change, The Stanley Foundation, and USC Schwarzenegger Global Policy Institute.

ICSU, ISSC (2015): Review of the Sustainable Development Goals: The Science Perspective. Paris: International Council for Science (ICSU). (Contributing author).

Hsu, A., J. Emerson, M. Levy, A. de Sherbinin, L. Johnson, O. Malik, J. Schwartz, and M. Jaiteh. (2014). The 2014 Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law and Policy. Available: <http://www.epi.yale.edu>.

Yale Center for Environmental Law and Policy, Center for International Earth Science Information Network at Columbia University, Chinese Academy for Environmental Planning, and the City University of Hong Kong. 2011. "Towards a China Environmental Performance Index." <http://environment.yale.edu/envirocenter/files/China-EPI-Report.pdf>

Hsu, A., N. Singh, and R.P. Song. "Sector-based approaches to Measuring and Managing Greenhouse Gas Emissions: A Case of the Chinese Cement Industry." *China Environment Forum: China and the Climate Change Challenge*, Vol. 11. <http://www.wilsoncenter.org/topics/pubs/CES%2011%20pp.%20239-294.pdf>.

Fransen, T., P. Bhatia, and **A. Hsu**. 2007. *The Greenhouse Gas Protocol Initiative: Measuring to Manage: A Guide to Designing GHG Accounting and Reporting Programs*. Washington, D.C.: World Resources Institute.

PUBLIC OUTREACH AND COMMUNICATION

- **Online popular media and blogging (selected)**

Hsu, A., N. Goyal, and A. Weinfurter. (2020). Are European cities delivering on their climate commitments? Carbon Brief. https://www.carbonbrief.org/guest-post-are-european-cities-delivering-on-their-climate-commitments?utm_content=bufferf755a&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

Hsu, A. (2019). In Singapore's climate fight, transition to clean energy is a matter of will. South China Morning Post. <https://www.scmp.com/week-asia/opinion/article/3050675/singapores-climate-fight-transition-clean-energy-matter-will>.

Hsu, A. (2019). Commentary: Forget bamboo straws. Let's name the elephants in the room of Singapore's climate debate. Channel News Asia. <https://www.channelnewsasia.com/news/commentary/singapore-climate-change-action-un-madrid-oil-refinery-petrochem-12178838>

Hsu, A. and Kim Samuel. (2018). How cities are failing to be inclusive and sustainable – and what they can do about it. World Economic Forum. <https://www.weforum.org/agenda/2018/12/how-global-cities-are-failing-to-be-inclusive/>

Hsu, A. and A. Weinfurter. (2018). All climate politics is local. *Foreign Affairs*, September 24. <https://www.foreignaffairs.com/articles/united-states/2018-09-24/all-climate-politics-local?cid=int-fls&pgtype=hpg>.

Hsu, A. and C. Rosengarten. (2017). The leadership void on climate change. *China Dialogue*, April 21. <https://www.chinadialogue.net/article/show/single/en/9744-The-leadership-void-on-climate-change>.

Hsu, A. and C. Rosengarten. (2016). Just how bad is the air we breathe? *World Economic Forum*. <https://www.weforum.org/agenda/2016/03/decoupling-development-and-dirty-air/>

Hsu, A., D. Wong, and C. Rosengarten. (2016). A New Air Pollution Database Is Good, but Imperfect. *Scientific American*. <http://blogs.scientificamerican.com/guest-blog/a-new-air-pollution-database-is-good-but-imperfect/>

Hsu, A. and C. Rosengarten. (2016). 2016 Environmental Rankings Show Declining Air Quality and Collapsing Fish Stocks. *Huffington Post*. http://www.huffingtonpost.com/angel-hsu/2016-environmental-rankin_b_9108872.html

Seligsohn, D. and **A. Hsu.** (2016). How China's 13th Five-Year Plan Addresses Energy and the Environment. *ChinaFile*. <https://www.chinafile.com/reporting-opinion/environment/how-chinas-13th-five-year-plan-addresses-energy-and-environment>.

Hsu, A., A. Moffat, and K. Xu. (2016). Making sense of China's drop in coal consumption. *Scientific American*. Available: <http://blogs.scientificamerican.com/guest-blog/making-sense-of-china-s-drop-in-coal-use/>.

Hsu, A. (2015). Liveability Ranking Ignores the Environment. *Huffington Post*. http://www.huffingtonpost.com/angel-hsu/with-every-breath-chinese_b_8254990.html?

Hsu, A. and A. Weinfurter. (2015). Paris climate talks need business to move beyond greenwash and empty promises. *The Guardian*. 10 July. Available: <http://www.theguardian.com/sustainable-business/2015/jul/10/paris-climate-talks-more-than-greenwash-empty-promises>.

Hsu, A. and A. Zomer. 2015. Four Hurdles to Getting Data and Science in the SDGs. Scidev.net. Available: <http://www.scidev.net/global/data/opinion/four-hurdles-data-science-sdgs.html>.

Hsu, A. and W. Miao. 2014. Soil Pollution in China Still a State Secret Despite Recent Survey. June 18. *Scientific American*. <http://blogs.scientificamerican.com/guest-blog/2014/06/18/soil-pollution-in-china-still-a-statesecret-despite-recent-survey/>.

Hsu, A. and A. Zomer. 2014. An interactive air-pollution map. *The Atlantic*. June 11. <http://www.theatlantic.com/health/archive/2014/06/the-air-we-breathe/372411/>.

Hsu, A. and J.D. Schwartz. 2014. China-India Smog Rivalry a Sign of Global Menace. *Scientific American*. March 26. <http://blogs.scientificamerican.com/guest-blog/2014/03/26/china-india-smog-rivalry-a-sign-of-global-menace>.

Hsu, A. 2013. "Does the Environment Need Big Data?" *The Huffington Post*. July 9. http://www.huffingtonpost.com/angel-hsu/does-the-environment-need_b_3568529.html.

Hsu, A. and W. Miao. 2013. "28,000 Rivers Disappeared in China: What Happened?" *The Atlantic*. April 29. <http://www.theatlantic.com/china/archive/2013/04/28-000-rivers-disappeared-in-china-what-happened/275365/>

Hsu, A. 2012. "Can a New Smartphone App Hold Leaders More Accountable in the Doha Climate Talks?" *The Huffington Post*. http://www.huffingtonpost.com/angel-hsu/decisionmakr-app_b_2198661.html.

Hsu, A. 2011. "Clearing the Haze." *China Dialogue*. October 19. <http://www.chinadialogue.net/article/show/single/en/4589-Clearing-the-haze> ** This article was

one of the Top-10 most read on China Dialogue in 2011.
http://www.chinadialogue.net/weblogs/4/weblog_posts/432

Hsu, A. and Y. Zhao. 2011. “Talking Tactics: China’s performance in Cancún points to a new, more conciliatory climate diplomacy from a country that knows the sharp end of the blame game.” *China Dialogue*. January 27. <http://www.chinadialogue.net/article/show/single/en/4076-Talking-tactics->.

Seligsohn, D. and **A. Hsu**. 2011. “What to expect on climate change and energy in China in 2011.” *Grist*. January 6. <http://www.grist.org/article/2011-01-06-what-can-we-expect-on-climate-andenergy-in-china-in-2011/>.

Hsu, A. 2010. “Account of the Tianjin Climate Talks: Of Pigs and Mirrors - The Breakdown of the U.S.-China Dialogue in Tianjin.” *The Atlantic*. October 15, 2010.
<http://www.theatlantic.com/international/archive/2010/10/account-of-the-tianjin-climatetalks/64649/>.

Hsu, A. et al. 2009. “China in Copenhagen,” series of analytical pieces following the Chinese negotiation position at UNFCCC Conference of Parties (COP-15) in Copenhagen, Denmark. Featured on <http://www.greenleapforward.com> and <http://climateprogress.org>.

- **Invited keynotes, talks, and presentations to external organizations**

Speaker, TED Climate Countdown. Online. Countdown.ted.com

Invited speaker, World Economic Forum Annual Meeting. Davos, Switzerland. Jan. 20-24, 2020.

Invited speaker, World Economic Forum Sustainable Development Impact Summit. New York City, NY. Sept 23, 2019.

Invited speaker, Big Picture on Urban Fragility. World Economic Forum Annual Meeting of the New Champions. Dalian, China. July 1-3, 2019.

Keynote speaker, World Bank Innovation for Climate Summit, Singapore, June 6, 2019.

“Sustainable but not Inclusive? The Urban Environment and Social Inclusion Index,” keynote at Smart City World Expo Conference. Barcelona, Spain. Nov., 15, 2018.

Invited speaker, Opening Plenary. Global Climate Action Summit, San Francisco, CA. Sept. 12-14, 2018. <http://globalclimateactionsummit.org/live>

Invited keynote speaker. Fourth-Wave Innovations in Data for Environment. Environmental Defense Fund All-Staff Retreat. Cambridge, MD. June 5, 2018.

“China’s Unlikely Environmental Leadership,” TED 2018: The Age of Amazement, Toronto, Canada. April 10-14, 2018.
https://www.ted.com/talks/angel_hsu_how_china_is_and_isn_t_fighting_pollution_and_climate_change.

“Working in a Sustainable Manner: What is Sustainability?” World Bank Environment Day, Washington, DC. March 13, 2018.

“Innovations and Opportunities in Big Data and Earth Observation Systems: Pathways to a More Sustainable Future,” Science Policy Business Forum, UN Environment Assembly, Nairobi, Kenya. December 3, 2017.

“New Technology and Urban Air Pollution,” Bloomberg Philanthropies. August 10, 2017.

“Data-Driven Cities,” invited panelist at C-40 Cities for Climate Leadership Annual Meeting, Mexico City, Mexico. December 1-2, 2016.

“Launch of the 2016 Environmental Performance Index,” 2016 World Economic Forum Annual Meeting, Davos. January 23, 2016

"Contextualizing Global Non-State and Sub-national Climate Action," invited speaker at UNFCCC COP-21 Paris climate negotiations official press conference. Dec. 4, 2015.

“The role of non-state actors in enhancing mitigation ambition pre-and post-2020,” Invited speaker at CCXG Global Forum, OECD, Paris, September 8, 2015.

“From Local to Global: Assessing Climate Action at all Levels,” invited presentation at International Energy Agency (IEA) workshop: Complementary measures for industry/business decarbonisation,” Paris, June 22, 2015.

“Development of the Environmental Performance Index,” keynote presentation at U.S. EPA – hosted workshop, “Community Environmental Resilience Index (CERI). July 22-23, 2014. Washington, D.C.

“Technology and Green Cities,” presentation at New Cities Summit, June 17-19, 2014. Dallas, Texas.

“The 2014 Environmental Performance Index – Worsening Air Quality,” Keynote address at the 2014 Environmental, Energy and Resources Law Summit State of Play on Air Regulation in Canada. Canadian Bar Association Conference, May 28-29, 2014. Ottawa, Canada.

“Launch of the 2014 Environmental Performance Index.” World Economic Forum Annual Meeting, Davos, Switzerland. January 25, 2014.

- **Expert testimony**

“China’s role in the Copenhagen negotiations and implications for the United States.” Testimony before the U.S.-China Economic and Security Review Commission Hearing, “China’s Green Energy and Environmental Policies.” Washington, D.C. April 8, 2010. Available: http://www.uscc.gov/hearings/2010hearings/bios/10_04_08_bios/hsu.php.

- **Media mentions (selected international publications and media)**

The Economist. (2018). California leads subnational efforts to curb climate change . Sept. 13. <https://www.economist.com/international/2018/09/15/california-leads-subnational-efforts-to-curb-climate-change>.

Milman, O. (2018). Climate change: local efforts won't be enough to undo Trump's inaction, study says. *The Guardian*. Aug. 30. <https://www.theguardian.com/environment/2018/aug/29/local->

climate-efforts-wont-undo-trump-inaction.

BBC News. (2017). “Dodgy” greenhouse gas data threatens Paris Accord,” August. 7.
<http://www.bbc.com/news/science-environment-40669449>.

Fullerton, J. (2017). Beijing hit by dirty smog but observers say air is getting better. *The Guardian*, March 31. <https://www.theguardian.com/sustainable-business/2017/mar/31/china-beijing-air-pollution-smog-business-crackdown-fines-spot-checks>

Wong, E. 2016. China’s carbon emissions may have peaked, but it’s hazy. *New York Times*. 4 April.
http://www.nytimes.com/2016/04/04/world/asia/china-climate-change-peak-carbon-emissions.html?_r=0

Confino, J. 2014. Big data: friend or foe of sustainability? – podcast. *The Guardian*. 18 February.
<http://www.theguardian.com/sustainable-business/big-data-sustainability-podcast>.

BBC World. 2014. Report: One fifth of China's soil contaminated. 18 April. Live television interview.

Kelkar, K. 2014. How to read pollution statistics. *Wall Street Journal*.

Mazoomdaar, J. 2014. 'Delhi air pollution higher than Beijing' report denied. BBC News. 31 January.

Larson, C. 2014. Who Has Dirtier Air: China or India? *Businessweek*. 28 January.

Vaitheeswaran, V. 2014. Browner, but greener. *The Economist*, Feb. 1 print edition. Available:

Harris, G. 2014. Beijing’s air would be a step up for smoggy Delhi. *The New York Times*. 26 January.

Kaiman, J. 2013. Chinese struggle through 'airpocalypse' smog. *The Guardian*, 16 February.

Alcorn, T. 2013. China's skies: a complex recipe for pollution with no quick fix. *The Lancet* 381.9882: 1973-1974.

----- . 2012. Clearing the air: Satellite data reveal the true scope of China’s pollution problem. *The Economist*. 11 February. Print edition.

Friedman, L. 2010. Tweeting from Tianjin. *The New York Times*, 8 October.

Friedman, L. 2010. The 2 Biggest Carbon Emitters Find Common Ground in Clean Energy Technology. Available: *The New York Times*, 23 April.

- **Media mentions (domestic publications and media)**

Hersher, R. and Northam, J. (2020). U.S. Emission Reductions Slowed After Trump Pulled Out Of Paris Accord. National Public Radio. <https://www.npr.org/2020/09/29/913727755/u-s-emission-reductions-slowed-after-trump-pulled-out-of-paris-accord>.

Tharoor, I. (2020). Trump drops a climate bomb on Davos. The Washington Post. <https://www.washingtonpost.com/world/2020/01/21/trump-drops-climate-bomb-davos/>.

National Public Radio (NPR). (2019). U.N. Climate Summit Sets Stage For New National Emissions Promises. <https://www.npr.org/2019/09/23/755858467/u-n-climate-summit-sets-stage-for-new-national-emissions-promises>

NBC News. (2018). Major climate summit aims to transform Trump admin headwinds into power for action. Sept. 12. <https://www.wxxv25.com/2018/09/12/major-climate-summit-aims-to-transform-trump-admin-headwinds-into-power-for-action/>.

Halper, E. (2018). How far can California push the nation — and the world? Jerry Brown's climate summit may provide the answer. *LA Times*. <http://www.latimes.com/politics/la-na-pol-climate-summit-preview-20180912-story.html>.

Storrow, B. (2017). Mayors promise to act on climate. How much can they do? E&E News, July 6. <https://www.eenews.net/stories/1060056980>.

D. Kahn. (2017). China is preparing to launch the world's biggest carbon market. Climatewire, August 14. <https://www.scientificamerican.com/article/china-is-preparing-to-launch-the-world-s-biggest-carbon-market/>

Holden, E., and A.C. Mulkern. (2017). Trump ignites Climate Pledges with Paris Withdrawal. *ClimateWire*. <https://www.scientificamerican.com/article/trump-ignites-climate-pledges-with-paris-withdrawal/>

The Kojo Nnamdi Show. (2015). Cleaner air: Measuring Air Pollution at the Street Level. NPR. 15 September. Guest on live radio program. <http://thekojoannamdishow.org/shows/2015-09-15/cleaner-air-measuring-pollution-at-street-level>

Dankowsky, J. et al. 2014. Where we Live: How Clean is Our Air? WNPR. 3 April. Guest on live radio program. Available: <http://wnpr.org/post/how-clean-our-air>.

ACADEMIC CONFERENCES AND PRESENTATIONS

“The Transformative Potential of Transparency in Climate Governance,” Virtual Forum on Earth Systems Governance. Sept. 17, 2020 (delivered online).

“COVID-19 and Climate Change in Asia: Opportunity or Red Herring?” Asia-Pacific Centre for Environmental Law. July 1, 2020 (delivered online).

“Future of US-China Climate Relations: Working towards a Green New Deal,” US-China University of Pennsylvania Project. Philadelphia, PA. June 4-5, 2020 (delivered online).

2019 Roundtable on Future District Energy Systems: Decarbonising the City and the Energy Sector. Future Cities Lab – ETH Zurich. Singapore. December 3, 2019.

Subnational transatlantic partnerships ahead of COP25. George Washington University. November 21, 2019 (delivered online).

“Seeking the Signal through the Noise: Applied Data Science for Decisionmaking,” 2019 KDD Data Science Workshop Keynote (via videoconference). Anchorage, Alaska, Aug. 5, 2019.

“Navigating Non-State and Subnational Climate Action in Fragmented Authoritarianism: Evidence from China,” on “Addressing Climate Change in China: Energy and Environmental Politics” Panel. Western Political Science Association Conference. San Diego, CA, April 19, 2019.

“Chapter 5: Role of Non-State and Subnational Actors in Narrowing the Emissions Gap,” UN Environment Programme Emissions Gap Report Launch, Paris, France. November 25, 2018.

“Citizen Science and the Sustainable Development Goals,” invited conference at the International Institute for Applied Systems Analysis. Vienna, Austria, Oct. 3-5, 2018.

“Black and Smelly Waters: How Citizen-Generated Transparency is Addressing Gaps in China’s Environmental Management,” Data, Digitization and Environmental Governance in China, organized by Genia Kostka, Freie Universität Berlin, May 28-29, 2018.

“Data-Driven Environmentalism in China,” Finding Solutions Conference, USC China Institute, Los Angeles, CA. April 6, 2018.

“Examining Linkages in Non-State and Subnational Climate Actions through Text as Big Data Methods,” with Udit Jain and Ross Rauber, invited paper for ISA 2018 Panel: Global Climate Governance through Non-State Actors, San Francisco, CA. April 6, 2018.

Co-convenor and speaker, “Cities and the challenge of 1.5c assessing modes mechanisms and manifestations of coordination in global urban climate governance,” Cities IPCC Conference, Edmonton, Canada. March 7, 2018.

“Integrating non-state and subnational climate action with national climate strategies,” invited paper for ISA 2017 Panel: After Paris: Nonstate actions and global governance for climate and sustainability with Robert Falkner (LSE), Kenneth Abbott (U. Arizona), Sander Chan (German Development Institute), Marianne Beisheim (Freie Universität Berlin), Thomas Hale (Oxford), Thomas Hickman (University of Potsdam), Baltimore, Maryland. February 2017.

“Determining Success: The Results of COP 21 and looking to a global climate change governance system supporting restraints on global carbon emissions,” invited panelist at ISA roundtable with David Victor (UCSD), Thomas Hale (Oxford), Jessica Green (NYU), Matt Hoffman and Steven Bernstein (U Toronto), chaired by Alan Alexandroff (U Toronto). Atlanta, GA, March 19, 2016.

“Measuring Climate Change Performance at the National Level,” invited talk at Climate Change Performance Index Workshop hosted by National Institute for Environmental Studies. Tokyo, Japan. August 25-26, 2016.

“Aggregating Metrics of Sustainability,” invited presentation at Urban Beyond Measure conference at Stanford University, May 2015.

“The Environmental Performance Index: A Global Indicator of Sustainability.” Invited keynote at the WIPIS 2015: Interdisciplinary Workshop on Environmental Sustainability. University of Concepcion, Chile. March 29-April 1, 2015.

Panelist on “Panel I: Towards a Renewed Energy & Transportation Infrastructure,” New Directions in Environmental Law Conference, Yale Law School and Yale School of Forestry and Environmental Studies, February 28, 2015, New Haven, CT.

“Urban Sustainability Metrics: Smart-Scaling for Cities,” 2nd Urbanization and Global Environmental Change Conference, November 6, 2014, Taipei, Taiwan.

“Towards a New Type of U.S.-China Relations on Climate Change.” Invited presentation and participation as one of eight U.S. early-career scholars chosen to participate in U.S.-China Youth Dialogue, hosted by the China Institute for International Studies. Changchun and Beijing, China. August 19-25, 2013.

“Measuring Green Progress: Over a Decades' Lessons Learned from The Environmental Performance Index.” Invited Keynote Speaker. e-Frame Environmental Indicators' Workshop. FEEM, Island of San Giorgio Maggiore, Venice, Italy. Dec. 5-6, 2013.

“Towards the Next Generation of Air Quality Indicators.” Presentation at official side event, “Implications for Monitoring, Mitigation, and Management at the Air Quality-Climate Change Nexus,” hosted by the Yale Climate and Energy Institute at the UNFCCC COP-18 in Doha, Qatar. December 7, 2012.

“The 2012 Environmental Performance Index and the Pilot Trend Index.” Invited presentation at official side event, “Sustainable Development index methodology – possible options,” hosted by the government of Armenia at the Rio+20 Earth Summit. Rio de Janeiro, Brazil. June 15, 2012.

“Measuring Air Quality in China and the Implications for MRV (Measurement, Reporting, and Verification) of Greenhouse Gas Emissions.” Presentation at the US Climate Action Network Official Side Event at the UNFCCC Tianjin Climate Conference. Tianjin, China. October 2010.

“Testing the Green Desert Hypothesis: Bottom-up Herbivore Regulation of *Piper cenocladum* amides.” Oral and Poster Presentation at 2003 Annual Student Research Conference in Los Angeles, CA. Received Superior (top) Award for research in Ecology and Evolutionary Biology. November 14-15, 2003.

INVITED SPEAKER AT ACADEMIC INSTITUTIONS

“From Satellites to Sensors: Third Wave Data Approaches to China’s Environmental Policy.” Oxford China Centre. November 28, 2018.

“The past, present, and future of regional collaboration and subnational diplomacy,” MIT Northeastern Climate Policy Summit, Cambridge, MA. December 8, 2017.

Climate Change Summit Panel, University of Michigan School of Environment and Sustainability Studies inauguration, October, 27, 2017.

“Urbanization and Climate Change: Challenges for the 21st Century,” invited guest lecture in Prof. Kim Samuel’s Capstone Seminar, Overcoming Social Isolation, and Sauvé Seminar. McGill University. November 23, 2017.

“Tackling Transparency: Third-Wave Data for Environmental Policy,” invited talk at Duke University, Durham, North Carolina. September 22, 2016.

“Seeking the Signal Through the Noise: Lessons learned from the Environmental Performance Index,” invited talk at Duke University, Durham, North Carolina. September 19, 2016.

“Disclosing Sustainability: The Transformative Power of Transparency,” invited summer school instructor and keynote speaker. Wageningen University, Netherlands. June 24-26, 2016.

“Implementing the Paris Climate Agreement: Sub-national and non-state actors,” invited speaker at Energy Studies Institute. Singapore. April 14, 2016.

“Seeking Truth from Facts: Data-driven Environmental Policy in China,” Invited talk at the Center for Contemporary China Studies, University of Pennsylvania, October 26, 2015.

“Measuring Global Environmental Sustainability,” invited lecture in “The Global Context of Policymaking” course in the Executive-MPA Program at the School of International and Public Affairs (SIPA) of Columbia University, July 7, 2015.

“Measuring Carbon emissions in China,” invited presentation at “Key Regional Actors and Sector Opportunities for International Climate Change Cooperation,” University of Texas-Austin, May 28, 2015.

“The G-2 in Global Climate Change,” invited lecture at Williams College, Williamstown, MA, April 30, 2015.

“Seeking the Signal through the Noise: The Environmental Performance Index.” Invited lecture at the Institute for Health Metrics Evaluation, University of Washington-Seattle. October, 15, 2014. Seattle, WA.

“Seeking Truth from Facts: Data-Driven Environmental Decision-Making and Policy,” invited lecturer at Duke University’s Spring 2014 Seminar Series, March 21, 2014, Durham, NC.

FUNDED GRANTS

2020-2021 IKEA Foundation, “Tracking Non-State Climate Action.” PI: Takeshi Kuramochi (NewClimate Institute); Co-PI (Hsu). 522,500 Euro (Hsu portion: 112,500 Euro).

2020-2021 Samuel Centre for Social Connectedness, “Urban Environment and Social Inclusion Index 2.0” – PI: Hsu. \$150,000 USD.

2019-2021 National Science Foundation - Science of Science Policy and Innovation, “Blockchain Climate Action Tracking (B-CAT) for Non-State and Subnational Contributions to Global Climate Change Mitigation” – PI: Hsu, Co-PI: Leandros Tassioulas, Department of Electrical Engineering, Yale University, \$499,068 USD

- 2019-2020 Yale-NUS College Tan-Chin Chuan Chinese Studies Research Programme, “Understanding and Strengthening Non-State and Subnational Climate Action in China,” \$93,537 SGD (PI)
- 2019 Climateworks Foundation – 2019 Global Aggregation Report for Non-State and Subnational Climate Action - \$180,650 USD (Split with New Climate Institute, Oxford University, PBL Netherlands, Mission 2020, German Development Institute, CDP) (Co-PI)
- 2019-2020 National Geographic Society/Microsoft AI for Earth - \$15,000 in Microsoft Azure computing credits and in-kind computing support from Microsoft for project, “Multi-scale Indicators to Map and Evaluate Urban Heat Risk and Policy Performance at Fine Resolutions in Singapore” (PI)
- 2019-2022 National University of Singapore Early Career Award – competitive early career research award for scholars within first three years of tenure-track position for project, “Next Generation Innovation in Tracking Non-State and Subnational Climate Action” - \$499,593.42 SGD (PI)
- 2019-2021 Singapore Humanities and Social Sciences Seed Fund Grant – \$20,000 SGD (PI)
- 2018 British Academy Visiting Fellowship with Oxford University’s Blavatnik School of Government - £33,000 GBP (maximum amount awarded). (PI)
- 2017 UN Data for Climate Action Challenge – Thematic Prize Winner for Linking Climate Change to the Sustainable Development Goals - \$4,000 USD (PI)
- 2017 Climateworks Foundation – Assessing the Global Impact of Non-state and Subnational Climate Actions - \$360,349 USD (PI)
- 2017 Samuel Family Foundation – Measuring Urban Environment and Social Isolation – PI - \$250,000 USD (PI)
- 2017 UN Environment Programme – Research support to the 1 Gigaton Coalition – PI - \$139,844 USD (PI)
- 2016 Yale-NUS Workshop Grant – Tracking adaptation to climate change: conceptual, methodological, and empirical challenges – PI, Yale-NUS College – \$30,000 SGD (PI)
- 2016 UN Framework Convention on Climate Change – Research support to the Non-State Actor Zone for Climate Action - PI - \$15,000 USD (PI)
- 2016 Natural Resources Defense Council (NRDC) – Galvanizing the Groundswell of Climate Action research support – PI – \$25,000 USD (PI)
- 2016 UNEP and Norway – Research support to the 1 Gigaton Coalition – PI – \$216,171 USD (PI)
- 2015 - Canada SSHRC Partnership Development Grant for Climate Adaptation Tracking Collaborative (ATC) – Co-I – McGill University - \$200,000 CAD
- 2015 - 2016 Climateworks Foundation – Third-Wave Data for Environmental Policy in China – PI – \$125,000 USD (PI)
- 2015 ADEME – The French Environment and Energy Management Agency – Understanding NAZCA: Challenges and Future of the World’s Largest Voluntary Climate Action Platform – PI – \$50,000 USD (PI)
- 2015 Google – Air Quality in China education and research – PI – \$12,000 USD (PI)
- 2015 Natural Resources Defense Council (NRDC) – PI – Galvanizing the Groundswell of Climate Action research support - \$15,000 USD (PI)

- 2015 New Paradigm Institute, Seoul, Korea – PI – Urban Environmental Sustainability Indicators - \$25,000 USD (PI)
- 2015 Natural Resources Defense Council (NRDC) – PI – Urban Indicators Hub Research - \$25,000 USD (PI)
- 2015 UNEP and Norway - Quantifying reduced GHG emissions resulting from renewable energy and energy efficiency initiatives and programmes in developing countries – PI – \$77,000 USD (PI)
- 2015 Connecticut Clean Energy Finance and Investment Authority – grant to support research on CT’s solar PV policies – PI – \$70,000 USD (PI)
- 2015 Natural Resources Defense Council – grant to support climate groundswell research and workshop - \$18,000 USD (PI)
- 2015 R-20 Regions for Climate Change and The Stanley Foundation – grant to support state and regional action on climate change case studies – PI – \$6,000 USD (PI)
- 2014 - 2019 Yale School of Forestry and Environmental Studies – Research support and start-up grant – \$500,000 USD (estimated) (PI)
- 2014 - 2016 McCall McBain Foundation grant to support the Environmental Performance Index – PI – \$300,000 USD (PI)
- 2014 Samuel Family Foundation grant to support the Environmental Performance Index – PI – \$125,000 USD (PI)
- 2014 “Feasibility Study for a Sub-national Environmental Performance Index in Vietnam.” PI – United Nations Development Programme (UNDP). \$35,760 USD (PI)
- 2012-2013 PEO Scholar Award recipient, Edith Frances Langfitt Greathead Endowed Scholar - \$15,000
- 2012-2013 Switzer Fellow recipient - \$15,000 USD
- 2011 Yale Graduate School of Arts and Sciences – Public Scholar Award - \$1,000 USD
- 2010-2011 U.S. Fulbright Scholar Award to China - \$22,700 USD
- 2002 National Science Foundation Research Experiences for Undergraduates (REU) Grant to conduct research at La Selva Biological Station in Costa Rica. 2002.
- 2001-2005 Nancy Susan Reynolds Scholarship (1 of 5 top merit-based full scholarships), Wake Forest University - \$160,000 USD (estimated)
- 2001 Coca-Cola National Scholar (1 of 251 recipients) - \$20,000 USD

TEACHING ACTIVITIES

Yale-NUS College/Yale University

- Quantitative Reasoning – Fall 2019, Fall 2020 (capped at 22 students)
- Data Science for the Environment – Fall 2020 (capped at 15 students)
- Environmental Studies Capstone Seminar – Fall 2019 (capped at 15 students)
- Comparative Social Inquiry – Fall 2015 (capped at 18 students), Fall 2016 (capped at 19 students)
- Urbanization and Environment – Spring 2016 (14 students); Fall 2016 (12 students)
- China’s Energy and Environmental Sustainability Challenge - Joint course offered with Yale School of Forestry and Environmental Studies – Spring 2016 (14 students); Spring 2017 (25 students); Spring 2019 (33 students)
- Climate Science and Policy – Spring 2017 (14 students); Spring 2019 (17 students)

STUDENT ADVISING, TRAINING, AND MENTORSHIP

Post-doctoral advising

Nihit Goyal, NUS LKYSPP PhD '19

Undergraduate advising

Yale-NUS Senior Capstones

- Jamie Lee, Environmental Studies, 2020
- Zhi Yi Yeo, Environmental Studies, 2020 – Winner of Best Environmental Studies Capstone
- Zac Yeow, Environmental Studies, 2020
- Maria Ivanenko, Environmental Studies, 2017
- Christina Ho, Environmental Studies, 2017
- Yihao Xie, Environmental Studies, 2017 – Winner of Best Environmental Studies Capstone

Yale College Senior Capstones

- Udit Jain, Statistics and Data Science, 2018
- Luke Hellum, Statistics and Data Science, 2019
- Barkley Dai, Statistics and Data Science, 2019

Yale School of Forestry and Environmental Studies

- John Brandt, Masters of Environmental Management, 2019

National University of Singapore

- Foo Jia Min, National University of Singapore Undergraduate Honors Thesis in Statistics, 2015-16

Student Research Assistants

- Ainsley Lloyd, Yale MEM'12
 - Executive Director, Quatere
- Omar Malik, Yale MEM'13
 - Developer, GeneDx
- Laura Johnson, MEM'13
 - Senior Associate Environmental Planner, ICF International Consulting
- Aaron Reuben, MEM'12
 - Fellow in Environmental Journalism, Middlebury Environmental Fellowship
 - PhD student in Environmental Psychology, Duke University
- Jason Schwartz, MEM'13 and Research Associate
 - Media Officer, Greenpeace USA
- Ryan Thomas, Research Associate
 - PhD student in City and Regional Planning, Cornell University
- Alisa Zomer, MEM'14 and Research Associate
 - Program Coordinator, MIT Governance Lab
- Danny Macri, MEM'14 and Research Associate
 - Industrial Sector Specialist, ENERGY STAR, U.S. EPA
- Kaiyang Xu, MEM'16 and Research Associate
 - Marketing Insight Consultant, SKIM
- Yaping Cheng, MEM'15 and Research Associate
 - Associate, L.E.K. Consulting

- Don Mosteller, MEM'15 and Research Associate
 - Research Analyst, Energetics
- Andrew Moffat, MEM'15
 - US Department of State, Beijing
- Stephanie Wnuck Keohane, MEM'15
 - Innovator, Solar Energy Technology Office (U.S. Department of Energy Fellowship Program), Connecticut Public Utilities Regulatory Authority
- Noah Walker, MEM/MBA'13
 - Project Leader, The Boston Consulting Group
- Avi Allison, MEM'15
 - Investment Banking Associate, Citi
- William Miao, MEM'14
 - Global Product Manager, Fisher & Paykel Appliances
- Cameron Yick, Yale College '17
 - Software Engineer (Data/Visualization), Enigma Technologies, Inc.
- Anna Young, Yale College '15
 - Masters of Environmental Health candidate, T.H. Chan School of Public Health, Harvard University
- Diego Torres-Quantanilla, Yale College '15
 - Software Engineering Intern, Two Sigma
- Yinan Song, Yale College '14
 - Master of Art, Information Experience Design, Royal College of Art
- Anne Householder, Yale School of Architecture '16
 - Architectural Designer, Weiss/Manfredi Architects
- Peter Hirsch, MEM'15
 - Analyst, EBRD
- Corey Nester, MEM'16
 - Research Analyst, Climate Bonds Initiative
- Shreya Shah, Yale School of Architecture '17
 - Urban Ecology Design Lab Assistant, Yale University
- Nikola Alexandre, MEM/MBA'18
 - Assistant Forest Manager, Yale Forests
- Sam Cohen, MEM'16
 - Science and Policy Analyst, River Network
- Pamela Jao, MEM/MBA'17
 - Investment Banking Associate, Power & Utilities, Barclays Capital
- Ariana Spawn, MEM'16
 - Knauss Legislative Fellow, Environment & Ocean Policy, United States Senate
- Daphne Yin, MEM'16
 - Consultant, Indufor
- Jayshree Sarathy, Yale College '18
 - Software Engineering Intern, Google
- Breanna Lujan, Yale College/MEM'16
 - Global Climate Policy Analyst, Environmental Defense Fund
- Nora Hawkins, MEM'14
 - Program Analyst, Energy Administration at Department of Energy and Environment, Government of the District of Columbia
- Sarah Guy, MEM'15

- Assistant Director, Heritage Outdoors
- Kelly Coplin, MEM'15
 - Senior Product Manager, WaterSmart
- Jeffrey Tong, Yale-NUS College '18
 - Temasek Foundation
- Yihao Xie, Yale-NUS College '17 – main capstone advisee, winner of Best Environmental Studies Capstone
 - International Council on Clean Transportation
- Udit Jain, Yale College '18 – statistics and data science capstone advisee
 - Snackpass
- Nikola Alexandre, MEM/MBA '18
 - Conservation International Restoration Fellow
- Chendan Yan, MEM '18
 - World Resources Institute Climate and Energy Analyst
- Andrew Feierman, Data Scientist
 - Stockholm Environment Institute
- Zhi Yi Yeo, Yale-NUS '20
- Sowmya Raghavan, Yale-NUS '21
- Claire Krummenmacher, Yale-NUS '20
- Yunsoo Kim, Yale-NUS '21
- Nick Chin, Yale-NUS '21
- TC Chakraborty, Yale PhD '22
- Xiyao Fu, Yale-NUS '21
- Jonas Tan, Yale-NUS '21
- Regina Vanda, Yale-NUS '21
- Wayne Toh, Yale-NUS '21
- Yi Ming Ng, Yale-NUS '21
- Jacob Jarabejo, Yale-NUS '21
- Damon Lim, Yale-NUS '21
- Rayner Ng, Yale-NUS '21
- Ian French, Yale-NUS '22
- Yin Xi Tan, Yale-NUS '22
- Odele Tan, Yale-NUS '23
- Vasu Namdeo, Yale-NUS '23
- Ajay Nair, Yale-NUS '23

CONFERENCES ORGANIZED

“Blockchain for Tracking Climate Action,” in partnership with Oxford Blavatnik School of Government and Alan Turing Institute, November 22, 2018. London.

“Data 2.0: Sustainability Hackathon,” in partnership with DBS Bank, March 17, 2018. Singapore.

“Reality of Climate Change Mixed Reality Hackathon,” February 9-10, 2018, Yale University, New Haven, CT.

“Measuring and Tracking Climate Change Adaptation in the Age of Big Data,” May 11-12, 2017, Yale-NUS College, Singapore.

“Data 1.0: An Introduction to Hackathons.”

“Third-Wave Data Environmental Data Approaches,” March 1, 2016 in Beijing, China.

“Measuring and Communicating the Groundswell of Climate Actions,” co-organizer with NRDC, Oxford University, The Stanley Foundation, and the Century Foundation, April 16-17, 2015 in New York City.

“Yale Data Hack,” creator and organizer with Center for Business and Environment at Yale, March 26-27, 2015 in New Haven, CT. 06511. www.yaledatahack.strikingly.com

REVIEWER FOR JOURNALS

Proceedings of the National Academy of Sciences Science	Nature Scientific Reports Nature Communications
Nature Energy	Global Environmental Change
Ecological Indicators	Global Environmental Politics
Climactic Change	Environmental Science and Technology
Environmental Development	AMBIO – A Journal of the Human Environment
Journal of Environment and Development	Review of Policy Research
PLOSone	Renewable and Sustainable Energy Reviews

UNIVERSITY SERVICE

Academic committees – Undergraduate Research Ethics Committee – Yale-NUS College (2019); Chinese Studies – Yale-NUS College (2015 -); Presidential Technology Task Force – Yale-NUS College (2016 -)

Yale-NUS and Yale School of Forestry and Environmental Studies Concurrent Degree Program Coordinator

PROFESSIONAL AFFILIATIONS AND SERVICE

2019 Intergovernmental Panel on Climate Change (IPCC) – Sixth Assessment Report Working Group III – Contributing author

2019 World Economic Forum Global Future Council on Public Goods in the Fourth Industrial Revolution – Co-chair

2018 United Nations Environment Programme (UNEP) – 2018 Emissions Gap Report Lead Author for chapter on non-state actors.

2017-19 – National Committee on US-China Relations – Public Intellectual Scholars Program

2017-18 – UN Environment Programme (UNEP) Global Environment Outlook (GEO-6) Lead author, Outlooks Chapter

2017 – iCAT International Climate Action Transparency Initiative – Technical Working Group member for Non-State Actor Track.

2016 – United Nations Environment Programme (UNEP) – Emissions Gap Report Contributing author and Reviewer

2015 – World Wildlife Fund (WWF) – Markets Institute Thought Leader Board

2015 – Earth Security Index – Advisory Board

2015 – United Nations Environment Programme (UNEP) GEO-6 Co-author for Asia-Pacific region; Reviewer for North American region.

2015 – United Nations Environment Programme (UNEP) - Transboundary Water Assessment Programme – Expert Reviewer
2015 – Expert reviewer for Canadian Environmental Sustainability Indicators (CESI)
2014 – Expert contributor to the Global Water Compendium, International Water Association
2013 – Expert advisor and contributor to the Environment and Gender Index by IUCN
2008 – Expert contributor to ChinaFAQs: China Energy and Climate Change Network

HONORS

2019 – Inspiring Yale honoree – nominated by students at the Yale School of Forestry and Environmental Studies
2018- TED Annual Summit Speaker – Age of Amazement
2018 – One of 13 My Climate Heroes. <https://amplifier.org/campaigns/myclimatehero/angel-hsu/2016> – One of 12 global finalists for TED Fellow Prize (\$1 million USD)
2016 – Named to Grist50: Global Environmental Leaders. <https://grist.org/grist-50/2016/>
2015 – Origins Magazine: 30 Climatechangers Thinkers and Doers:
<http://www.originmagazine.com/2015/11/19/climate-changers-30-top-thinkers-and-doers/>.
2011 – Yale Graduate School of Arts and Sciences – Public Scholar Award