ANIRUDDH MOHAN

Suite 211A, 86 Olden Street, Princeton University, Princeton, NJ 08540

I am interested in studying the role of emerging technologies in reducing greenhouse gas emissions at a systems-level. I do this by building mathematical models of technology deployment informed by a combination of technology specific operational attributes, rich geospatial datasets, and public policy.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA, United States 2018-2022
PhD in Engineering and Public Policy
Thesis Committee: Parth Vaishnav, Venkat Viswanathan (CMU Mechanical Engineering)
Nicholas Z. Muller, Jeremy Michalek, Jessika Trancik (MIT IDSS)

University of Cambridge, Cambridge, United Kingdom 2012-2013
MPhil - Nuclear Energy

University of Manchester, Manchester, United Kingdom 2009-2012
First Class BEng. Hons. Mechanical Engineering

WORK EXPERIENCE

Princeton University, Andlinger Center on Energy and the Environment, Princeton, USA 2022-Present
Distinguished Postdoctoral Fellow

Wuppertal Institute for Climate, Environment & Energy, Wuppertal, Germany 2017-2018
Alexander von Humboldt Foundation International Climate Protection Fellow

Observer Research Foundation, New Delhi, India 2015-2016
Junior Fellow

SELECTED HONORS AND AWARDS

Carnegie Mellon University Presidential Fellowship 2020

Herbert L. Toor Award for Best Paper – Department of Engineering and Public Policy 2020
PhD Qualifying Exams, Carnegie Mellon University

Second Prize – Columbia University International Energy Case Competition 2019

Alexander von Humboldt Foundation International Climate Protection Fellowship 2017

British Petroleum Scholarship for Outstanding Students- University of Manchester 2011

ACADEMIC JOURNAL PUBLICATIONS

Vaishnav, P., Tian, Y., Isaac, C., & **Mohan, A.** (2024). **Automation and electrification in long-haul trucking cuts urban health and environmental damages.** *Transportation Research Part D: Transport and Environment*

Schenuit, F., Brutschin, E., Geden, O., Guo, F., **Mohan, A**., Oliveira Fiorini, A.C., Saluja, S., Schaeffer, R. and Riahi, K. (2024). **Taking stock of carbon dioxide removal policy in emerging economies: developments in Brazil, China, and India.** *Climate Policy***.**

Mohan, A., Muller, N.Z.., Thyagarajan, A., & Martin, R.V., Hammer, M.S., Donkelaar, A.V. (2024). **Measuring global monetary damages from particulate matter and carbon dioxide emissions to track sustainable growth.** *Communications Earth & Environment***.**

Mohan, A., Bruchon, M., Michalek, J., & Vaishnav, P. (2023). **Life Cycle Air Pollution, Greenhouse Gas, and Traffic Externality Benefits and Costs of Electrifying Uber and Lyft.** *Environmental Science & Technology*.

Mohan, A., Sengupta, S., Vaishnav, P., Tongia, R., Ahmed, A., Azevedo, I.L. (2022). **Sustained cost declines in solar PV and battery storage needed to eliminate coal generation in India.** *Environmental Research Letters,* 17(11), 114043

Mohan, A., & Vaishnav, P. (2022). **Impact of automation on long haul trucking operator-hours in the United States.** *Humanities and Social Sciences Communications*, *9*(1), 1-10.

Mohan, A., Geden, O., Fridahl, M., Buck, H. J., & Peters, G. P. (2021). **UNFCCC must confront the political economy of net-negative emissions**. *One Earth*, 4(10), 1348-1351.

Mohan, A., Sripad, S., Vaishnav, P., & Viswanathan, V. (2020). **Trade-offs between automation and light vehicle electrification**. *Nature Energy*, 5(7), 543-549.

Mohan, A., & Wehnert, T. (2019). **Is India pulling its weight? India's nationally determined contribution and future energy plans in global climate policy.** *Climate policy*, *19*(3), 275-282.

Mohan, A.,& Topp, K. (2018). **India's energy future: Contested narratives of change.** *Energy research & social science*, 44, 75-82.

Mohan, A. (2017). **From Rio to Paris: India in Global Climate Politics**. *Rising Powers Quarterly*, 2(3), 39-61

Mohan, A. (2017). **Whose land is it anyway? Energy futures & land use in India**. *Energy Policy*, 110, 257-262.

Mathur, V., & **Mohan, A.** (2016). **Plus ça change, plus c'est la même chose: Adaptation in the Paris Agreement**. *India Quarterly*, 72(4), 330-342.

WORKING PAPERS

Direct Air Capture Integration with Low-Carbon Heat: Process Engineering and Power System Analysis
Under Review (2024)
Aniruddh Mohan, Fangwei Cheng, Hongxi Luo, Chris Greig, Eric Larson, Jesse Jenkins

INVITED TALKS & CONFERENCE PRESENTATIONS

"Direct Air Capture Integration with Low-Carbon Heat: Process Engineering and Power System Analysis" *Macro Energy Systems Workshop*, Princeton, NJ (June 2024)

"Evaluating the system-level impacts of emerging technologies for deep decarbonization" *Indiana University, O'Neill School of Public & Environmental Affairs*, Bloomington, IN (December 2023)

"Direct Air Capture Integration with Low-Carbon Heat: Process Engineering and Power System Analysis", *Andlinger Center Annual Meeting*, Princeton, NJ [Poster session] (October 2023)

"Life cycle air pollution, greenhouse gas, and traffic externality benefits and costs of electrifying Uber and Lyft" *INFORMS, Phoenix, AZ* (October 2023)

"Direct Air Capture Integration with Low-Carbon Heat: Process Engineering and Power System Analysis" INFORMS, Phoenix, AZ [Poster session] (October 2023)

"Evaluating the system level impacts of direct air capture deployment" *Distinguished Postdoc Seminar*, Andlinger Center for Energy and the Environment, Princeton, NJ (July 2023)

"Life cycle air pollution, greenhouse gas, and traffic externality benefits and costs of electrifying Uber and Lyft" *University of Maryland Transportation Institute Distinguished Seminar Series, Remote* (April 2023)

"Life cycle air pollution, greenhouse gas, and traffic externality benefits and costs of electrifying Uber and Lyft" *Transportation Research Board 102nd Annual Meeting, Washington D.C.* (January 2023)

"*Damages from fine particulate matter and carbon dioxide between 1998-2018" Princeton University, Conversations on the Environment, Responsible Energy, And Life (CEREAL), Princeton* (October 2022)

"Agent based modelling of ridesourcing operations" *Chalmers University, Department of Space, Earth and Environment, Remote* (March 2022)

"Global Environmental Pollution: costs and opportunities." *Pacific Northwest National Laboratory, Joint Global Change Research Institute, Remote* (February 2022)

"Emerging trade-offs and opportunities in sustainable urban mobility." *Princeton University, Department of Civil and Environmental Engineering, Remote* (February 2022)

"Tradeoffs between automation and light vehicle electrification" *Transportation Research Board 101st Annual Meeting, Subcommittee on Energy and Demand Implications of Connected and Automated Vehicles, AMS30(3), Washington D.C.* (January 2022)

"Impact of automation on long haul trucking operator hours in the United States" *Transportation Research Board 101st Annual Meeting, Washington D.C.* (January 2022) [Poster]

"Tradeoffs between automation and light vehicle electrification" *Transportation Research Board 101st Annual Meeting, Washington D.C.* (January 2022) [Poster]

"Sustained cost declines in solar PV and battery storage needed to eliminate coal generation in India."
United States Association for Energy Economics (USAEE), Remote (November 2021)

"Tradeoffs between automation and light vehicle electrification." *United States Association for Energy Economics (USAEE), Remote* (November 2021)

"Sustained cost declines in solar PV and battery storage needed to eliminate coal generation in India."
Battery Modelling Webinar Series (BWMS), Remote (August 2021)

"The growth of nations revisited: global environmental accounting from 1998 to 2018." *ETH Zurich Sustainability Academy, Remote* (September 2020)

"Automation is no barrier to light vehicle electrification" *Florida Autonomous Vehicles Summit, Miami, Florida* (November 2019) [Poster]

"Automation is no barrier to light vehicle electrification" *Carnegie Mellon Electricity Industry Center Annual Meeting, Pittsburgh, PA* (October 2019)

"Can autonomous light vehicles be fully electric?" *Centre for Climate and Energy Decision Making Annual Meeting, Pittsburgh, PA* (May 2019)

"Can autonomous light vehicles be fully electric?" *Carnegie Mellon University Energy Week Poster Competition, Pittsburgh, PA* (March 2019) [Poster]

"The social dimensions of energy transitions in India" *Alexander von Humboldt Foundation International Climate Protection Fellowship Seminar, Berlin, Germany* (February 2018)

"Non-state actors and equity in global climate policy" *United Nations Framework Convention on Climate Change (UNFCCC) Subsidiary Body 46 Conference, Bonn, Germany* (May 2017)

TEACHING EXPERIENCE

Carnegie Mellon University

Teaching Assistant, Applied Methods for Technology-Policy Analysis (Spring 2020)

Participant - Future Faculty Program, Eberly Center for Teaching Excellence & Innovation (Fall 2021)

SELECTED MEDIA COVERAGE

Marketplace Tech, **Carbon capture needs to scale up to make a dent in the climate crisis**, January 2023

Wall Street Journal, **Self-Driving Big Rigs Are Coming. Is America Ready?** June 2022

New York Times, **A look under the hood of the trucking industry**, April 2022

Bloomberg, **Robot Truckers Could Replace 500K U.S. Jobs,** March 2022

The Hill, **Self-driving semis may revolutionize trucking while eliminating hundreds of thousands of jobs,** March 2022

Bloomberg, **Why the Cars of Our Self-Driving Future Will Be Electric,** July 2020

Wired, **The intersection between self-driving cars and electric cars,** July 2020

Axios, **The case for all-electric self-driving cars,** June 2020

PROFESSIONAL SERVICE

Expert Reviewer — *Nature Communications, Joule, Energy & Environmental Science, Energy Policy*, *Climate Policy, iScience, Energy Advances, Transport Policy, and others.*

SELECTED OPINION COLUMNS & COMMENTARY

VoxEU, **Growth, sustainability, and the measurement of global gross product** [with Akshay Thagyarajan, Nicholas Z. Muller]**,** July 2020

Hindustan Times, **Covid-19: India needs a green economic stimulus** [with Madalsa Singh]**,** April 2020

Quint, **Make Nuclear Indian Again: Why Toshiba's Exit Is Not All Bad News,** February 2017

Australian Strategic Policy Institute, **Indian Climate Policy in a Post-Paris World** [with Samir Saran], February 2016

Brookings, **The time for a "New Deal" for climate change is now,** September 2015

LANGUAGE & PROGRAMMING SKILLS

Languages	English, Hindi, Spanish (European Level B1), German (European Level A2)
Programming	Proficient in MATLAB, Julia, GAMS, Python, R