

ABHISHEK CHATTERJEE

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Dr. Chatterjee's research interests lie in carbon cycle and climate science, Earth system models, and utilization of remote-sensing data for tackling large-scale geophysical problems. His research focuses on understanding the interactions between climate variability, greenhouse gases and the carbon cycle, both globally in key regions of change such as the high latitudes and the Tropics, and locally over urban areas and megacities. His findings have been published in several peer-reviewed journals, including *Science* and *Nature*. Prior to joining Schmidt Sciences, Dr. Chatterjee was the Project Scientist for NASA's Orbiting Carbon Observatory-3 (OCO-3) mission and Deputy Project Scientist for the OCO-2 mission. Dr. Chatterjee is one of the lead authors of the *Third Decadal U.S. Carbon Cycle Science Plan*, and has previously served as an author on multiple synthesis reports, including the *5th National Climate Assessment* and the *2nd State of the Carbon Cycle Report*. He is co-chair of the North American Carbon Program Science Leadership Group, co-chair of multiple working groups for NASA Science and Mission Teams, and actively engaged in a variety of national and international scientific committees.

History of Employment

- Senior Program Scientist, Climate Center, **Schmidt Sciences**, NY, U.S., 2026–present
- Visiting Associate, Division of Geological and Planetary Sciences, **California Institute of Technology**, CA, U.S., 2026–present
- Project Scientist (OCO-3 mission) and Deputy Project Scientist (OCO-2 mission), Earth Sciences Section, **Jet Propulsion Laboratory**, California Institute of Technology, CA, U.S., 2021–2026
- Group Lead and Senior Scientist (2019–2021) and Scientist (2015–2019), **Universities Space Research Association, NASA Goddard Space Flight Center**, MD, U.S., 2015–2021
- Climate and Global Change Postdoctoral Fellow, **National Center for Atmospheric Research**, CO, U.S., 2013–2014

Education

- Ph.D., The University of Michigan, Ann Arbor, MI, U.S. (2008–2012)
- M.S.E., The University of Michigan, Ann Arbor, MI, U.S. (2006–2007)
- B.E., Delhi College of Engineering, New Delhi, India (2002–2006)

Selected Publications (*h-index* = 31, *i-10 index* = 52, as of May 2026)

- Parazoo, N. *et al.* (2025) A U.S. Scientific Community Vision for Sustained Earth Observations of Greenhouse Gases to Support Local to Global Action, **AGU Advances**, doi: 10.1029/2025AV001914
- Chatterjee, A. *et al.* (2025) Satellite Remote Sensing (Chapter 24), in **WMO GAW Report – 314: Integrated Global Greenhouse Gas Information System: Urban Emission Observation and Monitoring Good Research Practice Guidelines**, 2025 Edition, eds. Turnbull, J. C. *et al.*, **World Meteorological Organization (WMO)**, doi:10.59327/WMO/GAW/314
- Virkkala, A. *et al.* (2025) Wildfires offset the increasing but spatially heterogeneous Arctic-boreal CO₂ uptake, **Nature Climate Change**, doi: 10.1038/s41558-024-02234-5
- Byrne, B. *et al.* (2024) Carbon emissions from the 2023 Canadian wildfires, **Nature**, doi: 10.1038/s41586-024-07878-z

- Feldman, A. *et al.* (2024) Large global scale vegetation sensitivity to daily rainfall variability, *Nature*, doi: 10.1038/s41586-024-08232-z
- Hugelius, G. *et al.* (2024) Two decades of permafrost region CO₂, CH₄, and N₂O budgets suggest a small net greenhouse gas source to the atmosphere, *Global Biogeochemical Cycles*, doi: 10.1029/2023GB007969
- Treat, C. *et al.* (2024) Permafrost carbon: progress on understanding controls, stocks, and fluxes across northern terrestrial ecosystems, *JGR – Biogeosciences*, doi: 10.1029/2023JG007638
- Marvel, K. *et al.* (2023) Ch. 2. Climate trends. In: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. *U.S. Global Change Research Program*, doi:10.7930/NCA5.2023.CH2
- Feldman, A. *et al.* (2023) Remotely sensed soil moisture can capture dynamics relevant to plant water uptake, *Water Resources Research*, doi:10.1029/2022WR033814
- Hurr, G. *et al.* (2022) The NASA Carbon Monitoring System Phase 2 Synthesis: Scope, Findings, Gaps and Recommended Next Steps, *Environmental Research Letters*, doi: 10.1088/1748-9326/ac7407
- Zhang, Z. *et al.* (2022) Anthropogenic emission is the main contribution to the rise of atmospheric methane during 1993-2017, *National Science Reviews*, doi:10.1093/nsr/nwab200
- Weir, B. *et al.* (2021) Regional impacts of COVID-19 on carbon dioxide detected from space, *Science Advances*, doi: 10.1126/sciadv.abf9415
- Bruhwiler, L. *et al.* (2021) Observations of greenhouse gases as climate indicators, *Climatic Change*, 165 (12), doi: 10.1007/s10584-021-03001-7
- Huntzinger, D. N. and A. Chatterjee (2018) "Chapter 19: Future of the North American Carbon Cycle." In *Second State of the Carbon Cycle Report*, doi:10.7930/soccr2. 2018.ch19
- Patra, P., *et al.* (2017), Orbiting carbon observatory tracks 2-3 peta-grams increase of carbon release to the atmosphere during the 2014-2016 El Niño, *Scientific Reports – Nature*, doi:10.1038/s41598-017-13459-0
- Chatterjee, A., *et al.* (2017), Influence of El Niño on atmospheric CO₂ over the tropical Pacific Ocean: findings from NASA's OCO-2 mission, *Science*, 358 (6360), doi: 10.1126/science.aam 5776

Selected Honors and Awards

- NASA Group Achievement Awards – OCO-3 Mission Team (2026), ABoVE Airborne Science Campaign Team (2018) and OCO-2 Mission Team (2018)
- Team Award (2024, 2023, 2022), Earth Science and Technology Directorate, *Jet Propulsion Laboratory*,
- Voyager Award, Earth Sciences Section, *Jet Propulsion Laboratory*, 2022
- GESTAR Excellence Award, *Universities Space Research Association*, 2018
- Outstanding Scientific Contribution by a new GMAO member, *NASA Goddard Space Flight Center*, 2017

Professional Society Memberships

American Geophysical Union, European Geosciences Union, Asia-Oceania Geosciences Society, American Meteorological Society, American Association for the Advancement of Science

Outreach Activities – Selected Press Articles and Media Interviews

Dr. Chatterjee considers talking to the media an important activity as they play a critical role in disseminating scientific information to the public. Here are a few selected examples of his interactions with the media:

1. "[Heat Trapping Pollution](#)" (Climate Central)
2. "[NASA Helps Find Thawing Permafrost Adds to Near-Term Global Warming](#)" (JPL News)
3. "[Carbon From Space](#)" (The Week on Earth Podcast)
4. "[How We Can Better Predict Weather Catastrophes](#)" (New York Times Op-Ed)
5. "[New 3D View of Methane Tracks Sources and Movement around the Globe](#)" (NASA Earth Science)
6. "[New Findings in Carbon Cycle Science](#)" (AGU Fall Meeting Press Conference)
7. "[NASA Satellite Reveals Source of El Niño–Fueled Carbon Dioxide Spike](#)" (Scientific American)