

Ensuring Data Quality, Access, and Trust in GHG Emissions Information

Leveraging AI for Greenhouse Gas Monitoring & Accountability Webinar Series



Accurate, accessible, and trustworthy greenhouse gas data are essential for effective climate action, yet emissions information remains fragmented, inconsistent, and difficult to verify across sectors and geographies. An interview-style discussion with **Riley Duren** (Carbon Mapper) will explore how AI-enabled tools such as satellite-based detection, atmospheric modeling, and large-scale data integration can improve data quality, accessibility, and trust. A Q&A session with the audience will follow. Join the livestream at [this link](#) and submit your questions and comments using [this link](#).

TUESDAY, MAY 26, 2026

3:00 PM (ET)¹ Welcome & Introductory Remarks

Kasia Kornecki, National Academies Roundtable on Artificial Intelligence and Climate Change Director
Constantine Samaras, Carnegie Mellon University

3:05 PM Technical Presentation

Riley Duren, Carbon Mapper

3:25 PM Discussion

Constantine Samaras, Carnegie Mellon University

3:45 PM Audience Q&A

4:00 PM ADJOURN

¹ All time in Eastern

This is the second of a 3-part educational webinar series, "[Leveraging AI for Greenhouse Gas Monitoring & Accountability](#)", which has a goal of outlining how AI can be leveraged to enhance the accuracy and accessibility of GHG emissions monitoring. This webinar series is an activity of the [National Academies Roundtable on Artificial Intelligence & Climate Change](#), which seeks to foster ongoing discussions, shared learning, and nimble coordination around emerging issues related to AI and climate change.

Speaker Biographies

Constantine Samaras, Carnegie Mellon University

Dr. Constantine (Costa) Samaras is the Director of Carnegie Mellon University's Scott Institute for Energy Innovation and the Trustee Professor of Civil and Environmental Engineering. He is an affiliated faculty member in the Department of Engineering and Public Policy and the Heinz College of Information Systems and Public Policy. He analyzes how technologies and policies affect energy and emissions pathways, security, climate resilience, and economic and equity outcomes. From 2021-2024, he served in the White House Office of Science and Technology Policy (OSTP) as Principal Assistant Director for Energy, OSTP Chief Advisor for Energy Policy, and then OSTP Chief Advisor for the Clean Energy Transition. He assessed technologies and policies to achieve national climate commitments, co-led the White House report "U.S. Innovation to Meet 2050 Climate Goals", co-led the climate and clean energy efforts of the President's Executive Order on Artificial Intelligence, and led the White House report on the climate and energy implications of digital assets. He was previously a Senior Researcher at the RAND Corporation and a megaprojects engineer in New York City. He received a joint Ph.D. in Civil and Environmental Engineering and Engineering and Public Policy from Carnegie Mellon.

Riley Duren, Carbon Mapper

Riley Duren is Chief Executive Officer for the non-profit organization Carbon Mapper. Previously, he spent 27 years at NASA's Jet Propulsion Laboratory including serving as a laboratory [Fellow](#) and Chief Systems Engineer for JPL's Earth Science and Technology Directorate from 2008 to 2019, with a broad portfolio of satellite mission and aircraft instrument development, research and analysis, and applied science spanning the agency's earth system science enterprise. Additionally, he was the Chief Engineer for NASA's Kepler mission. He was also a Research Scientist at the University of Arizona from 2019 to 2024. In 2020 he founded Carbon Mapper with a public good mission to help drive the world toward comprehensive, transparent global monitoring to facilitate science-based decision-making and mitigation of greenhouse gas emissions.