



2021 Global Maritime Forum



Dr. Christian Braneon

Dr. Christian V. Braneon is a climate scientist and civil engineer who co-leads urban research at the Climate Impacts Group of NASA GISS. He serves as a visiting professor at Barnard College and co-leads the Environmental Justice and Climate Just Cities Network at The Earth Institute of Columbia University.

His primary research, conducted as part of the NASA-Microsoft partnership, has developed applications of remote sensing data that enhance resilience to urban heat stress. This partnership is one of a series of collaborations between NASA's Earth Science Division and non-traditional public and private organizations to improve the application of Earth observation data for societal benefits.

Dr. Braneon's work covers many areas in climate science. His agricultural research focuses on using measured agricultural water use along with geostatistical techniques, crop models, and general circulation modeling to assess irrigation demand and the uncertainty associated with demand projections at spatial scales relevant to water resources management. This research has informed the regional water planning in the Apalachicola-Chattahoochee-Flint River Basin shared by Georgia, Florida, and Alabama.

In 2013, he developed an approach for integrating climate change projections into the City of Dallas's Long Range Water Supply Plan. Dr. Braneon's research team at GISS uses publicly available archives of satellite imagery and open-source software to evaluate the cooling effects of green infrastructure.

Dr. Braneon is particularly known for integrating satellite data and climate science into urban planning and civil engineering practice. Recently, he advised the New York City Council's Data Operations Unit on their data science strategy as they integrated Landsat 8 satellite imagery into their temperature mapping initiatives. He is also advising the City of Chicago Department of Public Health as it integrates satellite data into an air quality focused dashboard in development. Dr. Braneon is currently a co-investigator on a research project that will produce new data products, providing new information and insights on the role of coastal marshes in the global carbon and nutrient cycles.