



Lorenzo Rosa

Assist Prof (By Courtesy), Earth System Science

Bio

BIO

Lorenzo Rosa is a Principal Investigator at Carnegie Institution for Science in the Biosphere Sciences and Engineering Division. Lorenzo is also an Assistant Professor (by courtesy) in the Doerr School of Sustainability at Stanford University. Prior to joining Carnegie, he was a Postdoctoral Fellow in the Institute of Energy and Process Engineering at ETH Zurich. He holds a Ph.D. in Hydrology and Water Resources from University of California Berkeley, and a B.S. and M.S. in Environmental Engineering from Politecnico di Milano, Italy.

Dr. Rosa researches innovative technologies to enhance water, energy, and food security within the interconnected food-energy-water nexus. His work focuses on sustainable solutions that balance resource demands and improve resilience in agricultural and energy systems. By exploring strategies to minimize the environmental impacts of agriculture, he contributes to sustainable water management, efficient energy use, and food production. Dr. Rosa's research informs policies and investments in sustainable development, supporting long-term resource security. Additionally, his work assesses the potential benefits and unintended consequences of new innovations designed to meet global water, energy, and food demands.

Dr. Rosa's contributions to science and society have been recognized through multiple awards, including the 2019 American Geophysical Union (AGU) Hydrology Research Grant and the 2021 AGU Science for Solutions Award. The latter award is given "for significant contributions in the application and use of the Earth and space sciences to solve societal problems". In Dr. Rosa's case recognized his contributions to understanding global water-energy-food linkages and solutions to benefit humanity and nature. The AGU is the primary professional society in Dr. Rosa's field, and these awards are extremely selective and highly prestigious. In addition to these awards, he was also listed among the most influential young leaders in Science and Technology for the year 2020 by Forbes 30 Under 30.

Dr. Rosa is an avid sportsman, when he is not at his desk, you can find him running, cycling, swimming, and skiing. In his career as an athlete, he won the Regional and Italian Championships in mountain running.

Recent publications can be found on his Google Scholar page: <https://scholar.google.co.uk/citations?hl=en&user=rriy1mEAAAAJ>

Lab website: <https://carnegiescience.edu/bio/dr-lorenzo-rosa>