



Lorenzo Rosa

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Bio

BIO

Dr. Lorenzo Rosa is a Principal Investigator at the Carnegie Institution for Science and an Assistant Professor (by courtesy) at Stanford University. He is an environmental engineer whose research focuses on the resilience and sustainability of water, energy, and food systems under climate change and resource constraints.

His work combines systems modeling, hydrological simulation, techno-economic analysis, life-cycle assessment, optimization, and geospatial data science to evaluate emerging technologies and identify pathways toward sustainable development. His research spans water scarcity, climate-resilient agriculture, low-carbon fertilizers and fuels, and the environmental and economic feasibility of emerging climate solutions.

Dr. Rosa earned his PhD from the University of California, Berkeley, and completed postdoctoral training at ETH Zurich. He collaborates with academic, industry, and policy partners to translate scientific discoveries into actionable solutions. He also serves as an advisor to Ammobia, a climate technology company developing green ammonia production systems to support industrial decarbonization.

His contributions have been recognized through the American Geophysical Union Science for Solutions Award, the Leonardo Award in Engineering, Forbes 30 Under 30, and designation as a Clarivate Highly Cited Researcher.

Recent publications: <https://scholar.google.com/citations?user=rjiy1mEAAAAJ>

Research group website: <https://lorenzo-rosa.wixsite.com/curriculum>