

You are cordially invited to a Seminar Organized by

Department of Civil and Environmental Engineering

Meeting the Challenge of Sustainable Food Production in the Face of Climate Change

by

Dr. Lorenzo Rosa

Principal Investigator at the Carnegie Institution for Science
Assistant professor (by courtesy) at Stanford University

Host: Dr. Xiaogang He

Department of Civil and Environmental Engineering

Date: 05 July 2023, Wednesday

Time: 15:30 pm – 17:00 pm

Venue: E1A-06-21/22

College of Design and Engineering

National University of Singapore

1 Engineering Drive 2

Singapore 117576

Abstract

In the next three decades, the global demand for food is expected to rise substantially, posing a daunting challenge to agriculture. To meet this demand, we are facing the challenge of producing the same amount of food in the next three decades as we have over the last 8000 years, all while minimizing the environmental impact of farming. In this talk, I will present an overview of my research program, which aims to explore the intersection of agriculture and climate change. I will show our recent research that aims to assess the potential benefits and unintended climate and environmental consequences of innovations engineered to adapt and mitigate climate change. I will discuss the challenges posed by climate change to agriculture and assess various strategies for reducing the environmental impact of farming. By presenting our latest research results in this area, I hope to provide insights into how we can increase agricultural productivity while promoting sustainability.

Speaker's Biography



Lorenzo Rosa is a Staff Associate at Carnegie Institution for Science. 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 Environmental Science from University of California Berkeley, and a B.S. and M.S. in Environmental Engineering from Politecnico di Milano, Italy. His research aims to assess the potential benefits and unintended climate and environmental consequences of innovations engineered to satisfy the increasing global demands for energy, water, and food. Dr.

Rosa was awarded the 2019 American Geophysical Union (AGU) Horton Hydrology Research grant and the 2021 AGU Science for Solutions Award. He was also listed among the most influential young leaders in Science and Technology of 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.

General enquiry: Ms Asmidah Tel: 65164776, Email: asmidah1@nus.edu.sg

Map of Seminar Room E1A-06-21/22. 1 Engineering Drive 2, Singapore 117576

