

# Interdisciplinary Speed Talks

(Tentative Schedule)

Wednesday, November 19th, Schermerhorn 614, 7:30pm-9:00pm

[Kyle Frischkorn](#) (*Earth and Environmental Science*)

**Title:** Surviving the high seas under stress: a molecular investigation of the iron-phosphorus link in a nitrogen fixing cyanobacterium

**Prompt:** recent biochemical research has shown that the enzyme alkaline phosphatase--a critical tool the acquisition of phosphorus from organic compounds--requires iron as a cofactor. This suggests that the phosphorus and iron cycles in the ocean are biologically linked. Nitrogen fixing cyanobacteria like the genus *Trichodesmium* dominate open ocean ecosystems where both iron and phosphorus are exceedingly low. I'm investigating the molecular underpinnings of their success in these harsh conditions.

[James Rising](#) (*Sustainable Development*)

**Title:** An Integrated Model of the Food System

**Prompt:** The next phase of my research is to take some production models I have and use them as the foundation for an integrated model of food-- supply, demand, policy, spatial configurations, and climate change.

[Alex Heaney](#) (*Environmental Health Sciences*)

**Title:** Will climate change redistribute H5N1 avian influenza?

**Prompt:** I am interested in how climate change might redistribute H5N1 avian influenza by altering migratory bird behaviors. Certain species of birds migrate while shedding the virus and can therefore spread the disease to new geographical regions. As climate change alters migratory bird behaviors, the birds may spread H5N1 to new areas, resulting in the infection of susceptible local wild birds, poultry, and/or humans.

[Mukund Palat Rao](#) (*Earth and Environmental Science*)

**Title:** Dzuds, droughts, and livestock mortality in Mongolia

**Prompt:** Our study shows that widespread mass mortality of livestock in Mongolia is caused primarily by anomalously cold winters. However, preceding summer drought can also exacerbate mortality. Therefore, understanding the relationship between climate and mortality is critical to mitigate the impact of future extreme events on the lives and livelihoods of herders.

[Eyal Frank](#) (*Sustainable Development*)

**Title:** Improving on Rainfall Shocks with Rainfall Intensities

**Prompt:** Development economics is using rainfall shocks as a proxy for income but is missing out on information regarding the rainfall distribution. This project is about how accounting for intensities contributes to the results about households' decisions in developing countries. Further work will demonstrate how rain intensities can explain a set of other phenomena such as: Lake eutrophication, infrastructure damage, and malaria outbreaks.

[Ashlinn Quinn](#) (*Environmental Health Sciences*)

**Title:** Indoor Conditions Study NYC

**Prompt:** I am running a research study to monitor temperature and humidity inside NYC residences. In addition to using this information to better understand the conditions experienced in indoor environments where people spend a majority of their time, I will correlate these measured conditions with the residents' a) perceptions of thermal comfort; b) symptoms of certain illnesses.

[Amrita Neelakantan](#) (*Ecology, Evolution, and Environmental Biology*)

**Title:** Does relocation work for conservation and people?

**Prompt:** When relocating people outside of protected areas do we lessen pressures or simply move them? How do the relocated people fare as agriculturists in the changing agricultural matrix outside of protected forests?

[Anthony D'Agostino](#) (*Sustainable Development*)

**Title:** Rural Credit and Climate Change Adaptation

**Prompt:** This project investigates whether credit access enables farmers to adapt to climate change, with a focus on India where a large segment of the population is reliant on agriculture. I work with climate and bank branch data and am interested in observing outcomes related to crop composition, capital stock purchases, and on-farm net profits.

[Tiffany Sanchez](#) (*Environmental Health Sciences*)

**Title:** Limited impact of point-of-use water filters on arsenic exposure in rural Bangladesh

**Prompt:** Point-of-use filters are used to reduce exposure to arsenic contaminated drinking water, however little is known about their long term utility in rural Bangladesh. I will present findings from a longitudinal study on filter failure, arsenic exposure and self-reported filter-use habits.

**Elliot Cohen** (*Earth Institute Fellow*)

**Title:** Global trends in urban energy demand

**Prompt:** Many of the world's largest and fastest-growing cities are located in South Asia and Sub-Saharan Africa with tropical to sub-tropical climates unlike those of most OECD member cities in the global North. As the tropics/sub-tropics become increasingly urban, industrial and affluent, it is important to consider how energy demand--particularly for thermal comfort--will evolve differently in these places than it has historically in the global North.

**Kayleigh Campbell** (*Sustainable Development*)

**Title:** The Impacts of Bike Sharing Technology on Bus Transit

**Prompt:** This is a differences-in-differences study on how the introduction of Citi Bike impacted ridership and travel time on New York City bus routes. This fits into a larger discussion about considering the multi-modal nature of urban transportation in policy decisions.

**Sonja Köke** (*University of Hamburg, Economics*)

**Title:** What does a language analysis of climate negotiations reveal about countries' preferences?

**Prompt:** The plan is to use a language analysis tool on negotiation documents of the UN climate conferences to get a better understanding of what the different country (groups) would be willing to agree upon in an international climate agreement.

**Ben Taylor** (*Ecology, Evolution, and Environmental Biology*)

**Title:** Controls on Nitrogen Fixation During Tropical Forest Regeneration

**Prompt:** Ben's work focuses on the role that nitrogen-fixing plants play in supplying tropical forests with the nitrogen needed to fuel recovery from deforestation. The aim of this work is to focus on the relative costs and benefits of obtaining nitrogen from the soil vs. from fixation and how these costs and benefits change over successional time.