

## **Graduate Pursuit: Understanding dynamic environmental and socio-economic interactions in food systems to support decision-making towards a sustainable and resilient agriculture**

### **Time of Event:**

Tuesday, June 25, 2019 - 09:00 to Friday, June 28, 2019 - 17:00

### **"Understanding social responses to environmental shocks: A text mining approach"**

Because of their sudden onset, environmental shocks can be difficult to study using traditional survey-based methods which require significant amounts of time to plan, fund and execute. Continuous in situ data streams from social media, newspapers, and other big data sources, offer an opportunity to examine how people perceive and respond to environmental shocks like heat waves and floods. Analyzing these data before, during, and after a shock may provide important insights for informing policies and planning for adaptive, resilient socio-environmental systems. Using a diverse suite of textual datasets, including posts from major social media platforms (e.g, Twitter and Sina Weibo); online Google searches; and newspaper articles and blog posts from around the world, we will assess people's perceptions about and responses to shocks using two machine learning techniques: topic modeling and sentiment analysis. This project will extend existing research which demonstrates that temperature affects mood (sentiment) while examining how perceptions about climate change and actions vary across languages, geographies, and media types. Finally, we will investigate how shocks foster long-term systemic adaptive change in the public behaviors of consumers and companies. By taking a cross-domain data science approach and synthesizing diverse meteorological, geographic, and textual data, this project will bring new insights to how humans perceive and respond to climate shocks. Our results could have important implications for economics, policy and adaptation and resilience planning.

To learn more about this Graduate Pursuit, click [here](#) [1].

### **Event type:**

Project Meeting

### **Event Attendance:**

Private Working Group

---

### **Source URL:**

<https://www.sesync.org/events-announcements/tue-2019-06-04-2037/graduate-pursuit-understanding-dynamic-environmental-and>

### **Links**

[1] <https://www.sesync.org/project/graduate-pursuits-request-for-proposals/understanding-social-responses-to-environmental-and>

ntal