

**Statistics Seminar**  
Department of Mathematics and Statistics

<b>DATE:</b>	Thursday, April 3, 2025
<b>TIME:</b>	1:15pm - 2:15pm
<b>LOCATION:</b>	Zoom Only
<b>SPEAKER:</b>	Rumi Chunara, NYU
<b>TITLE:</b>	A Multi-level Perspective for Navigating the Intersection of Data and Public Health

**Abstract**

In public health we study the social, cultural, economic, and other factors at individual, community, organizational, and policy levels that drive health and quality of life. When attempting to quantify these complex concepts through data and statistical analyses, we encounter both promising opportunities to enrich our theoretical frameworks and significant challenges that can exacerbate health disparities. In this talk we will illustrate two such areas through a multi-level perspective. First, we will investigate the consequences of disparate missingness on causal effect estimation through model transport. Second, we will discuss the use of machine learning methods for creation of data and measures designed to represent the built-environment and the necessity of a multi-level perspective to inform decision making. Overall, by leveraging a multi-level framework, this talk aims to inspire approaches to data-driven studies that are both methodologically rigorous and rooted in theoretical knowledge.

**Bio**

The overarching goal of Dr. Rumi Chunara's research is to develop computational and statistical approaches for acquiring, integrating and using data to improve population-level public health. She focuses on the design and development of data mining and machine learning methods to address challenges related to data and goals of public health, as well as fairness and ethics in the design and use of data and algorithms embedded in social systems. At NYU, Dr. Chunara also Directs the Center for Health Data Science, which develops data science methods in public and population health, as well as knowledge ecosystems to share and translate knowledge across disciplines and places. Previously, she was a Postdoctoral Fellow and Instructor at HealthMap and the Children's Hospital Informatics Program at Harvard Medical School. She completed her PhD at the Harvard-MIT Division of Health Sciences and Technology and BSc at Caltech. She is an NSF CAREER, Facebook Research, Gates Foundation Grand Challenges, MIT Technology Review Top 35 Innovators Under 35, Max Planck Sabbatical award winner and ACM Senior Member.

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