

**Presenter:** Nidhi Parikh, PhD

**Presenter Type:** Rapid Fire Presentation

**Title:** Unlocking the Predictive Power of Heterogeneous Data to Build an Operational Dengue Forecasting System

**Unmet Needs:** While many studies have utilized various data streams (e.g., socioeconomic, weather/climate, satellite, internet, entomological) to predict dengue, none has systematically evaluated contribution of different data sources at the subnational level for an entire country.

**Aims:** 1) Predict dengue in Brazil at multiple spatial and temporal resolutions. 2) Assess the utility of multiple data sources (i.e., weather, satellite, demographics, and Google Health Trends) in predicting dengue. 3) Find optimal combination of statistical model and data sources to predict dengue at the subnational level.

**Significance or Benefit if project is successful:** The proposed approach is a step closer towards building an operational system to accurately predict dengue across diverse geographical regions.

**Feedback you seek from the audience:** We are interested in learning about additional potential data sources, features, or feature transformations that we haven't yet considered. Additionally, suggestions about new modeling and data/result visualization approaches are welcome.

**Any additional information:** Our ultimate goal is to contribute towards a global disease forecasting system – in the spirit of weather forecasting – that can provide real-time predictions at the subnational level. However, the main challenge in building an operational system is access to real-time clinical surveillance data (i.e., ground truth data) to validate the results.