The power of mathematical and statistical modeling tools to address the COVID-19 pandemic

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Abstract

The devastating COVID-19 pandemic represents an unprecedented opportunity to test and apply mathematical and statistical modeling approaches to infer key epidemiological and transmission characteristics of the novel coronavirus, quantify excess deaths as well as evaluate the performance of different theoretical models for forecasting the trajectory of the pandemic at various spatial scales. In this context, I will present results from multiple collaborations involving interdisciplinary quantitative scientists, doctoral students, and public health officials.