

Statistics and Data Science Seminar

Change-point detection for COVID-19 time series via self-normalization

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Abstract: This talk consists of two parts. In the first part, I will review some basic idea of self-normalization (SN) for inference of time series in the context of confidence interval construction and change-point testing in mean. In the second part, I will present a piecewise linear quantile trend model to model infection trajectories of COVID-19 daily new cases. To estimate the change-points in the linear trend, we develop a new segmentation algorithm based on SN test statistics and local scanning. Data analysis for COVID-19 infection trends in many countries demonstrates the usefulness of our new model and segmentation method.

Wednesday, April 28 at 4:00 PM in Zoom