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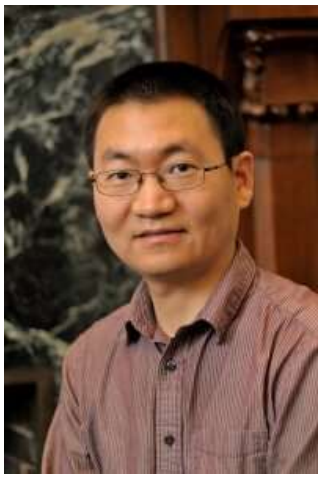

Xiaofeng Shao
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Change-point detection for COVID-19 time series via self-normalization

Wednesday, April 7th, 2021
11:45 AM EST

Zoom Meeting: Meeting ID: 953 7972 1088
Password: 419535

https://rutgers.zoom.us/j/95379721088?pwd=M3JrWDBsdFNBWHNGMnN3NElOS20rdz09

Virtual Coffee session before the seminar at 11:30AM EST

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 thelinear 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..

Bio:
Xiaofeng Shao is currently a professor at University of Illinois at Urbana-Champaign. He is a fellow of Institute of Mathematical Statistics (IMS) and American Statistical Association (ASA). His research interests include: Time series analysis, functional data analysis, high dimensional data analysis and their applications in atmospheric science, business, economics, finance, and neuroscience.

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