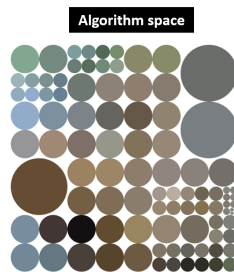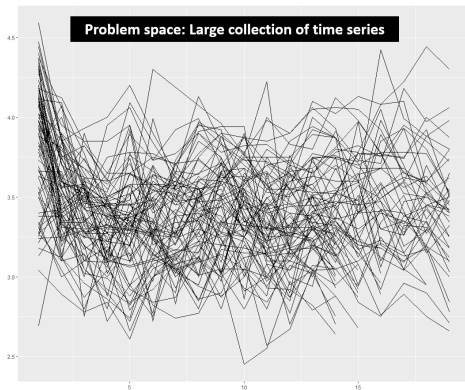# Feature-based Time Series Forecasting

Thiyanga Talagala,

Rob J Hyndman, George Athanasopoulos

Feng Li, Yanfei Kang
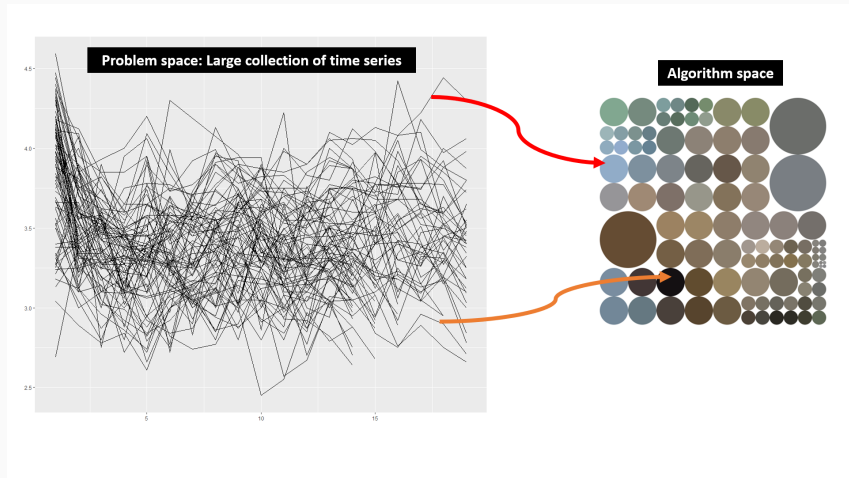
11 June 2019

Big picture

Problem space: Large collection of time series

Algorithm space

- What algorithm is likely to perform best?

Big picture

- What algorithm is likely to perform best?
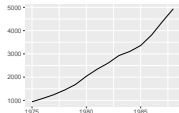- Algorithm selection problem, John Rice (1976)

Time series features

- Transform a given time series $y = \{y_1, y_2, \cdots, y_n\}$ to a feature vector $F = (f_1(y), f_2(y), \cdots, f_p(y))'\}$.

Time series features

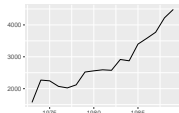- Transform a given time series $y = \{y_1, y_2, \cdots, y_n\}$ to a feature vector $F = (f_1(y), f_2(y), \cdots, f_p(y))'$.
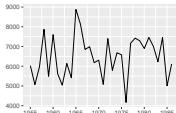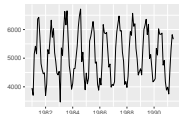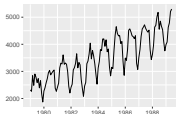

N0001

N0633
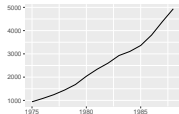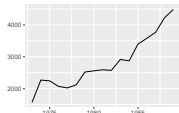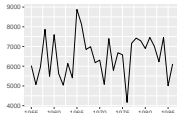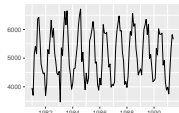
N0625

N0645

N1912

N2012

Time series features

- Transform a given time series $y = \{y_1, y_2, \cdots, y_n\}$ to a feature vector $F = (f_1(y), f_2(y), \cdots, f_p(y))'\}$.