



Jerzy Rydlewski-1, Daniel Kosiorowski-2, Dominik Mielczarek-3, Małgorzata Snarska-4

1 i 3-Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie

2 i 4-Uniwersytet Ekonomiczny w Krakowie

ry@agh.edu.pl, daniel.kosiorowski@uek.krakow.pl, dmielcza@wms.mat.agh.edu.pl,

malgorzata.snarska@uek.krakow.pl

Generalized exponential smoothing in prediction of hierarchical time series

Shang and Hyndman (2016) proposed grouped functional time series forecasting approach as a combination of individual forecasts using generalized least squares regression. We modify their methodology using generalized exponential smoothing technique for the most disaggregated series in order to obtain more robust predictor. We discuss some properties of our proposals basing on results obtained via simulation studies and analysis of real data, i.e., concentration of dangerous particles in the atmosphere.

Ref.

SHANG, H., L., HYNDMAN, R., J., (2016), *Grouped functional time series forecasting: an application to age-specific mortality rates*, Journal of Computational and Graphical Statistics.