

## **Workshop on Advanced Time Series Forecasting: Methodology and Applications**

June 26, 2024, 08.00 - 12.00 WIB (Indonesia time), offline  
Venue: UNS Inn, Universitas Sebelas Maret, Surakarta, Indonesia  
<https://maps.app.goo.gl/wibuxQwNvtZCMcti8>

Speaker 1: Prof. Dr. Paulo C. Rodrigues, ISBIS President, Brazil

Speaker 2: Dr. Winita Sulandari, Universitas Sebelas Maret, Surakarta, Indonesia



Prof. Dr. Paulo C. Rodrigues



Dr. Winita Sulandari

### **Abstract**

This four-hour workshop provides an in-depth exploration of time series forecasting techniques. Participants will gain a thorough understanding of time series data characteristics, including trend, seasonality, stationarity, autocorrelation, and time series decomposition techniques. Hands-on exercises will guide attendees in implementing traditional forecasting models such as ARIMA and exponential smoothing. The workshop will also cover advanced topics like singular spectrum analysis, recurrent neural networks, ensemble and hybrid methods, and effectively handling multivariate time series data. Real-world case studies from various domains, such as finance, climate, energy, and pollution, will be integrated to demonstrate the practical applications of these techniques. By the end of the workshop, participants are expected to build accurate forecasting models and to leverage diverse time series forecasting methods for data-driven decision-making using R and/or Python.

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