

Several solution for assessing Particulate Matter concentrations

Alin Pohoata¹, Daniel Dunea², Emil Lungu¹, Corneliu Salisteanu³, Otilia Nedelcu³

¹*Valahia University Targoviste, Faculty of Science and Arts;*

²*Valahia University Targoviste, Faculty of Environmental Engineering and Food Science;*

³*Valahia University Targoviste, Faculty of Electrical Engineering*

e-mail: alinpohoata@yahoo.com

Forecasting and analysis of the Particulate Matter (PM) concentrations is a subject of high interest for the public health. PM contains the inhalable particles that penetrate the thoracic region of the respiratory system determining numerous negative health effects particularly for younger children (0-10 years). We present in this article several methods of assessing the trends of PM concentrations, based on feedforward neural networks (FANN) combined with a wavelet decomposition of the time series values using smoothing filters to adjust the PM model outputs.