COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

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Forecasting of PV Plant Output Using Weather Data and Wavelet-Based Neural Network

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This paper explores two models proposed for medium and short-term PV power forecasting that can be used in both large scale and small scale PV systems. These models make use of available site-specific weather forecast data and historical data processed using wavelet analysis, more specifically the Stationary Wavelet Transform (SWT). These data are then fed into Artificial Neural Networks (ANN) specifically designed to predict the PV power available in the next 30 minutes (short-term) and the next 24 hours (medium-term).

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Juan Ospina is a Ph.D. student in the Department of Electrical and Computer Engineering at Florida State University, Florida. He received his two BS degrees in Electrical and Computer Engineering from Florida State University in 2016. His research interests include demand response and design of energy management systems, machine learning algorithms for energy management control, power systems modeling and simulation, and integration of distributed energy resources (DER).