Ultra-short-term PV power forecasting based on a support vector machine with improved dragonfly algorithm

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ABSTRACT

Photo-voltaic (PV) is one of the most abundant sources on the earth for the generation of electricity. Although, due to the stochastic nature of PV characteristics to sustain constant power, an accurate PV power prediction is needed for a grid-connected PV system. The proposed model of support vector machine (SVM) with improved dragonfly algorithm(IDA) is used to forecast the PV power. Previously, Theexecution can be done by dragonfly algorithm (DA) through adaptive learning factor along with the differential evolution technique. The IDA is used to select the best support vector machine parameters. Eventually, the suggested model provides better performance as compared to the other algorithm such as SVM with dragonfly algorithm(SVM-DA). It is suitable for forecasting ultra-short-term PV power.

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