

Artificial Neural Networks Controller for Power System Voltage Improvement

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Abstract : In this paper, power system Voltage improvement using wind turbine is presented. Two controllers are used: a PI controller and Artificial Neural Networks (ANN) controllers are studied to control of the power flow exchanged between the wind turbine and the power system in order to improve the bus voltage. The wind turbine is based on a doubly-fed induction generator (DFIG) controlled by field-oriented control. Indirect control is used to control of the reactive power flow exchanged between the DFIG and the power system. The proposed controllers are tested on power system for large voltage disturbances.

Keywords : artificial neural networks controller, DFIG, field-oriented control, PI controller, power system voltage improvement
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