Informatika i sistemy upravleniya. – 2016. – No. 4(50). – P. 103-114.

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ADAPTIVE CONTROL FOR POWER SYSTEM «DFIG – WIND TURBINE» WITH NONLINEAR DISTURBANCE OBSERVER

The synthesis of adaptive control laws with sliding mode control for power system «DFIG – wind turbine» is proposed. Suggested laws provide both system movement from an arbitrary initial state in a valid field to the final state, characterized by the desired reactive power and optimum rotor speed values, and the worst disturbance compensation.

Keywords: adaptive control, observer, synergetic control theory, DFIG, wind turbine invariant.

DOI: 10.22250/isu.2016.50.102-114

For citation:

Kuz'menko A.A., Synitsin A.S., Synitsina A.A. ADAPTIVE CONTROL FOR POWER SYSTEM «DFIG – WIND TURBINE» WITH NONLINEAR DISTURBANCE OBSERVER // Informatika i sistemy upravleniya. – 2016. – No. 4(50). – P. 103-114.