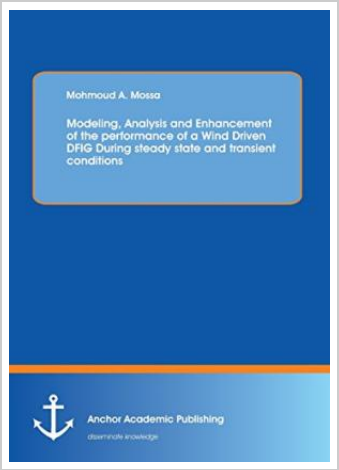




# Modeling, Analysis and Enhancement of the performance of a Wind Driven DFIG During steady state and transient conditions

By Mohmoud Mossa

Anchor Academic Publishing Jan 2014, 2014. Taschenbuch. Condition: Neu. Neuware - Recently, wind electrical power systems are getting a lot of attention since they are cost competitive, environmentally clean, and safe renewable power source as compared with the fossil fuel and nuclear power generation. A special type of induction generator, called a doubly fed induction generator (DFIG), is used extensively for high-power wind applications. They are used more and more in wind turbine applications due to the ease of controllability, the high energy efficiency, and the improved power quality.This research aims to develop a method of a field orientation scheme for control both, the active and the reactive powers of a DFIG that are driven by a wind turbine. Also, the dynamic model of the DFIG, driven by a wind turbine during grid faults, is analyzed and developed, using the method of symmetrical components. Finally, this study proposes a novel fault ride-through (FRT) capability with a suitable control strategy (i.e. the ability of the power system to remain connected to the grid during faults). 120 pp. Deutsch.



### *Reviews*

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