

Evaluation of fuzzy-based maximum power-tracking in wind energy conversion systems

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Abstract

Fuzzy logic is a convenient approach to construct maximum power-point-tracking algorithms. A new scheme composed of two fuzzy systems is proposed here. The first fuzzy system is based on a modified hill climb search algorithm to conclude the power set-point. The second fuzzy system is an adaptive proportional integral-like controller that uses a variable structure tuning algorithm to track the power set-point. Simulations show that the proposed scheme can improve the system efficiency.

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