

عنوان مقاله:

A Robust and Adaptive Temporal Difference Learning Based MLP Neural Network for Flexible AC Transmission Systems

محل انتشار:

نوزدهمین کنفرانس بین المللی برق (سال: 1383)

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خلاصه مقاله:

A neuro-control approach for flexible AC transmission systems (FACTS) based on temporal difference learning based multilayer perceptron neural network (TDMLP) is presented in this paper. The proposed scheme consists of a single neuron network whose input is derived from the active or reactive power or voltage derivation at the power system bus, where the FACTS device (in this case an unified power flow controller) is located. The performance and usefulness of this approach is tested and evaluated using both single-machine infinite-bus and power system subjected to various two-machine transient disturbances. It was found that the new intelligent controller for FACTS exhibits a superior dynamic performance in compensation to the existing classical control schemes. Its simple architecture reduces the computational overhead, thereby real-time implementation

کلمات کلیدی:

Temporal difference learning, MLP neural network, FACTS, real and reactive power, transient stability

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