

TCSC damping controller design based on self-learning fuzzy controller techniques

Abstract:

Application of self learning fuzzy (SLFLC) controller to TCSC device for improving damping inter-area modes of oscillations is investigated. The SLFLC plus integral term utilizing sensitivity technique is synthesized by learning that is actuated after completion of the main learning algorithm. The paper considers the conventional PID controller and compares its performance with respect to the proposed SLFLC controller. numerous abnormal conditions like fault and load disturbance simulation results are presented to emphasize the efficiency of the proposed TCSC controller in a TNB 25 bus system.