Abstract

This paper proposes a hybrid controller scheme for enhancement of steady state stability in the presence of uncertainties in power systems. The procedure employs a robust TCSC assisted by a Fuzzy PSS designed with the uncertain model of power system. The resulting controller provides excellent damping of oscillations at low frequencies for a SMIB system. The simulation results show the great enhancement in the steady state stability of the power system. The proposed controllers combined stabilize the power system with effective damping of low frequency oscillations.


**Index Terms**

Computer Science
Control Systems

**Keywords**

FACTS- Flexible AC transmission system
TCSC- Thyristor controlled series capacitor