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.

References

H∞ TCSC Controller and Fuzzy PSS Design in Mitigating Small Signal Oscillations


- McFarlane, D. C., and K. Glover; Robust Controller Design using Normalised

Index Terms

Computer Science
Control Systems

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