

## FACTS Controllers

- Classification and description of FACTS Controllers including:
  - Series controllers (6)
  - Shunt controllers (14)
  - Combined controllers (3)
- Stability of FACTS controllers
- Applications of FACTS controllers
- Power electronics devices employed in FACTS controllers
- Various topologies suggested for controllers
- Steady states and transients of FACTS controllers
- Modulation and switching control
- Harmonic performance of FACTS controllers
- Modeling of FACTS controllers
- Interactions of controllers with power systems
- Principles of FACTS controllers design and simulation

### References:

- N. G. Hingorani and L. Gyugugi, "Understanding FACTS: Concepts and Technology of Flexible AC Transmission Systems", IEEE PRESS, 1999
- Y. H. Song and A. T. Johns, "Flexible ac transmission systems (FACTS)", The IEE Publication, 1999
- M. Tavakoli Bina, "Inactive Power and Harmonic Control", K. N. Toosi University Publication, November 2003
- Power Electronics and Power system Periodicals relevant papers
- J. H. Miller, "Reactive Power Control", John Wiley, 1982

