

Power System Stability

Objective:

The three-days seminar Power System Stability provides a comprehensive overview about power system stability and control problems combined with an introduction to the dynamic modelling and simulation environment of DigSILENT PowerFactory.

The course includes aspects related to applications in transmission and industrial systems. It covers physical principles of stability phenomena in power systems and the relevant mathematical models for synchronous generators, induction machines, loads, excitations systems and turbine and governing systems.

Pre-requisites:

- A good working knowledge of the basic techniques used in PowerFactory.
- Each participant should have basic knowledge about the PowerFactory software, e.g. acquired through our load flow and short circuit seminar, a PowerFactory basic training or relevant experience in the use of PowerFactory.
- Delegates should have attended the Basic Course
- Own Laptop (NOTE: laptops can be supplied at an additional charge)

Software used: *PowerFactory* V14.0

No of participants: Minimum: 6; Maximum: 12.

Cost: see www.digsilent.co.za for latest course fees, which includes a set of course notes, lunch and refreshments.

PowerFactory licences, pens and notepads are also supplied.

Please note the booking clauses on the registration form.

Duration: 3 days

Topics to be covered:

- General overview about stability problems in power systems
- Direct approach to rotor angle stability: single machine problem
- Handling of stability function
- Models for dynamic power system analysis
- Dynamic modelling with Powerfactory
- Power plant models
- Voltage stability analysis
- Excitation systems
- Motor starting
- Multi-machine systems