

# Dynamic Modelling (DSL)

## Objective:

The two-day workshop "Dynamic Modelling" complements the DigSILENT seminar "Power System Stability". The whole procedure of translating a physical system into a set of mathematical equations and implementing it using the PowerFactory simulation language DSL (DigSILENT Simulation Language) will be introduced and practiced.

Various aspects of the DSL language, like the description of differential equations, issuing simulation events, coding dead-times etc. will be introduced systematically and each participant will practice extensively the implementation process of various DSL models.

## Pre-requisites:

- A good working knowledge of the basic techniques used in PowerFactory.
- Each participant should have basic knowledge about the PowerFactory software being familiar with the PowerFactory time domain simulation functions ("RMS-simulation" or "EMT-simulation") is also required for successfully participating in this workshop.
- 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](http://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:** 2 days

## Topics to be covered:

- Introduction to DSL
- Calculation of Initial conditions
- Simple Excitation System – Exercise
- Turbine and Governor modelling
- Static VAR compensation
- Switched Shunts
- TCR / Statcoms