

Master Thesis

Analysis of the IEEE standard parameters of excitation systems and turbine governors

Motivation

In addition to modeling the machine, modeling and parameterizing the controller are also important when analyzing technical requirements. Ideally, a controller model is provided by the manufacturer, often based on IEEE standard models or accompanied by a set of predefined parameters. Alternatively, often only information about the type of controller is available, without specific parameters. In such cases, the standardized IEEE parameters are usually used.

Research Topics

- How do the standard parameter sets differ from real implemented parameters?
- Which parameters have a significant influence on different effects?
- Can the standard parameters be used or are adaptations and additions necessary?

Procedure/Methodology/Task definition

- Literature research IEEE parameters
- Definition of three different power classes for the analyses
- Determination of the effects to be analyzed
- Familiarisation with DIgSILENT PowerFactory
- Set up of the simulation models
- Carrying out the parameter study
- Development of a guideline

Organisational Issues

Beginn immediately

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