Status	Availible
Start	Immediately

Typ	Master thesis
Topic	Modal analysis of a turbo generator set interacting with a prospective electrical transmission system by QR decomposition or dominant pole iteration.
Supervisor	M. Sc. David Riebesel

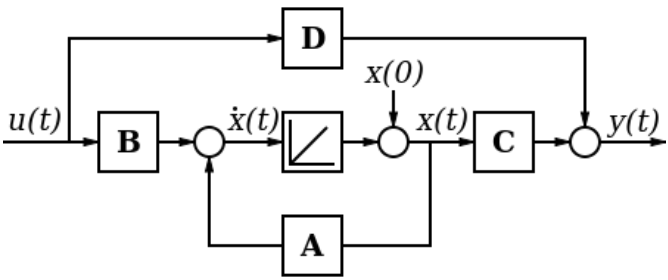
As part of the new energy policy, conventional energy sources are increasingly being replaced by renewable energies. Since the new types of generators are usually connected via converters, there is mostly an accelerating of the system dynamics. New approaches are needed to respond appropriately. To this end, the methods already applied are to be analysed and subsequently expanded with new approaches.

The aim of the work is to evaluate SSTI phenomena with a combination of RMS and EMT modal analysis for different frequencies. For this purpose, certain assets with different levels of detail are to be modelled and studied.

Absolutely necessary:
Mathematical affinity,
Advanced knowledge about electrical networks,
Experience with simulations

Necessary lectures:
BKE, BVE, Control Engineering

Preferred language:
English,
German



$$\chi_A := \det(\lambda E_n - A)$$

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david.riebesel@fau.de