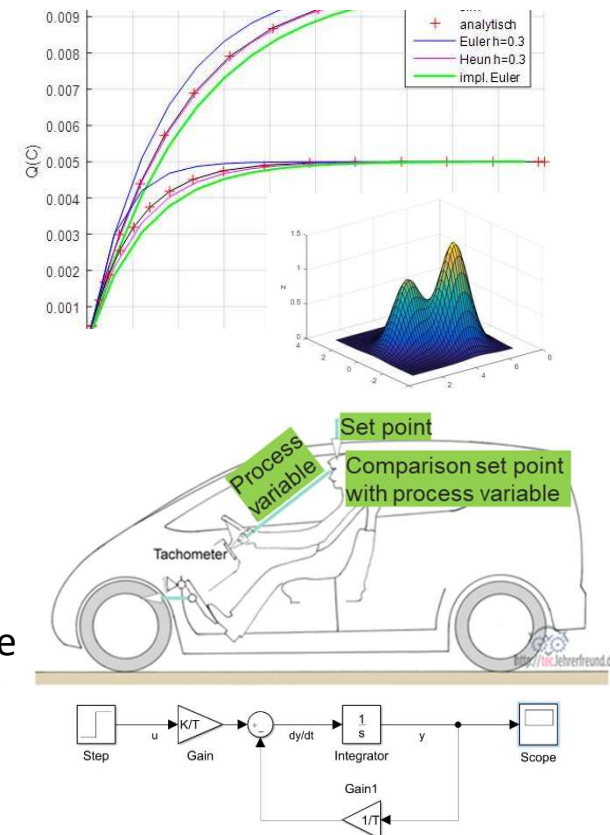


Lecture w/ integrated exercise

Modelling and Optimization of Energy Systems

The course „Modelling and Optimization of Energy Systems“ (MOES) for Master students is building upon the undergraduate course „Basics of Numerical Methods and Simulation“ (NumS). Because of that it is recommended to previously participate in NumS, as basic programming skills (not necessarily in MATLAB) are required for MOES..

Experience with Matlab is helpful, but not mandatory, as the course includes a short introduction to Matlab. After that, basic modelling methods (white-box/differential equations as well as black-box/data-driven models) are presented and applied in exercises using Matlab. Further topics include optimization problems (e.g. fitting curves to data), a short introduction to creating Simulink-models and a first short glimpse at control theory.



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