Assignment 3: Control of Electric Machine Drives

Objective

A simulation model of the induction motor (squirrel cage) drive will be built using the Matlab/Simulink environment. This assignment aims to familiarize you with basic features of Simulink and to demonstrate modelling approaches applicable to electric drives. This assignment is similar to the first assignment, but the drive is the induction motor drive.

Tasks

1- To build the model of the induction motor (analogous to the task on page 7 of the first assignment).
2- To augment the motor model with models for the appropriate converter (analogous to the task on page 9 of the first assignment).
3- To build the current and speed controllers for the motor (analogous to the task on pages 10 and 11 of the first assignment).

References

Lecture Notes and Ch 8 of Krishnan's book

Deadline

One week after the final exam (2 Jan 2020)