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New methods in the Engineering Education of Mechatronics

Mechatronics today is one of the most important engineering fields of study, the graduates have extremely advantage condition for job and are asked by many industrial companies. Main reason is the fact, that mechatronics is the driving force of the almost innovation`s activities from the different industrial applications. Nevertheless the interest of students has not been adequate response to the today`s importance of mechatronics and expected trends for the next two decades. Development of the driving systems based on the modern AC drives is from the theoretical point of view non/trivial problem and his explanation is hard to understanding.

From the demonstration reasons, better understanding and increasing attractivity of study was developed the set of models, which could be used for modeling and simulation of all basic types of servo-drives with DC motors, AC induction`s motors, synchronous motors with permanent magnets as well as with switched reluctance motors. Models could analyze also discrete control circuits.

This set enable not only better didactic processing but it serves also for diagnostic purposes and tuning industrial drives.