

POTENȚIALUL INOVATOR AL MECATRONICII ÎN EDUCAȚIE ȘI ÎN PRACTICA INGINEREASCĂ

THE INOVATIVE POTENTIAL OF MECHATRONICS IN THE FIELD OF ENGINEERING EDUCATION AND PRACTICE

Drd.ing. Daniela Alina OPREA

Drd.fiz. Ioan VLAȘIN

Drd.ing. Vlad TĂMAȘ

Prof.dr.ing. Vistrian MĂȚIEȘ

Universitatea Tehnică din Cluj-Napoca

Abstract: In the paper there are systematized and explained the fundamental problems that define the status of mechatronics as the main vector of innovation in the knowledge society. The evolution in the society development was constantly influenced by the evolution in the technological development. The transition from one stage to another in this evolution was marked by revolutions. In the paper, there are an analysis and description of these stages, as well as the specific approaches in the educational process. The XXth century was marked by three revolutions: the Quantum Revolution, the Informational Revolution and the Mechatronic Revolution. The mechatronic revolution, which took place in the 9th decade of the twentieth century, generated a wave of renewal in the education, research and technological development. Mechatronics was born as a technology, it became philosophy, the science of intelligent machines, and in the knowledge society, the environment for intelligent education and organizational learning. By stimulating the synergy effect, mechatronics has opened up unsurpassed horizons in all areas of activity.

Keywords: mechatronics, education, innovation, knowledge, technology