

### СЕКЦІЯ 3. ЕЛЕКТРОМЕХАНІКА ТА РОБОТОТЕХНІКА

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#### THE IMPLEMENTATION OF ROBOTICS INTO HUMAN'S LIFE

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**Abstract:** The world is currently changing at a concomitant rate. Robots, which were being imagined to facilitate the labour force in the earlier centuries, due to the digitalization and modernization, began to develop and implement in a society. Nowadays, there is an increasing demand for the help of these robots in different areas. Therefore, the society in which we live today requires a broad knowledge of technology, as XXI is considered to be the century of robotics.

Robots are automated machines, which are highly capable of performing functions of humans within the interaction. They have been thought and dreamed to be made up for long centuries, and are now in charge of facilitating the way of living. Undoubtedly, their main mission is to make our life more comfortable by diminishing “hand working” from difficult labor force and increase productivity. The robot is built on computer technology, the consciousness is a computer with which information can be read and transferred to a separate medium. They are not treated as humans, but can be repaired by entering the appropriate diagnostic programs. Robots are frequently met in manufacture, where with their assistance, the majority of industrial tasks are completely managed to be done. However, despite this, smart devices are also involved in military industries, medicine, in the sphere of hospitality and consumed sections. Robotics is a new branch of science and technology based on the fields of mechanics, electronics and microprocessor technology, computer science and computer control of machine movement. Robots and robotic systems are designed to perform work operations with the transfer of a person to heavy, dangerous work, from micro meters to macro-dimensions. Earlier they only executed repeated routine objectives on programs, and nowadays their level reached on a high level, affording interactions with us, communicating in their machine languages, understand our gestures and emotions. In addition to this, by using specialized platforms each has an opportunity to influence an industry, create their programs and add new functions into robotics. Hereby, developing from simple mechanisms, robots have chances to affect the community and become our friends. Industrial robots are often used in factories and enterprises. They are used for controlling, moving and moving functions in various production processes. Their main feature is that they do not get tired. Robots can work around the clock without any human presence, since their functioning requires only an approved program in which they operate. They can only perform certain actions, but they are most often used in auto mated production systems. In recent years, the whole world has been closely following the development of autonomous cars that will transport people without their participation in the process. Now the closest to un manned vehicles is the Uber taxi service. But manufacturers such as Ford, Mercedes, Toyota, BMW and Tesla regularly demonstrate progress in technology development. Robots are also actively used in agriculture. These include radio-controlled tractors and plows, but un manned aerial vehicles, which are used to map their land and regularly inspect crops, are increasingly used. With the advent of more up-to-date robots, in medicine they contribute enormously in many factors. First and foremost, contemporary operative equipped with new facilities, allowing to do operations more accurately and with a few risks for patient's health in a con sequence. Furthermore, technologies afford to enhance the quality of preparation of doctors. Nanorobotics that deliver medicinal preparation to the disease destination; the intervention of robotics into the typical life of a per son and a mobile device, all this is a promising area of robotics in medicine. One of the primary objective of current engineers is the establishment of such a robot that will not exclusively shift through large arteries, but also through narrow blood vessels. This could allow operations without traumatic surgery. Micro robots can also be useful for treating cancer.

In addition, there is a growing number in un manned aerial vehicles, which have long passed from exclusively military applications to civilian ones. Drones are used for a wide variety of tasks - from entertainment to surveillance and professional video. The leadership in this sector belongs to the Chinese manufacturer DJI. Their latest Spark is considered the most advanced selfie drone launched and controlled by gestures.

**Problems.** In spite of all the technological advances, robotics are not used ubiquitously, as they are mostly seen in science-fiction movies. This is mainly related with nearby factors. First of all, our infrastructure is not simply ready for this: roads, streets, buildings and houses. Robots perceive the world in a different way and not able to distinguish just a chair from another chair, in which talking about permanent changing conditions of our life. Second of all, the right system of authority is not ready: the utilization of those user-friendly machines requires more appropriate laws, so that they would coexisted “peacefully” with us. Finally, in any case there must be an attentive responsibility for their actions. Third of all, some researchers claim that it is necessary to carefully appeal to those mechanical machines, as with the further active development of the artificial intelligence they might literally enslave us. Those concerns hold back investigations and the distribution of them too seriously. As we see, robots have already implemented in the views of various intelligent gadgets, household facilities and smart-systems. However, until ideal forms, created by human imagination, we still need to the highly advanced level of technological process. All they can actually do is to perform of programmed commands of humans. Therefore, software engineers are now making huge attempts to create machines highly competitive as well as interaction with them is more straightforward, natural and most importantly accessible to everybody.

**Future forecasts.** According to the statistics of the Tractica organization, the number of people using robots will reach 31,2 million by 2020 across the world. Moreover, the leadership on the market will come to the household robots, overtaking industrial and military that will certainly lead to the high demands in use. Scientists predicted that by 2018 years the overall facilities accessed to the Internet will be counted at 6 billion around the world. Those facilities will appeal people to build new business plans for serving those facilities. By 2020 approximately 40% interactions with mobile devices will be implemented through “smart” agencies. In fact, this forecast is based on the fact that our world is moving towards a computerized era of applications in which services such as Amazon Alexa, Microsoft Cortana and Apple Siri will play a vital role in a universal inter face for human interaction with devices. As we now have an access only cleaning robots, drones as well as personal assistants, the fact that we will have a great opportunity make that device more functional, not depending on producers makes us happier. More advantageously, ordinary people are not yet mentally ready to accept robots in a similar way to them. This is primarily due to the lack of information about the achievements of scientific and technological progress. Additionally, people have a mistaken opinion about robots that have been repeatedly featured in science fiction films.

**Conclusion.** All in all, we cannot replace the labour force of humans with smart machines’ although that is more productive and without tiring. And it is to note that communicative skills with robots will not be less useful rather than with people. We see as modern and state-of-the-art technologies combine people and smart machines into a large social-hardware network. And this is only the beginning of the difficulty, but of the very fascinating travel into the future.

#### REFERENCES:

1. R. Kelly and R. Carelli, “A class of nonlinear PD-type controllers for robot manipulators,” *Journal of Robotic Systems*, vol. 13, no. 12, pp. 793–802, 2010.
2. S. Kawamura, F. Miyazaki, and S. Arimoto, “Is a local PD feedback control law effective for trajectory tracking of robot motion?” in *Proceedings of the IEEE International Conference on Robotics and Automation*, vol. 3, pp. 1335–1340, 2015.
3. K. S. Narendra and A. M. Annaswamy (2011), *Stable Adaptive Systems*, Prentice-Hall, Englewood Cliffs, New Jersey. 484 Priyank Jain & Dr. M.J. Nigam