From 11 to 13 December 2019, our representatives took part in the 58th International Conference on Decision-Making and Control, which took place in Nice.

The main program of the conference focused on management and control systems enabling the development of the use of cybernetics in four main areas: in medicine, the automotive industry, logistics and motion simulation, including additional and control activities for robotics.

The authors of most lectures and workshops were experts from the ranks of scientists and researchers from major universities around the world. In essence, it was a meeting and transfer of information from scientific leaders in the field of using cybernetics to simplify or replace human activities across many industries and medical disciplines. The program took place in the Congress Palace simultaneously in two large halls and several dozen smaller rooms. It was not possible to attend all lectures and workshops (a total of 1345 presentations took place during the conference).

In our opinion, we have chosen the topics most suitable for implementation in the Czech Republic. It was mainly the use of control systems in the automotive industry, which in the Czech Republic employs about 160,000 people, including employees in related industries about 400,000 people, represents 26% of Czech industrial production and generates the most economic profit in the entire manufacturing industry. Most of the lectures on this topic dealt with autonomous cars, the development of their control units and testing. These were very professional topics that we have available in electronic form. Selected lectures, especially in the field of autonomous control and simulation, can also be used for researchers in the field of production of railway locomotives, aircraft and other means of transport.

Research into new technologies, their implementation within the digitization and robotization of industry will cause a radical change in the organization of work. Many jobs will be lost, especially for the low-skilled. It will be necessary to adapt the curriculum to this. In connection with electromobility and autonomous control of many vehicles and machines, far more qualified people with electrical education will be needed not only for production, but also for the operation and servicing of these machines and equipment.

The second aspect of the conference was the annual growing number of women in the field of research and application of robotics in practice, which a few decades ago was exclusively a male domain. The International Committee of the IEEE Control Systems Society (CSS), which brings together researchers in the field of management and control in cybernetics and robotics, not only connects individual universities and research institutes, but also monitors the number of women in the field and assists them in professional development.

For all of us who had the opportunity to attend the conference, the stay was an impetus for further education in the active use of new digital technologies and the idea of promoting changes in the school education system with regard to the need for far more graduates in electrical engineering, robotics and cybernetics. .

The mobility took place within the Erasmus + project "The future of employees in the era of digitization, robotics and automation of industry 4.0 and related processes" No. 2019-1-CZ01-KA104-060305. This project has been funded with support from the European Union. Compiled by: Dana Ligocká, Simona Šutariková, Eva Šodková, Zuzana Smolarčíková.

We offer experts - research and development workers in the industry the opportunity to share lectures. In case of interest, contact the e-mail: tajemnik@kpms.cz.