

Conclusions of Cyber-Physical-Systems - Driver for innovation and Knowledge

Submitted by Ioan Dumitrache on Thu, 10/02/2014 - 10:05am

The round table entitled "Cyber-Physical-Systems - Driver for innovation and Knowledge", organized by the Ministry of Education in collaboration with the Romanian Academy Department of Science and Information Technology and the Technical Sciences Academy Department of Automation and Electronics, was held on 26.09.2014 from 13.00 in the Aula of the Romanian Academy Library.

The interest was focused on the current trends regarding the integration of computers, communications and control strategies of real time physical processes and business processes, known as Cyber-Physical Systems (CPS), and their major impact on process and product quality, in the context of Internet of Things and Internet of Services expansion.

The debate was opened by the State Secretary prof. Tudor Prisecaru, who highlighted the major role of research for the Romanian economy development.

Further, Academician Florin Filip, the director of the Academy Library, made a presentation of the Academy Library and its role in the context of Romanian research.

Prof. Ioan Dumitrache, corresponding member of the Romanian Academy, the event promoter and initiator, made a presentation of the Cyber-Physical Systems (CPS), emphasizing both the top research character and the domain complex meaning, as well as the importance for the Romanian research. Also, prof. Dumitrache highlighted the importance of multi-domain integration and the necessity of Romanian industry development aligning with the C4 paradigm: computers, communication, control and knowledge.

The debate continued with the presentation of Professor Detlef Zuehlke, the Director of the German Centre for Artificial Intelligence - DFKI. The presentation addressed both the domain of Cyber-Physical Systems as well as innovative technologies, experimental models and prototypes developed within the institute leaded by Professor Detlef Zuehlke in collaboration with different research centres. Furthermore, a debate followed regarding research directions, research applicability in the fields of medicine and agriculture and the necessity of a CPS research program for the Romanian economy.

The debate continued with the presentation of professor Ioan Dumitrache targeting the National Research Plan in the field of Cyber-Physical Systems. Professor Dumitrache highlighted the major research fields, the real applicability of these systems and the major R&D directions in order to develop innovative

products and processes.

The debate ended with the necessity of finance in order to initiate a National Research Plan in the field of Cyber-Physical Systems, taking into consideration the real necessity for the Romanian Economy Development in order to align with the European economy.
