

Academia-Industry Matching Event on the Mutual Impact of Industry 4.0 and High-Energy Physics

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Research activities of the Center of Modern Control Techniques and Industrial Informatics

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Abstract:

This paper presents the activities of the Center of Modern Control Techniques and Industrial Informatics at the Department of Cybernetics and Artificial Intelligence of the Faculty of Electrical Engineering and Informatics, Technical University of Košice with the emphasis on research, teaching and technology transfer from academia to industry. The research and pedagogical activities of the Center are based on the 5-level pyramid model of the distributed control system, built in accordance with the Industry 4.0 concept. The talk describes a set of physical models of the Center of Nondestructive Diagnostics, which was built as part of the TTO Technicom project, as well as the joint results of TU Košice and CERN, achieved as part of the international research project "ALICE Experiment on the LHC in CERN: Studying the strongly interacting matter in extreme conditions".

About the speaker:

Ján Jadlovský studied technical cybernetics at what is presently Faculty of Electrical Engineering (FEEL) at the Technical University of Košice (TUKE). In 1990, he defended his dissertation thesis on speech recognition and went on to work as assistant professor. In 1994, he defended his habilitation thesis which focused on distributed control systems. He has worked since as an associate professor at the Department of Electrical Engineering of FEEL, TUKE, Slovakia. He has been involved in basic research related to distributed control systems and supervised a number of bachelor, master and dissertation theses in this area. Most importantly, he has contributed to the development of a universal model workplace based on the five-level pyramid model of process control with a wide range of physical applications. Together with his team, he has developed and implemented a number of solutions for regional manufacturing companies using this model, in which his long-term goal of transferring research results into production was repeatedly achieved. Since 2012, he has been involved in the ALICE experiment of CERN in cooperation with the Institute of Experimental Physics of the Slovak Academy of Sciences based in Košice. He is the Team Leader of the TUKE research group within the ALICE collaboration. Presently, the TUKE research group is involved in the development of a new generation of the pixel detector using the distributed control systems methodology.

Presenter(s) : JADLOVSKY, Jan (Technical University of Kosice (SK))

Session Classification : Presentation of the organizing institution