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Chair: Imre Rudas

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Strategic Development of Intelligent Transportation Systems

by

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ABSTRACT

In this lecture the structure and build-up of transportation systems, their development, and especially, the needs established by the society that motivate the continuous expansion of such systems will be outlined. The development is determined by the four participants (“components”) of these systems, namely by the human beings, vehicles, infrastructure and regulations. The principal element of the process is man with his demands for mobility and transportation. These demands can be satisfied by manufacturers who produce the desired vehicles. The response time of manufacturers is much shorter than the development of infrastructure; however, the later is also essential in order to serve transportation processes. The low flexibility of infrastructure is partly caused by the huge amount of necessary investment, and also by the complex ownership relations. The last element that usually appears with delay compared to the other three is the regulation system (laws, standards, specifications etc.), and it also expresses the needs of the society as long as the development – motivated by social demands – sometimes conflicts with other needs, i.e. the needs for safety or for the protection of environment. This contradiction finally closes the “control loop”, and actuates the evolution of transportation systems.

ABOUT THE SPEAKER:

Pál Michelberger, Professor-Dr., Dr. H. C. Michelberger was born in Vecses, Hungary in 1930. He received his higher education in mechanical engineering from Technical University of Budapest in 1948, 1952 and 1961 for BS, MS and Ph.D., respectively. He has received two honorary doctoral, degrees (Hon. Causa) in 2001 and 2005. He is a full member of the Hungarian Academy of Science, a member of the Hungarian Academy of Engineering, and has been President of Hungarian Federation of Technical Science Societies. International, he has been a member of many academies among them are the Russian Academy of Transportation, Academy Europaea, Academy of Higher Education, European Academy of Science and Arts. He has served as a Council member of the IIASA in Austria and a board member of the European nuclear Research Center (CERN). He has published over 460 technical works, including 12 books in Hungarian and 210 articles in German, English, French and Russian. He has delivered over 100 lectures in international destinations. At the Technical University of Budapest, he has held numerous positions from assistant (1952-55), Senior assistant (1955-63), Assistant Professor (1963-68), Professor (1968-2000), Dean of Engineering (1985-90), Rector (1990-94), and Professor emeritus (2001-present). He has worked in Hungarian industry such as design engineer for IKARUS Bus Company, Chief Engineer, Chief Designer, Technical Advisor, Director of Board, as well as department head of Trust of Automobile and Tractor Industries, HUNGAROCAMION Transport, Ltd., chairman of Board. He is a technical advisor of the KNORR Bremse Hungary, Ltd. from 1996-2007.