Automated driving system for the next generation mobility

Yoshihiro Suda  
The University of Tokyo, JAPAN

ABSTRACT

Advanced mobility research center, Institute of Industrial Science, The University of Tokyo conducted projects for development and evaluation of automated driving system for sustainable transportation system of next generation. Automated driving is expected to be implemented socially as next-generation mobility. Changing the mobility society may lead to improvement of productivity of Japan, Asian countries, and all of the world. It is important to build a business ecosystem. Development of research on sensing technologies, artificial intelligence, and control engineering for automated driving should be improved. However, more important things is technologies of HMI (Human-Machine-Interface) technologies to establish and consider the social acceptance of automated driving system. Not only driver but also people for transportation around the automated driving vehicle should accept the new system. Moreover, non-technical issuers such as legal and management matters should be considered. In this presentation, recent trends for consideration of ecosystem will be introduced. In Japan, a lot of demonstrated experiments on the public roads are conducted under the newly authorized rules by Japanese government even for driverless operation. Some of the examples will be shown. For future prospects, such as social acceptability considering the impact on users and industry will be presented showing experiments of business model in local community.

BIOGRAPHY

Yoshihiro SUDA is Professor of Institute of Industrial Science (IIS). He graduated from The University of Tokyo, Department of Mechanical Engineering in 1982 and got Doctoral Degree in 1987. After working as Associate professor of Hosei University and Guest Associate Professor of Queen’s University at Kingson, Canada, he worked as Professor and Director of Advanced Mobility Research Center and Chiba Experiment of Station of IIS. His research area is dynamics and control engineering, human-machine interface, and their applications to automobile and new generation mobility. He has conducted many industry-academia collaborative projects with automobile and railway industries, and developed many practical outputs such as automated platoon truck system. He is a board member of JSAE, ITS Japan, Railway Technical Research Institute and charged committee member of Japanese Governments. He hosted many international conferences.