



SUMMER SCHOOL ON

“INTELLIGENT TRANSPORT SYSTEMS: DESIGN AND SAFETY”

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CONTENT OF LECTURES AND CV OF SPEAKERS AND AFFILIATIONS

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ITS functions and their potential consequences on safety

This presentation aims to introduce the general principles of ITS functions in transport in relation to road safety. It will develop and overview of what types of functions can be included in the broad designation of « ITS », including functions in public transport or on motorway such as VMS, without too much detail but in such a way that relationships between implementation of ITS in transport and consequences on road safety can be established. It will focus in more detail on the safety issues raised by the implementation of some ITS functions in the vehicle such as functions related or not related to the driving task, good design / poor design consequences for the same function, cooperation between driver and system for assistance system, risk homeostasis and appropriation for assistance functions, ergonomic approach based upon user needs and requirements; inputs for systems design and safety evaluation. The current European position concerning this issue in relation with the publication of the European Statement of Principles will be briefly presented and broad outlines the ITS future functions perspectives will be touched on.

ITS and professional drivers

Light vehicle professionals (ambulance, taxi, delivery...) are under several constraints linked to their activity, and typical for a type of profession. Available functions from ITS can greatly influence their task, on one hand by increasing their efficiency through support of external communication and support in the organisation of their trips, and on the other hand by increasing the potential interference due to the run of attentional tasks in addition to the main driving task. This issue is even more crucial considering that professional drivers usually do a lot of kilometres and could be the first population to be equipped by communication and information systems.

This lecture will present a survey conducted in France among light vehicle professionals. Needs of ITS functions in relation to the type of activities and nowadays situation will be analysed. Perspectives at the European level according to this issue will be presented, in terms of responsibilities between designers, developers, fleet owners and drivers, and future actions will be debated.

Annie Pauzié is Research Director at INRETS/LESCOT. She has a PhD in Neurosciences and Ergonomics from the University of Sciences in Toulouse, France. She did a post doc at the University of California, Los Angeles from 1985 to 1987. Since 1988, she is a researcher at INRETS/LESCOT on ergonomics of telematic systems design in transport, with a focus on elderly users' needs and requirements. She has been involved in several European projects in the framework of the program DRIVE, such as STAMMI - Definition of Standards for the In-Vehicle Man-Machine Interface, 1989-1991; HARDIE - Harmonisation of ATT Roadside and Driver Information in Europe, 1992-1994; AIDE - Adaptive Integrated System Vehicle Environment, 2004-2007. Some European projects were also devoted to the ITS design from infrastructure such as TROPIC, 1997-1999, and ITS available in public transport for multimodal traveller information such as Infopolis 1 & 2, 1995-2000. She represents the French Ministry of Transport at the International Harmonised Research Activities -ITS working group. She has been involved as the French expert in the working group eSafety initiative on HMI, DG InfSo.



The French National Institute for Transport and Safety Research (INRETS) was created by interministerial decree on the 18th of September 1985. The INRETS is a state-financed scientific and technological body under the dual administrative supervision of the Ministry of Research and the Ministry of Transport. INRETS has the following main missions: To organize, execute and assess technological research and development concerned with the improvement of the means and systems of transport and of traffic from technical, economic and social viewpoints. To carry out evaluative and advisory studies within these domains. To promote the results of these research and study programmes, to contribute to the dissemination of scientific knowledge, and participate in training by and for transport research both in France and abroad. Staff at INRETS totals 400: 189 researchers, 157 technicians and assistants, and 54 administrative and management personnel. Two thirds of research have training in the physical sciences, and one third in the social sciences. The institute's activities involve such diverse fields as economics, sociology, psychology, physiology, ergonomics, biomechanics, acoustics, mechanics, mathematics, computer science electronics and electro-technical. The diversity of approach used to carry out the different research programmes gives a multidisciplinary characteristic to the INRETS research teams, which correspond to their methods.