

Editorial

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New approaches and trends in the study of road safety are spreading always more rapidly all over the world. The most diffused “passwords” seem to be two: multidisciplinary and advanced technologies.

The multidisciplinary approach is changing the traditional perspective of researchers and scholars starting from their laboratories to a new way of making culture and science.

Models sharing, information exchanges, developing of new concepts among researches involved in different disciplines are the keys of knowledge evolution. Each discipline retains its methodologies and assumptions without change or development from other disciplines within the multidisciplinary relationship. Traditionally engineers worked without any contact with psychologists and for the psychologists it was the same. Now engineers know that the consideration of human factors is essential for road safety investigations and psychologists know how roadway layout is conditioning for drivers behaviors.

Probably in the next future the multidisciplinary approach will turn to an interdisciplinary one. Interdisciplinarity blends the practices and assumptions of each discipline involved. But I think that in the field of road safety analysis the scientific community is making the first steps from the sharing of the different approaches to the developing of a new conceptual scheme.

Advanced technologies give modern, reliable and high performing tools for investigating and analyzing problems.

In this sense, thanks to the intuition of a few that were ahead of one’s time, driving simulation is the main advanced tool that in this last decade is always more used by researchers in different disciplines studying road safety.

The consciousness that driving simulation has been becoming a strategic tool for many researchers suggested to a group of experts who have been using this technology since many years to promote an international event to exchange experiences, results and know-how. This group organized restricted meeting each year in Europe or America till 2006. In 2006 at the Massachusetts Institute of Technology this group planned a more ambitious event: an international conference in Rome, Italy.

The international Conference “Road Safety and Simulation 2007” took place in Rome in November 2007, hosted by the Inter-Universities Research Centre for Road Safety and the University of Roma Tre.

The Italian Minister for Transportation has opened the Conference together with the Deputy Minister of Saudi Arabia, the representative of Buenos Aires Susecretariat for Transit and Transport and the CEO of Autostrade per l'Italia. About 150 papers have been presented. More than 360 authors from over 40 different countries all over the world have been contributed. About 500 people have visited during these days the Conference and 60 delegates from Italian and international press have been here.

The preliminary idea to match together different scholars from different disciplines was successful and effective. It has been widely appreciated that engineers, psychologists, human factors experts, computer scientists have been sitting at the same tables.

This appreciation was so significant that during the Closing Session all the attendees promoted a second Conference RSS in the future. Starting from this stimulus a Permanent Steering Committee of the Conference was established to plan future events and policies. The next event is expected in Paris, France, in 2009.

The general objective of the past Conference that will be implemented and improved by the Steering Committee in the up-coming events is the development of a high profile interdisciplinary network of experts, scholars and researchers from public and private sectors from all over the world who are working in the field of road safety. It will help to plan, design, construct and maintain safer roads. All the sectors of sciences traditionally involved in road safety analysis have taken part to the Conference: from traffic and infrastructures engineers to mechanical engineers, from psychologists and human factors experts to computer science researchers.

The Conference Proceedings are available on the RSS website www.rss2007.org. A selection of the papers are going to be published in "*Advances in Transportation Studies – an international journal*" <http://host.uniroma3.it/riviste/ats/>.

The main topics of the Conference are: roadway design, background and applications of advanced technologies for road safety and the contribution of human factors sciences.

The presented papers demonstrate as the driving simulation is today the most reliable tool for roadway validation under a safety perspective and for the assessment of the effectiveness of safety measures. Specific papers discuss traditional themes as the evaluation of speeds, geometry consistency, visibility analysis. Other researchers propose to use driving simulators to evaluate advanced problems as the drivers' risk perception, the dynamic legibility of signs, the validation of measures under different traffic or environmental conditionings.

Reading the Conference Proceedings an innovative, up-to-date framework comes out both from a technological and from a cultural point of view. It depends on the changed mobility scenario in developed as in developing countries, on the availability of new tools for the analysis of safety and also on a renewed idea of the theory of roadway design. This theory has passed the traditional kinematical-dynamical approaches to study the driving phenomena considering, in a glance, vehicle dynamic, human factors and road environment in terms of traffic and pavement conditions as in terms of weather conditions.

A very interesting example of this evolution is well demonstrated by the papers that are collected in this Special Issue: the papers have been selected from those presented at the Conference and are shortly presented in the following pages by W. Allen, M. L. Cook and T. J. Rosenthal.