

Editorial

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Editorial Board "Advances in Transportation Studies – An International Journal"
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This special issue is printed after more than two years from the birth of this Journal, *Advances in Transportation Studies an International Journal* was launched in November 2003. I had the privilege to serve as member of the Editorial Board from the first issue of the Journal and during these years, now I am personally honoured to serve as special co-editor for 2005 Special Issue of *ATS*.

Thanks to the Editor in Chief, the Associate Editors, the Members of the Editorial Board, the Referees but especially thanks to the Authors the results in terms of dissemination, scientific quality of published papers, high profile of contributors are beyond any expectations.

About 60 scientific papers have been published. The cultural policy and the editorial proposals to make this Journal the stage for interdisciplinary debates and scientific discussions about the topics of transportation and with the overall objective of developing safer roads have reached their success.

The Journal offered to about hundred authors from almost twenty different countries of developed and developing world the chance to defence their theories and disseminate their researches. The topics presented in the papers concern the safety of the road from different perspectives: now from the engineering approach, now under a medicine or psychology framework. I find this "editorial scenario" unexpected and innovative related to all the international scientific production. At the same time it has to be noticed that researches from all the continents have rarely the opportunity to present and discuss their results at once on the same Journal.

Coming to my role of special co-editor I would like to encourage an up-coming strengthening of the Journal in order to contribute in the exceeding the current gap between the traditional road engineering and the innovative theories. This Special Issue goes towards this objective. In fact if

traditional approach of road engineering to safety of roads has achieved in the past important goals, promoting social and economical development of human communities, basically it has not reached the requirements for a formal theory. Such a theory should explain through general laws the system composed by the driver, the vehicle and the road environment. Explaining this system under all the possible conditions of traffic flow, weather, driver conditions and expectations is yet a distant frontier.

But a theory of the road infrastructures is needed to understand the mechanisms of accident generation and development, to identify the causes of accident and to prevent hazardous conditions under the shared objectives of safety and reliability of infrastructures projects in a modern society.

If the overall objective is the definition of a general theory for the roads design under safety guidelines and through an interdisciplinary approach, advanced instruments, equipments and tools for experimental validations are needed to ground a theory that is science in a Galilean sense.

Repeatability and reliability of traditional measures of road engineers have been affected by the high variability of traffic conditions, weather, environment and boundary. In other words the methodological assumptions of modern scientific approach fail.

Nowadays these points of weakness can be cancelled by the availability of advanced technologies. In this context the interactive driving simulation in virtual reality is the most effective tool for safety studies taking into account human factors and all the aspects affecting driving conditions.

The diffusion in the field of road engineering of a simulation based approach is incredibly spreading in these years all over the world. It is a shared and firm conviction that we are living the beginning of a "new era" for road designers.

Probably a sort of passive cultural resistance still exists in many countries to this radical innovation. I think that it is simultaneously radical, because it implies a total change of perspective, and it is irreversible, because it is the effective jump beyond an approximated and strict technical framework to the new actual frontiers of a new theory. These two are the characters of an "era".