



Introduction to a selection of papers on “Traffic management and traffic behavior: a European perspective”

Jacek Zak*, Szymon Fierek*, Riccardo Rossi, Massimiliano Gastaldi***

Poznan University of Technology, Logistics Division, Poznan, Poland, E-mail address: jacek.zak@put.poznan.pl,

Department of Civil, Architectural and Environmental Engineering, University of Padova, Padova, Italy. E-mail address: riccardo.rossi@unipd.it, massimiliano.gastaldi@unipd.it

Selected papers from 14th Meeting of EURO Working Group on Transportation, Poznan, Poland, September 6-9, 2011,

Since the first meeting, held in Landshut (Germany) in 1992, for scientists from Europe and all over the world, the meetings of the EURO Working Group on Transportation have represented an opportunity to share research results and perspectives in the field of transportation.

The previous conferences (Landshut, Paris, Barcelona, Newcastle upon Tyne, Budva, Goteborg, Helsinki, Rome, Poznan, Bari, Ischia, Padua) gathered top research scientists from prestigious universities and research institutes, and scientific participants from private sectors and public agencies.

The 14th Meeting of the EURO Working Group on Transportation “In Quest for Advanced Models, Tools and Methods for Transportation/Logistics” took place in Poznan, Italy, September 6-9 2011, with the main aim of providing a forum to share information and research experiences, and of promoting cooperation among various institutions and organizations in the field of traffic and transportation planning, management and analysis. The Meeting focused on recent advances in Traffic and Transportation Systems research, and covered a wide range of research topics.

The high standards of the conference were ensured by a large and competent scientific committee and by a selective reviewing process. The review for the 14th Meeting took place between April and June 2011, according to extended abstracts between 5 and 10 pages long. Each paper was reviewed by at least 2 reviewers, and by the organizing committee, and 94 were accepted for presentation (see conference web site for further information, <http://www.ewgt.org>).

Reviewing of manuscripts submitted for publication in the special issue started in January 2012, with at least 3 reviewers per paper and further revision by guest editors. The entire process was completed by March 2013.

Of the 15 contributions selected for publication in *European Transport*, 4 were only accepted after an accurate review by the most expert referees: namely Fusco *et al.* (2013), Gastaldi *et al.* (2013), Meneguzzer *et al.* (2013), Dell'Acqua *et al.* (2013).

These papers cover advances in the state-of-the-art related to traffic management and traffic behavior:

- Network capacity. The paper, introducing the concept of “capacity function”, proposes a generalized concept of road network capacity which does not require information on either current O-D demand or the corresponding growth trend.
- Signal settings synchronization. The object of the paper is to investigate the effect of signal synchronization on traffic flow patterns on the network and validate results of synchronization problem in signal setting design. A platoon based traffic model is applied to solve both one-way and two-way synchronization problems in under-saturated conditions.
- Effect of pedestrian crossings on roundabout entry capacity. The proposed method leads to the determination of a capacity reduction index based on crosswalk occupancy times, which can be applied in operational analyses to obtain realistic estimates of roundabout entry capacities taking into account the impact of pedestrian crossings.
- Speed prediction models for two-lane rural roads. The aim of the paper is to validate operating speed prediction models calibrated on two-lane rural roads by using speed data collected in the field. The results allow to trace continuous operating speed profiles on two-lane rural roads and to carry out safety analyses on the horizontal alignment.

We would like to thank the participants in the EWGT Meeting for submitting high-quality papers, which allowed us to edit this special issue of *European Transport \ Trasporti Europei*. Special thanks go to all the reviewers for their professional work and to Prof. Romeo Danielis, Managing Editor of the journal, for inviting us as guest editors.

References

- Fusco, G., Bielli, M., Cipriani, E., Gori, S., Nigro, M. (2013) Signal settings synchronization and dynamic traffic modeling, *European Transport \ Trasporti Europei*, 53, paper 7
- Gastaldi M., Rossi R., Vescovi R. (2013) Analysing the capacity of a transportation network. A general theoretical approach, *European Transport \ Trasporti Europei*, 53, paper 8
- Meneguzzer, C., Rossi, R. (2013) Analysis and control of the interaction between vehicular and pedestrian flows on roundabout approaches, *European Transport \ Trasporti Europei*, 53, paper 9
- Dell'Acqua, G., Russo, F., Mauro, R. (2013) Validation procedure for predictive functions of driver behaviour on two-lane rural roads, *European Transport \ Trasporti Europei*, 53, paper 10