

VEHICULAR AND PEDESTRIAN MODELING: ADVANCES IN RESEARCH AND TECHNOLOGY TRANSFER

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ABSTRACT

Mathematical methods and models for predicting both pedestrian and vehicular traffic have been developed for many decades and nowadays have reached a great variety and a high degree of sophistication. Numerous commercial software has also been created for engineers who design and supervise road traffic or mass events. Nevertheless, the use of this kind of software is still limited, and there is a large time lag between the discovery of new models (research papers) and their actual use in the field. Furthermore, customization, calibration, and validation of the models remain a complex task.

This session is dedicated to new discoveries in the field of simulation of vehicular and pedestrian dynamics, with particular interest in collaboration between academia and industry. In this framework we will try to answer the following questions: which kind of real data is available to researchers? What are the difficulties encountered between the development of a theoretical model and its real use in the field? Is it necessary to have commercial software in the middle between research activity and practical use? To what extent are the models useful for practitioners?

REFERENCES

- [1] M. Briani, E. Cristiani, P. Ranut, *Macroscopic and multi-scale models for multi-class vehicular dynamics with uneven space occupancy: a case study*, *Axioms*, 10 (2021), 102.