

Recent results in fluid dynamic and kinetic modelling of vehicular and pedestrian flows

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Abstract

The fast growing number of vehicles on networks of roads, either highways or urban streets, and the related economical and social implications (pollution and energy control, prevention of car crashes, etc.) constantly motivates an intense research activity in the field of traffic flow modelling.

In the same way, the investigation of the behavior of human crowds is receiving an increasingly attention. Pedestrians crowds are found everywhere in the real world; for this reason, their analysis is not only an interesting problems in itself but mainly a necessity in designing realistic interactive environments, as in transportation research, architecture etc.

In this talk we give some insight on the recent development of mathematical modelling of such complex systems. In particular, we introduce some kinetic [1] and macroscopic [2] models that are able to reproduce the main features of the systems' real behavior and show some computational result corresponding to specific situations.

Keywords: Mathematical modelling, traffic flow, pedestrians crowds.

References

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