



Barcelona Innovative Transport

SELF-DRIVEN PARTICLE MODEL FOR MIXED TRAFFIC AND OTHER DISORDERED FLOWS

Research seminar by:

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Room: **B1-003**
UPC Carrer de Jordi Girona, 1,
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12:00 h

Dr. Venkatesan Kanagaraj is a Marie Curie IF fellow in Chair of Traffic Modelling, Econometrics, and Statistics Institute for Transport & Economics, TU Dresden. His research interests include: Traffic flow and crowd modeling, Traffic simulation.

Abstract: Vehicles in developing countries have widely varying dimensions and speeds, and drivers tend to not follow lane discipline. In this flow state called "mixed traffic", the interactions between drivers and the resulting maneuvers resemble more that of general disordered self-driven particle systems than that of the orderly lane-based traffic flow of industrialized countries. We propose a self-driven multi particle model for high-speed particles and show that it reproduces the observed characteristics of mixed traffic. The resulting model is very general and can serve as a paradigm for the general motion of drivers, bikers, runners, and other high-speed self-driven particles with kinematic restrictions avoiding crashes.

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