

Heterogeneity Effects in Models of Pedestrian Dynamics

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Floor Field model is considered as a powerful tool to capture pedestrian dynamics on microscopic level. The original idea of static and dynamic fields has been significantly extended within last two decades, including inertial forces, movement prediction, physical interactions, and others.

This presentation focuses on individual approach, i.e., enabling heterogeneity of pedestrians in terms of velocity, aggressivity or path selection. Within his Ph.D. thesis, author proposed, implemented, and validated several enhancements of FF mode in order to improve correspondence between FF model simulations and experimental data gathered within FNSPE.

The effect of implemented features with respect to parametric set up will be illustrated on case study “passing through a room” parametrized by controlled inflow rate. Aside of heterogeneity effects, the natural requirements as symmetry or phase transition will be investigated as well.