Social Force as a Microscopic Simulation Model for Pedestrian Behavior in Crowd Evacuation

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Understanding the evacuation mechanism has been important subject nowadays in order to model the simulation on the pedestrian behavior in crowd evacuation for the case study of fire emergency scenario in the building. Almost two decades the interest of Social Force Model (SFM) in pedestrian traffic increased significantly as a microscopic model to have a realistic simulation model. The social interactions between the pedestrian is emergent phenomena and very hard to capture, rare and evasive maneuvers in order to avoid collisions between the agents or so called as pedestrians. SFM has been chosen to simulate and modeling the case study based on the crowd dynamic, pedestrian dynamic and evacuation dynamic.

Keywords: Crowd Evacuation, Social Force Model, Fire Emergency Scenario, Evacuation, Microscopic Simulation

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