Discrete Element Method Approach for Rushing Flow of Pedestrians on S-type Corridor

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The rushing flow of pedestrians has many similarities with the flow of particles. On the top view, pedestrians flow can be treated as a 2-dimensional flow of particles. Each particle is treated as a pedestrians. Particle flow is usually analyzed by a few computational methods. Among the methods, Discrete Element Method (DEM) is most popular. To simulate the rushing flow of pedestrians, modified discrete element method is applied. Psychological force coming from behavior characteristics becomes driving force in the rare flow, while physical contact force becomes main force acting on pedestrians. In this study, the flow pattern and congestion are studied by a different corridor angle and pedestrians spatial distributions.

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