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Autore	Abd Rahman Noorhazlinda
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Nota di contenuto	Introduction -- DEM-Based Crowd Behavior Simulator -- Switching Action Behavior Model in Crowd Behavior Simulator -- Application of a Switching Action Behavior Model to DEM-Based Multi-Agent Crowd Behavior Simulator -- Recapitulation.
Sommario/riassunto	This book introduces the use of the distinct element method (DEM) in modeling crowd behavior and simulating evacuation processes. Focusing on the mathematical computation of the uncertain behavior of evacuees, which is switching action behavior, it subsequently reproduces the crowd evacuation process under several conjectural scenarios using a DEM-based multi-agent model that has been modified by introducing the switching action behavior. The proposed switching action behavior model describes a person who has to change his/her destination due to the limited space capacity of the designated evacuation area. The change in the destination of a person is determined according to the motion of other individuals in the perception domain during the defined switching action time. The switching action time is formulated in the so-called switching action function, which is described by a convolution integral of the input and

unit response functions. The newly developed switching action model is then validated using sensitivity analysis in which the primary focus is the crowd motion and flow of switching action behavior.