Chapter

Review on Evacuation Systems for Indoor Fire Situation

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Abstract

Casualties and huge losses could result from fire disasters in buildings. On the event of fires, evacuation from an isolated place of course becomes difficult and complicated due to factors such as fire spread, panic in evacuee movement and consequent congestion, failure in communication due to errors and delays, etc. This paper aims to compare competitive algorithms used for the calculation of shortest paths or the safest paths to mitigate the problem of evacuation. It also reviews corresponding evacuation models implemented in the past. By comparison with all existing methods, challenging issues are discussed, which should be met to enable basic requirements of an evacuation routing system. We conclude by underlining future directions towards enhancing the abilities for fire evacuation.

Citations (2) References (20)

... In this context, problem solutions should provide a course of action which should lead to the accomplishment of goals, and which should serve as the foundation for establishing and executing control measures. Employees and employees who are too near to the sequences may no longer notice and identify the risks, or may view the events as minor since to their knowledge, where no one has been injured [23, 24] . Figure 3 shows the overall block diagram of proposed work. ...

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attention as an alternative method for advanced firefighting training. In particular, to develop virtual training content, it is important to understand the combustion characteristics of indoor combustible materials and appropriately simulate their behavior. In this ... [Show full abstract]

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Fire Dynamics in a confined space is considerably difficult. Flashover container enables experimental examining of many of its aspects in controllable conditions. For this reason there is an extensive research in form of large scale tests goes in Zbiroh where large container complex for liquefied gas fuel was built. In this time a human factor and its effect on the environment is in the research. ... [Show full abstract]

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