

**Summer Research Program 2011/2012*****Project Title: Investigate pedestrian crowd panic modelling*****Supervisor: Dr Nirajan Shiwakoti****Email: nirajan.shiwakoti@monash.edu****Phone: 99055580****Department: Civil Engineering**

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**Objective**

*The aim of the project is to investigate the use of empirical data in pedestrian crowd panic modelling.*

**Description**

The rapid movement of large numbers of people is critical in emergency and/or panic situations, such as during the evacuation of buildings, stadiums, theatres, and public transport stations; outdoor events such as public assemblies, open concerts, and religious gatherings; and community evacuations following natural disasters or terrorist attacks. Perhaps the most critical reason for studying collective pedestrian dynamics under emergency/panic conditions is the lack of complementary data to develop and validate an explanatory model.

This research project will investigate the use of empirical data in the development of a collective pedestrian traffic model under panic conditions. The practical application could be in changing building designs and the layout of open public spaces, by providing supporting evidence that the design would actually be effective and improve safety. For the project, existing empirical data will be used to investigate the underlying mechanisms of crowd panic.

Good understanding of pedestrian traffic and transport subjects is expected for this project.