

**INSTITUTION OF FIRE ENGINEERS, SINGAPORE (IFES)**

# HUMAN BEHAVIOUR AND EVACUATION MODELLING

## Seminar Information

The aim of the seminar is to introduce human behaviour theories that are relevant for Fire Safety Engineering (FSE). After completion of the seminar, the participants will also have a basic understanding of pedestrian dynamics, and understand different egress modelling approaches (network, grid and continuous models) and their limitations.

The seminar includes a wide variety of topics, such as human behaviour theories, toxicology, pedestrian dynamics, egress modelling and Building Information Modelling. Most of the material will be covered in lectures, but there will also be exercises related to the design of emergency exits.

The knowledge gained at the seminar will help participants to incorporate aspects related to fire evacuation and human behaviour in their works. After completion of the seminar, the participants will receive a certificate.

## Target Audience

Fire Safety Engineers, Professional Engineers, Registered Architects, Fire Investigators, SCDF, Fire Safety Managers, Safety Officers, Officers from Relevant Government Agencies, Suppliers of Fire Products, Building Owners, Developers, Building Contractors, Facility Management and Maintenance Personnel, etc.

## Date and Time

1 to 2 August 2022 (Monday & Tuesday), 8.30am to 6pm

## Venue

Holiday Inn Singapore Orchard City Centre  
11 Cavenagh Road, Singapore 229616

## Seminar Fee

- a. \$900 for members of IFES
- b. \$1,050 for non-members  
(includes coffee breaks & lunch and no GST)

## Seminar Program

### Day 1

Time	Topic
8.30-9.00	Introduction
9.00-10.45	Human behaviour theories
10.45-11.00	Coffee break
11.00-13.00	Pedestrian evacuation dynamics
13.00-14.00	Lunch
14.00-15.00	Intro to Egress Modelling
15.00-16.00	Evacuation Modelling Lab - Pathfinder
16.00-16.15	Coffee break
16.15-17.45	Virtual and Augmented Reality for Evacuation. This module will introduce definitions of these two technologies and how they can be used to design Evacuation systems using the Theory of Affordance.
17.45-18.00	QA Session and Conclusions

### Day 2

Time	Topic
8.30-9.30	Toxicity
9.30-11.15	Advancements in Evacuation Modelling This model will show how the existing models can become smarter using new data and decision-making sub-models making agents "smarter".
11.15-11.30	Coffee break
11.30-13.30	Verification and Validation
13.30-14.30	Lunch
14.30-15.30	BIM for Fire Safety and Evacuation - Part 1 This module will introduce definitions of BIM and how this can be used for Fire Engineering and for evacuation modelling. We are going to assess the status quo and where we are going with this digital technology.
15.30-16.30	Evacuation Modelling Lab – Simulex
16.30-16.45	Coffee break
16.45-17.45	BIM for Fire Safety and Evacuation - Part 2
17.45-18.00	QA Session and Conclusions

## Professional Accreditations

- a. CPD hours accredited to FSM – TBA
- b. CPE hours accredited to FSE – 16hrs
- c. PDU points accredited by PEB – TBA
- d. CPD points accredited by SIA-BOA - TBA

## Speaker's Profile



Dr Ruggiero Lovreglio (known as Rino) is Senior Lecturer at Massey University (New Zealand) where he teaches Digital Construction (BIM, VR, AR and 3D scanning) and Research Methods. He got his PhD in 2016 from the Scuola Interpolitecnica (Politecnico di Bari, Milano e Torino) in Civil Engineering. His expertise is on Human Behaviour in Disasters, evacuation modelling and simulation, pedestrian dynamics. To date, he has been investigating human behaviour in several disasters such as building fires, earthquakes and wildfires. His research uses new technologies such as Virtual and Augmented Reality to investigate behaviours and training people. He is an expert in data analysis using traditional statistical tools and machine learning.

## CONTACT INFORMATION

Ms Karine Lim  
9669 3176 (HP) or 63389274 (Mon to Fri 9am to 5pm)

Email: [admin2@ife.org.sg](mailto:admin2@ife.org.sg)

## REGISTRATION INFORMATION

### Closing Date

Registration closes on **18 July 2022**

### How to register and pay

Scan QR Code or click on the link to **register and pay** below



### Registration Link:

<https://allevents.in/singapore/human-behaviour-and-evacuation-modelling-seminar/80001484923904>

### Notes:

1. **We seek your kind understanding and cooperation to register and pay via the QR code or link provided above for purposes of accounting and administrative work process.**
2. **Please ensure you have completed the registration form before Check out for payment via PAYPAL.**
3. **Receipts will be issued by ALLEVENTS / Paypal upon completion of payment page. Nominal processing fees per transaction by booking platform applies.**

### Disclaimer & Refund Policy

1. IFES reserves the right to postpone or cancel the course due to unforeseen circumstances.
2. No refund of seminar fees for cancellation. Replacements are allowed **before** the closing of the registration date line stated in this Brochure. No replacements after the closing of the registration date.