

## Hong Kong Ergonomics Society Seminar

### Fatal occupational injuries in construction industry

**Professor Chia-Fen Chi Christine**

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Taipei, Taiwan

Date: 27<sup>th</sup> March 2015

Time: 6:30pm

Venue: Room 2411, 2/F, Academic 2  
City University of Hong Kong, Kowloon Tong

#### **Abstract:**

The statistics of work-related fatalities in Taiwan indicates that falls and electrocution caused the most deaths in the construction industry. Effective strategies for preventing fatal falls must be developed based on the accident scenarios associated with these fatal occupational injuries. For each fatal fall or fatal electrocution, contributing factors were identified with respect to the victim's individual factors, the fall site, company size, and cause of the fall. Individual factors included age, gender, experience, and the use of personal protective equipment (PPE). A classification scheme coding system was developed to facilitate the categorization of fatal falls and electrocutions in terms of the cause of the fatality, the fall site, individual factors, and company size, in order to determine the importance of the contributing factors and to derive effective protection strategies. Eventually, electrical fatalities in the construction industry can be classified into seven patterns based on source of electricity (power line, energized equipment, improperly installed or damaged equipment) and direct or indirect contact through some source of injury (boom vehicle, metal bar or pipe, and other conductive material). A fault tree analysis was applied to represent the causal relationships among events and causes that contributed to fatal falls in the construction industry.

#### **Speaker bio:**

Professor Chia-Fen Chi received her Ph. D. in Industrial Engineering from State University of New York at Buffalo. She holds a B.S. in Industrial Engineering from Tunghai University in Taiwan (in 1985), a M.S. and Ph.D. in Industrial Engineering from State University of New York at Buffalo 1985-1990. She joined National Taiwan University of Science and Technology in Taiwan (NTUST) in 1990 as Associate Professor and was promoted to Professor in 1998. She was the President of the Ergonomics Society of Taiwan 2003-2005. Between 2008 and 2013, she served as the Department Chair, Associated Dean, and Dean of International Affairs. Currently, she is the Director of Center for Teaching & Learning in NTUST. She is trained on Case Method and Participant-Center Learning in Harvard Business School (2006) and has had intensive training on Teaching Entrepreneurial Thought and Action in Babson College (2013). She has served as an editorial board member in International Journal covered by SCI e.g. International Journal of Industrial Ergonomics since 2009. She published a book on Job accommodation for disabled workers, over 46 referred journal papers. Her research interests include Accident Analysis, Visual Fatigue, Iconic and Auditory Interface Design and Evaluation.

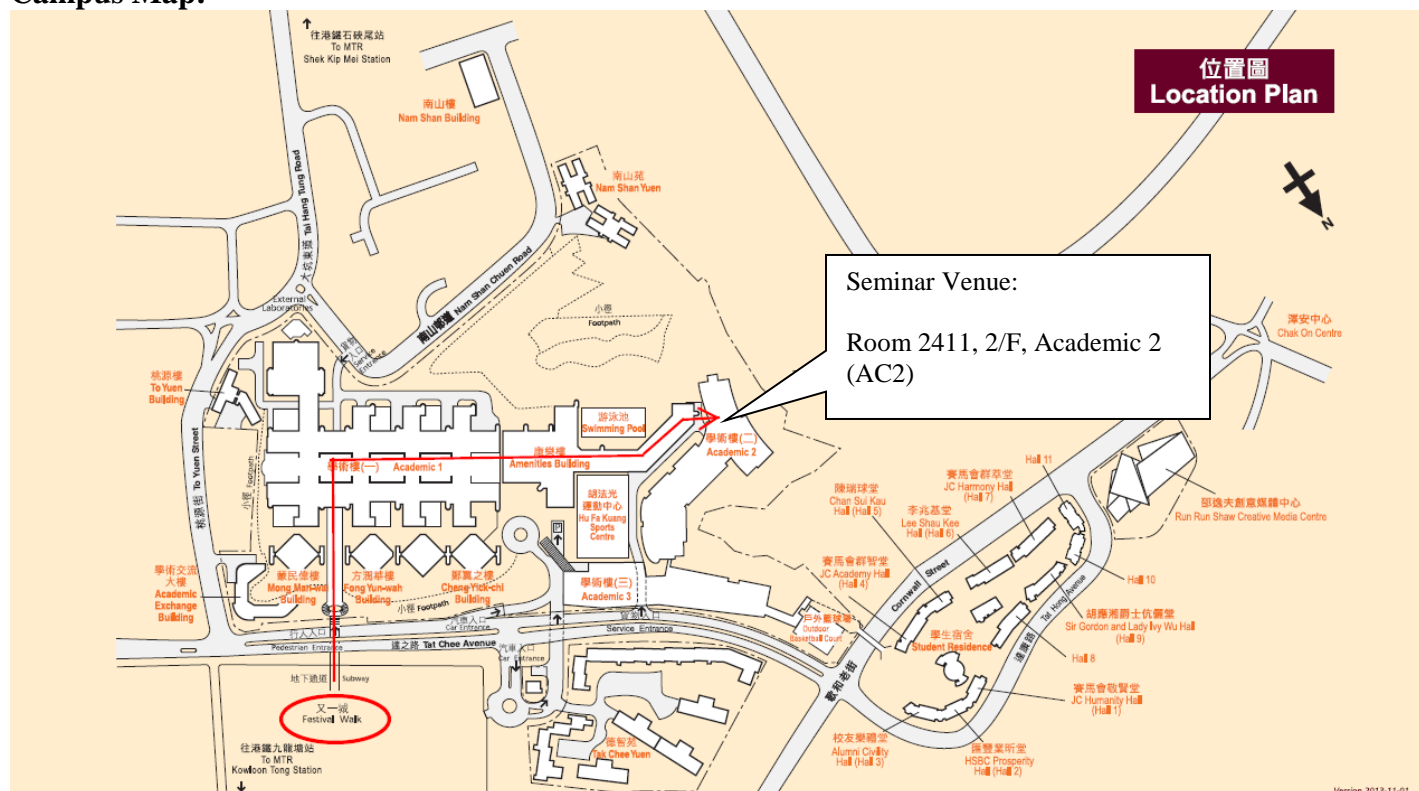
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Please note that the Hong Kong Ergonomics Society and the Department of Systems Engineering and Engineering Management are not responsible for any liability associated with this seminar.

## Seminar Venue Direction

**Address:** Room 2411, 2/F, Academic 2 (AC2), City University of Hong Kong, Kowloon Tong, Hong Kong

### Campus Map:



### Please follow Route:

1. Take MTR East Rail Line or MTR Kwun Tong Line to “Kowloon Tong” station.
2. Exit at “Festival Walk”
3. Find **Shop LG1-10**, take the escalator next to it, which bring you to a **pedestrian subway** leading to **CityU**.
4. Pass through the pedestrian subway, go straight, and enter Academic 1.
5. Turn right and take the escalator to level 4.
6. Walk across Academic 1, and you will be in a covered terrace.
7. Follow the covered walkway in front of you and you will see the Swimming Pool on your left.
8. Go straight, walk up the stairs and pass **LT401**, then take another stairway up to **Academic 2** .