

Continuing Professional Development Short Course 2006

***Designing Buildings and Infrastructure for Wind, Fire
and Other Extreme Events***

16 September 2006 (Saturday)

8:30-9:00 a.m. Registration

9:00-9:45 a.m.

Effects of fire on reinforced concrete

Dr Y.L. Wong (Department of Civil & Structural Engineering, The Hong Kong Polytechnic University)

Damage mechanisms, concrete cover spalling, strength degradation, structural failure.

9:45-10:45 a.m.

Extreme events of storm surges and tsunami

Prof K.T. Chau (Department of Civil & Structural Engineering, The Hong Kong Polytechnic University)

Storm surges, tsunami, historical events and hazard, earthquake, numerical simulation, hydraulic models, submarine landslides, structural forms.

10:45-11:15 a.m.

Morning tea/coffee

11:15-12:15 p.m.

Wind engineering: Its role in infrastructure development in an urban environment

Prof Kenny Kwok (Department of Civil Engineering, The Hong Kong University of Science and Technology)

Wind engineering, wind tunnel, wind effects, tall buildings, field measurements.

12:15-1:45 p.m.

Lunch

1:45-2:45 p.m.

Wind hazard mitigation: advanced technologies

Prof Y.L. Xu (Research Centre for Urban Hazards Mitigation, The Hong Kong Polytechnic University)

Design wind speed, wind characteristics, wind and structural health monitoring, application of GPS, system identification, computational simulation, buffeting analysis of long span bridge, wind-induced cable vibration and control, effects on road vehicles, wind-train-bridge interaction.

2:45-3:00 p.m.

Afternoon tea/coffee

3:00-4:00 p.m.

Fire engineering design and practice

Dr Ming-chun Luo (Ove Arup & Partners Hong Kong Ltd)

Fire safety design of high-rise building and evacuation strategy for super high-rise buildings, performance-based design approach.

4:00-5:00 p.m.

Ship impact on bridges

Dr Limin Zhang (Department of Civil Engineering, The Hong Kong University of Science and Technology)

Ship impact design case study

Dr Daman Lee (Ove Arup & Partners Hong Kong Ltd)