**Postgraduate Research Series: Advanced Yield Design**

by

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<td>22 Oct 2013</td>
<td>3:00 pm – 4:50 pm</td>
<td>Room B4702, 4/F Academic 1 (Lift 3), City University of Hong Kong</td>
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**Course Outline:**

1. Introduction to the Yield Design concept. Continuum mechanics fundamentals
   - Introduction to the Yield Design approach. The case of a simple structure
   - Review of 3D continuum mechanics fundamentals: notations, equilibrium equation, dualisation

2. The Yield Design Theory
   - Dualisation: principle/theorem of virtual work in 3D continuum mechanics
   - Loading parameters
   - The Yield Design problem. Static approach
   - From Statics to virtual Kinematics
   - Kinematic approach of the Yield Design theory, Pi-functions, maximum resisting work
   - Implementation of the Kinematic approach of the Yield Design theory

3. Optimality and probability approaches
   - Resistance parameters, potentially safe dimensionings, domain of potential stability
   - Optimal dimensioning
   - Probabilistic approach

4. Yield Design of plates
   - The 2D continuum model for plates without torsion
   - Yield Design analysis of plates and thin slabs

5. A review of some typical Yield Design analyses

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All are Welcome