

Organizers:



Department of Building Services Engineering  
The Hong Kong Polytechnic University

## Joint Institution Technical Seminar

on

### Green Wall Lighting and Photobiological and Health Effects of Lighting

Date: 5 February 2015 (Thursday)

Time: 6:30pm for 7:00-9:00pm

Venue: Y301, PolyU

#### **Programme Highlight**

Green Wall Lighting - A case study of a hotel in Hong Kong:

Green walls, which can bring about environmental, economic and social benefits, are gaining popularity in buildings. Different from external green walls, interior green walls usually receive limited natural light, which greatly hinders the growth of plants. For this reason, supplementary artificial lights are often required, resulting in excessive use of electrical energy which contradicts the principle of sustainability. This talk presents the initial works of a case study which aims at optimizing the lighting system for the interior green wall of a hotel in Hong Kong. Daylight availability on the green wall was investigated. Taking into account the required quantity and quality of light and the photoperiod of the plants, the findings show that an LED lighting system operating on an optimized schedule is recommended. The proposed new lighting system could save over half of the original energy use.

Photobiological and health effects of lighting:

Recently, blue light hazard from LED light sources has become a concern of health risk resulting from the use of this energy efficient light source. This talk briefly introduces different possible health risks from lighting. Health risks directly from exposure to optical radiation will be discussed together with lamp classification system for photobiological safety. Night-time lighting hazard due to disruption of human circadian rhythm will also be briefly discussed.

#### **Speakers:**

Dr. Roger Ng, Instructor and Prof. T.M. Chung, Visiting Professor,  
Department of Building Services Engineering, The Hong Kong Polytechnic University

#### **Registration & Enquiry**

Please register ONLINE via the website of CIBSE Hong Kong Branch – <http://www.cibse.org.hk>  
The talk is free of charge and application will be accepted on a first-come-first-served basis. The maximum number of participants is 110. The deadline of application is 25 January 2015.  
Successful applicants will be notified by email or phone, and the successful applicant list will be posted on the institution website [www.CIBSE.org.hk](http://www.CIBSE.org.hk). For enquiry, please contact MY Chan at Tel. 27665836