

# Occupational Hygiene Technical Conference 2009

25 April 2009

Lecture Theatre F,

Hong Kong University of Science & Technology



**Health, Safety & Environment Office**  
**The Hong Kong University of Science and  
Technology**



**Hong Kong Institute of  
Occupational and Environmental  
Hygiene**

## Programme

**8:30 – 9:00 Registration**

**9:00 – 9:15 Welcome and presentation of souvenir to speakers**

**9:15 – 10:30 Morning presentation**

**Chairperson: Mr Percy TO**

**Keynote presentation**

**Dr Arthur LAU**, Assistant Research Scientist

*Institute for the Environment, HKUST*

Environmental Hygiene – A Bioaerosol Perspective

**Technical papers**

**Mr Billy SO**, PhD Candidate

*Department of Orthopaedics and Traumatology, Faculty of Medicine, CUHK*

Workplace ergonomic analysis of work-related musculoskeletal disorders among aircraft cabin cleaners in Hong Kong: An Industrial Athlete Approach

**10:30 – 10:45 Questions and Answers**

**10:45 – 11:15 Tea break**

**11:15 – 11:45 Technical papers**

**Mr YW LAI**, Nurse Manager

*Central Nurse Division, Kwong Wah Hospital, Hospital Authority*

Chemical Safety Management System in Kowloon West Cluster Hospitals

**11:45 – 12:00 Wrap Up for Morning Session**

**12:00 – 13:30 Lunch**

**13:30 – 14:45 Afternoon presentation**

**Chairperson: Mr KK CHAN**

**Keynote presentation**

**Mr TW TSIN**, Senior Occupational Hygienist

*Labour Department, HKSAR Government*

Thermal Stress Assessment and Prevention of Heat Stroke

**Technical papers**

**Mr Percy MT TO**, Health, Safety and Environment Manager

*Health, Safety, Environment Office, HKUST*

Role of Occupational Hygienists in Supply Chain

**14:45 – 15:00 Questions and Answers**

**15:00 – 15:30 Tea Break**

**15:30 – 16:30 Technical papers**

**Mr KH LAM**, Occupational Hygienist

*Labour Department, HKSAR Government*

Occupational health issues on Radiofrequency Identification (RFID) System

**Ms Maggie Y C Wong**, Lecturer

*Open University of Hong Kong*

Integration of SHE Management System in Construction Industries: Sharing of Local Experience

**16:30 – 16:45 Wrap Up for the Afternoon Session**

**16:45 – 17:00 Closing Remarks**

**Abstracts:**

Keynote Speeches:

*Environmental Hygiene – A Bioaerosol Perspective*

LAU A

Bioaerosols refer to any air suspended substances originated from organisms. The minute size of the bioaerosols often escapes the first line of sensual awareness of human. Health threats due to bioaerosols can be tremendous in acute (e.g. SARS) or chronic (allergy) term. In this talk, studies on the potential sources of bioaerosols and their implications in proximal environments of our daily live will be shared and discussed.

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*Thermal stress assessment & prevention of heat stroke*

TSIN TW

In recent years, due to the global changes in climatic conditions, the local weather has a tendency of getting more hot/ warm days in the whole year round. The summer heat (air temperature) can go up to 34 °C and higher occasionally. Workers engaged in manual work are often at risk of suffering heat stroke or other heat-induced disorders, which are physiological response of a person or the result of heat strain. It can affect seriously the productivity and health being of workers. It may diminish the tolerance of a person to other environmental hazards at the same time. Also, when people get tired easily, they are likely to get ill or injured due to co-exposure to other risks.

The presentation tells about the problem of heat stress and the obligation of the responsible persons in workplaces. Heat stroke is one of the most critical issues among all common heat induced problems. The strategies for prevention of heat stroke are outlined in the talk:- including acclimatization, drinking water supply, work patterns and schedules, ventilation or other engineering control methods, and personal protection, etc. Checklist approach and WBGT methods are recommended for health risk assessment and prevention of heat stroke in the potential hot environment. A few case examples are discussed to illustrate the application of WBGT method for the screening purpose and understanding of the heat problem in the environment so that the appropriate measures could be adopted.

Finally, the control measures for acute hazard prevention (such as heat stroke) are reviewed,

including the importance of awareness, usefulness of risk assessment, and the need in adopting the adequate measures and good work practices.

Technical Papers:

*Chemical Safety Management System in Kowloon West Cluster Hospitals*

Lai YW

In hospitals, many strong chemicals are being used in many workplaces. They are used to treat patients (medications and anesthetic agents); to clean, disinfect, and sterilize surfaces and supplies (cleansers/disinfectants); and to kill insects and other pests (pesticides).

Staff members most at risk for exposure to strong chemicals are working in high risk areas such as operating rooms, dialysis departments, endoscopy units, laboratories, and intensive care units. Whereas dietetic workers are also at risk of exposing to strong detergents or cleaners, and maintenance workers are potentially exposed to solvents. Exposure to hazardous chemicals would have adverse effects ranging from minor skin, eye, or mucous membrane irritation, to burns, respiratory distress, nervous system dysfunction, or even death. Although control of strong chemicals has been an important safety policy addressed by hospitals, over the years, there are still incidents related to the unsafe use of strong chemicals with resulted injuries to staff at work.

After SARS, hospitals promote strict hand hygiene to remove soil and pathogens by applying hand washing agents or alcoholic hand rub. As a result of this, using chemical becomes every people's business and part of their daily life inside hospital. Since most hand washing agents are mild in nature, therefore users would regard them as safe product and ignore their hazardous effect. However, mucosal contact with such '**mild chemical**' still could cause severe damages if without proper management, and we had record of **corneal ulceration** caused by such '**mild chemical**'.

A safe hospital does no harm to the patients, and does not expose the provider to any avoidable risk, and does not result in any danger to other people. To have profound impact on the behavior of all individuals inside hospital, we need to promote ownership and accountability of chemical safety concerns to all level and that everybody must participate and involve. To have effective promotion of chemical safety in hospitals, we would continue our promotion strategies. At corporate level, the top management and the chemical safety working group will continue to lead, steer, assist and ensure that departments would implement an effective **chemical safety management system**; establish chemical safety

inspection programs to identify gaps; apply management system that supports continuous improvement in chemical safety.

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***Occupational health issues on Radiofrequency Identification (RFID) System***

LAM KH

Radiofrequency Identification (RFID) System has been developed for years and its commercial products are ready on the market. The technology offers operational benefits that attracted more and more users from different sectors, e.g. logistic, retails, libraries, security, toll collection, and hospital. Following the popularity of the technology, the risk of cancer and other adverse health effects about the associated RF exposure are concerned by the working groups. In the viewpoint of occupational health, this talk tries to explain the nature of RFID, explore the existing industrial standards to the technology, and relate to the permissible RF exposure standards.

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***Integration of SHE Management System in Construction Industries: Sharing of Local Experience***

WONG YCM

Safety, Health and Environment (SHE) in Occupational application is a hot topic in this decade with people's growing awareness that Occupational safety, health and environmental concerns are closely related. Occupational Safety and Health professionals are trying hard to apply SHE concepts in various workplaces. However, current holistic approaches to integrate these practices leave room for improvement. It is the right time for the Occupational Health profession to share some experiences, from various workplaces, to explore the root causes of problems and practical ways of implementing a "Holistic SHE practice" in the workplace.