

REGISTRATION FORM

Seminar on "INDOOR AIR QUALITY - SECURITY AND HEALTH RISKS"

Wednesday, 16 November 2005

2.00pm - 5.00pm

York Hotel

Please fax your registration form to fax no. 6775 5502 by 7 November 2005.

For enquiries, kindly contact Ms Zainon at tel: 6516 3440 or email: bdgzbaa@nus.edu.sg.

Yes! Please register me for the seminar on "Indoor of Air Quality - Security and Health Risks" @ SGD 150 (BEMA Alumni) or SGD 180 (non-BEMA Alumni). A group registration of 3 or more @SGD150 per delegate from the same organisation.

Company _____

Contact Person _____

Address _____ S()

Tel : _____ Fax : _____ Email : _____

BEMA Alumni
Please tick ✓

1. Name _____ Designation _____

2. Name _____ Designation _____

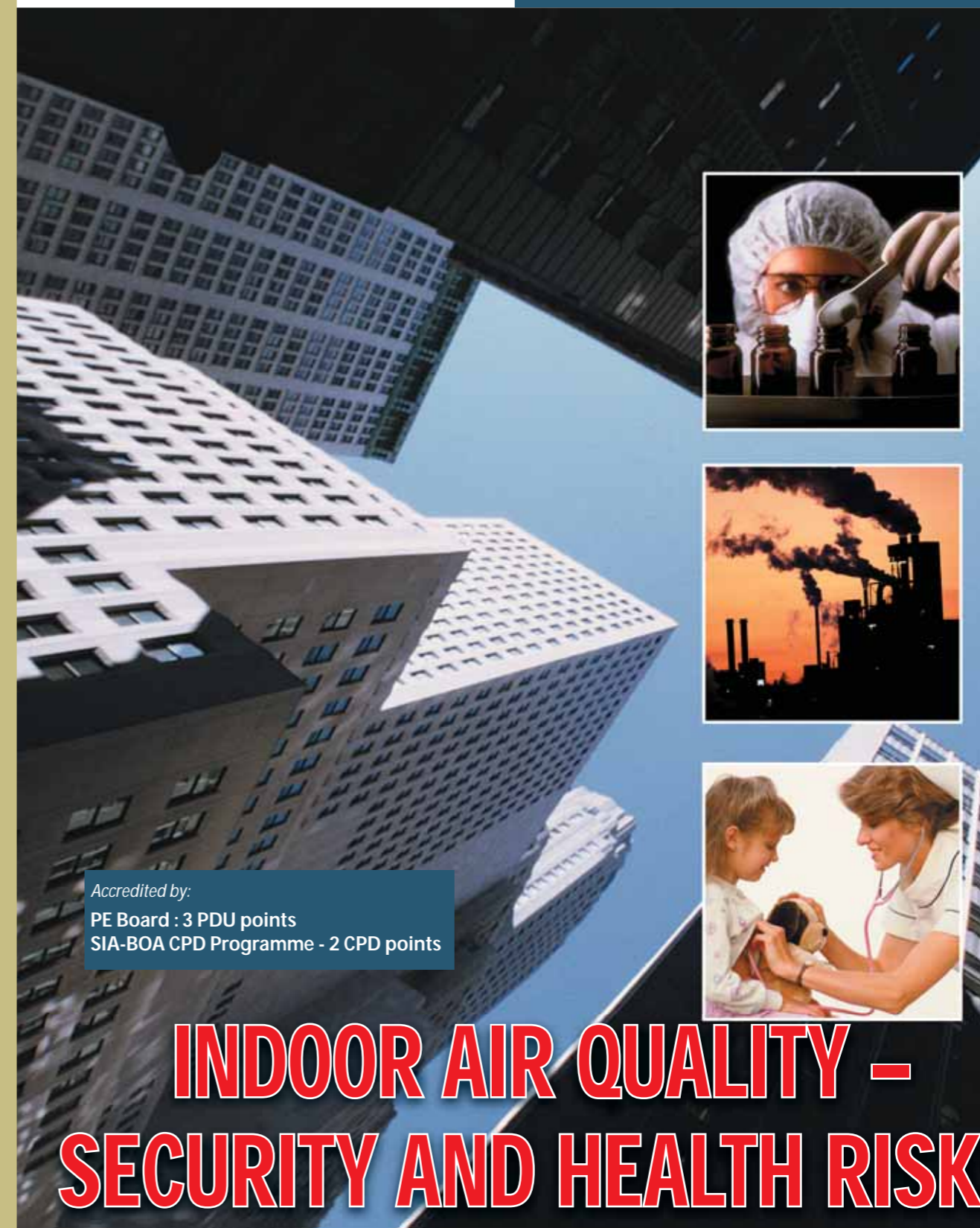
3. Name _____ Designation _____

Please make the cheque payable to "BEMA, NUS" and send it by post to:

Building and Estate Management Alumni
c/o Departments of Building & Real Estate
School of Design and Environment
National University of Singapore
4 Architecture Drive
Singapore 117566

Attention : Ms Zainon

Cancellation and transfer: Payment must be received before the event. BEMA reserves the right to cancel or postpone the event due to unforeseen circumstances. Cancellation or withdrawal will not be entertained upon confirmation from BEMA. However, substitution of participants is permissible at no extra charge.



Accredited by:
PE Board : 3 PDU points
SIA-BOA CPD Programme - 2 CPD points

INDOOR AIR QUALITY - SECURITY AND HEALTH RISKS

Date : Wednesday, 16 November 2005, 2.00pm - 5.00pm

Venue : York Hotel

Jointly organised by:



Building and Estate Management Alumni



Department of Building, National University of Singapore

Seminar on "INDOOR AIR QUALITY- SECURITY AND HEALTH RISKS"

INTRODUCTION

Indoor Air Quality (IAQ) has taken significantly new perspectives in the light of recent events, thus necessitating a re-look at the performance indicators. Beyond the comfort and environmental quality, challenges have been posed in the form of 9/11 type threats, SARS and infectious agents, and even more mundane concerns of occupant acceptance of indoor environment and productivity. This seminar adopts the position that these challenges have become issues that need to be effectively tackled in today's facilities management. It examines the gaps between current practice and desirable performance targets, and discusses technologies and strategies that may be suitable to manage the security and health risks.

The seminar speakers are from the Indoor Air Quality Research Unit of the Department of Building, including an adjunct faculty from the Ministry of Health. They have been intimately involved in the development of indoor air quality guidelines and standards, both locally and internationally, have held significant positions in the International Society for Indoor Air Quality and Climate (ISIAQ), ASHRAE Technical committees on ventilation and thermal comfort, conducted numerous indoor air quality audits, provided input to Singapore Civil Defence Force's In-Place Protection schemes, played significant roles in SARS outbreak management in Singapore, and served as members of the International Academy of Indoor Air Sciences. Their research have been regularly featured in important journals in the field including the Lancet, Indoor Air and ASHRAE publications.

TOPICS

• Security Risks

The design and management of buildings post 9/11 is very challenging. Security considerations and threats need to be recognized and dealt with effectively. What forms of such risks exist? What are plausible scenarios of episodes that directly, or indirectly, challenge the performance and ability of ventilation, cleaning and filtration systems? How vulnerable is the indoor environment, and how would chemical and biological agents be transported within buildings? These issues are discussed to provide a broader understanding and appreciation of the risks involved in facilities design and management.

• Health Risks

Advances in environmental science, engineering, medicine, and public health have all contributed towards eliminating many of the hazards posed to city dwellers just a generation ago but as we move into the knowledge economy, we fear a whole range of new threats. Building-related disease, infectious bioaerosols, SARS, sick building syndrome - the list goes on. While man continues to modify his built environment, few actually understand the existing balances with nature that can be so easily overturned. Research shows that fears often do not match the facts. Where are the dangers? What can we do? An appreciation of these issues can help us sort out and make sense of what we need to be concerned about.

• Today's Environment - An Assessment

In the light of the security and health risks, a multi-faceted approach is needed to effectively meet the challenges. Are building regulations and codes adequately identifying and providing sufficient protection to such risks? What are the gaps between current design practice & building operation, and the desirable level of protection and performance of facilities? What are indicators of performance of the ventilation and air-conditioning systems? This discussion attempts to assess the adequacy of today's environment and provisions and identify what needs to be addressed.

• Technologies and Strategies to Combat Security and Health Risks

A suitable response to the challenges involves knowledge of the technologies and strategies that are available. What are effective ventilation strategies, filtration, air cleaning and alternative technologies? Why would they be effective? What are the considerations and difficulties in adopting these? Are there ready solutions that could be considered? Participants should develop an appreciation of the possibilities for addressing security and health risks.

WHO SHOULD ATTEND

Architects; Builders; Consultants; Facilities Managers; Building Owners; Project Managers; Commissioning Consultants; Work, Safety and Health Professionals; Town Council Managers and Executives, Control Professionals; Scientists and Researchers; Policy Makers and Implementors; Insurance Agents; HVAC professionals and equipment suppliers.

SPEAKERS



David Cheong

Dr Cheong is Associate Professor and Program Director of the BSc (Building) course in the Department of Building, National University of Singapore. Dr Cheong serves on local technical committees, technical assessor for the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) on indoor air quality, member of the editorial advisory board for International Journal of Low Carbon Technologies, UK, and reviewer of numerous research projects for the Engineering and Physical Sciences Research Council (EPSRC), UK. He has undertaken numerous consulting works with both private and public organizations on indoor air quality audits and total building performance. His research interest is in the area of air quality and ventilation in buildings; tracer-gas technology; and migration of pollutants from outdoor to the indoor environment and within buildings.



Steven Ooi

Dr Ooi is Adjunct Associate Professor, and Deputy Director (Disease Control) at the Ministry of Health. He was formerly the Senior Assistant Commissioner of Public Health at the Environment Ministry and Deputy Director of its Institute of Environmental Epidemiology, a WHO Collaborating Centre for Environmental Epidemiology. A fellow of the Academy of Medicine, Singapore, and an elected member of Delta Omega (US National Public Health Honor Society), his specialist interests are in infectious diseases, environmental health and outbreak epidemiology. He has been instrumental in developing guidelines for good indoor air quality in the tropics.



Chandra Sekhar

Dr Sekhar is a member of International Academy of Indoor Air Sciences, and editorial Board Member of Energy and Buildings journal. He serves as a member of two Standards and two Technical Committees in the American Society for Heating, Refrigerating and Air conditioning Engineers (ASHRAE), and is a member of Board of Governors of the ASHRAE Singapore Chapter. He serves as member of international advisory boards and scientific committees of major international conferences. He is an invited speaker in seminars in ASHRAE meetings as well as other local and international forums and serves regularly as paper reviewer for several peer-reviewed international journals. He is a co-convenor of the Working Group for the Singapore Standard (SS) Code of Practice on "Indoor Air Quality for Air-conditioned Premises".



Tham Kwok Wai

Dr Tham is Deputy Head (Research) at the Department of Building and Deputy Director, Centre for Total Building Performance, National University of Singapore. He is a member of the International Academy for Indoor Air Sciences (IAIAS), and has been involved in the development of guidelines and standards for indoor air quality in the Tropics, and various Technical Committees of SPRING Singapore's (Standards, Productivity and Innovation Board), and Singapore Accreditation Council (SAC). He serves as a member of international advisory boards and scientific committees of major international conferences, has provided keynote and invited speeches in indoor air quality, and undertaken numerous indoor air quality consultancies.

PROGRAMME

1.30pm	Registration
2.00pm	Welcome Address Dr Teo Ho Pin, President, BEMA
2.10pm	Security Risks Assoc. Professor Tham Kwok Wai
2.45pm	Health Risks Assoc. Professor Steven Ooi Peng Lim
3.20pm	Coffee Break
3.40pm	Today's Environment - An Assessment Assoc. Professor Chandra Sekhar
4.15 pm	Technologies and Strategies to Combat Security and Health Risks Assoc. Professor David Cheong
4.50pm	Panel Discussion
5.10pm	End of Seminar