

Advancing Innovative Technologies & Sustainability

9th May 2008, 9 am to 5 pm

Sheraton Towers Singapore



Jointly organised by:

Housing & Development Board
Singapore Concrete Institute



Supported by:

National University of Singapore
Institute of Engineers, Singapore



THE INSTITUTION
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The theme of the seminar is “**Advancing Innovative Technologies and Sustainability**”. The seminar will serve as an excellent platform for the engineers and professionals in the building industry to meet and showcase their engineering expertise and technologies. HDB will also take this opportunity to share with the industry some of her key initiatives and technologies used in public housing.

Guest-of-Honour:

Deputy CEO, Building Group, Housing & Development Board
Er Lau Joo Ming

Date	: 9 May 2008 (Friday)
Time	: 9.00 a.m. – 5.00 p.m.
Venue	: Sheraton Towers Singapore
Normal Fee	: S\$ 250/-
Early Bird Fee	: S\$ 225/- (for registration & payment received before 18 April 08)
Full-Time Student Fee	: S\$100/-
Group Discount	: S\$ 200/pax (for group of 3 or more from the same organisation)
Fees include 7% GST, seminar materials and refreshments.	
Accreditation by PEB	: 6 PDUs
CPD points are pending accreditation by BOA-SIA.	

ABOUT THE SEMINAR



Sustainable Development, The HDB Way – Er Yap Tiew Yew, HDB



HDB is proactively promoting and implementing eco-friendly measures throughout its building and development process. In view of the growing awareness to protect our environment, HDB faces the challenge to ensure that towns are sustainable in the long term and at the same time meet the needs of residents, as well as foster community development. The presentation will feature how HDB capitalises on green technologies and innovations to provide public housing that is affordable and environmentally sustainable.

Er Yap Tiew Yew is currently the Director of Building Technology Department of the Housing & Development Board (HDB). He leads over 200 staffs to provide and innovate for total cost-effective solution in enhancing technology, sustainability, safety and building life cycle performance of HDB properties and its facilities. His vast experience in construction and repairs technology, project management and building maintenance are assets that he adds to many key projects both within HDB and those on a cross-agency basis. Under his stewardship, his department had initiated several sustainability projects that are in various stages of implementation.

The Singapore Flyer & design of Giant Observation Wheels – Er Brendon McNiven, Arup

Opened in Mar 2008, it is the largest giant observation wheel of its kind in the world. Arup built upon design knowledge gained during the design of the London Eye to develop a 'next generation' rim structure. The design of the Singapore Flyer was an engineering-led process that recognised the importance of a number of geometric constraints on the efficiency of the structure. The resulting 2-dimensional 'ladder truss' rim structure is both larger and lighter than its predecessor.



Er Brendon McNiven specialises in architectural building structures. He has worked around the world with Arup for the last 20 years and on projects of a widely varying nature. Coming from a broad base of experience including Civil and Civil Infrastructure design, he understands the application of the 'design process' required in any project to achieve its objectives.

Brendon's specialist structural skills include lightweight structures, building stability systems, facade, heritage buildings, and computer aided design analysis. He has managed multi-disciplinary design teams delivering a number of the Arups significant projects.



ION @ Orchard – Mr Desmond Hill, Penta Ocean Construction Co. Ltd.

Ion Orchard is a mixed development featuring a retail podium and a 56-storey residential tower crowned with a magnificent double-height public observation deck. Due to site and time constraints including proximity to Orchard MRT Station, the podium is constructed out of structural steel members with top down construction for the basement works. The foundation for the mega columns and the high-rise tower used huge barrette piles. This presentation showcases the engineering expertise and technologies employed, and the challenges faced during construction.

Mr Desmond Hill is the Deputy General Manager of Penta-Ocean Construction Co Ltd, Singapore Branch Office where he oversees construction activities, handles contracts administration and seeks potential business opportunities for the company both in the local and overseas market.

Mr Hill graduated with a Degree in Bachelor of Engineering (Civil) in 1982 from the National University of Singapore. He has over 20 years of experience in large scale civil works such as MRT, and building projects such as HDB Public Housing, Singapore Post Centre, Wheelock Place and notable iconic developments such as the Esplanade – Theatres on the Bay, VivoCity, and Ion Orchard.



Gardens in the Sea – Dr Serena Teo, NUS

Since the 1970s, Singapore's coastline has undergone rapid urbanization and is heavily utilised for a diversity of economic activities. Similar to land, seas also require urban planning by URA Garden City concept to fulfil sustainable development. In this presentation, issues relating to application of "Gardens in the Sea" concept to Singapore marine environment will be discussed.

Dr Serena Teo is a marine biologist and Research Fellow at the Tropical Marine Science Institute, National University of Singapore (NUS) and has been working for over 15 years in various marine biology projects in Singapore. Her current research focus is urban ecology and the ways marine organisms interact with the man-made environment. Some applied aspects include antifouling and the environment, culture of marine invertebrates and ballast water research.



A Smart Workplace for Tomorrow, Today – Mr Jonah Ong & Mr Markus Ruddock, LTA

Rapid Transit System (RTS) is the backbone of our public transport system given its higher capacity, greater reliability and speed. LTA will extend RTS network to 278km by 2020 to reach more people and places while road network is expanded to serve new developments and support economic growth. Find out more about the construction milestones of these infrastructure projects.

Mr Jonah Ong is the Assistant IT Manager at Innovation & Information Technology Group of Land Transport Authority (LTA). In the field of information technology for more than 10 years, he is responsible largely for application systems that enable business operations in civil engineering works at LTA, especially in the field of workflow and document management.

Mr Markus Ruddock is a Senior Project Engineer from UK, working with LTA on the Downtown Line MRT civil engineering construction project. He joined LTA in 1997, and implemented the Drawing Management System (DMS), as a database for design submissions and commenting for the North East Line MRT project. He used his experience to develop the current Project Drawing System (PDS) to capture all softcopies document and provides a paperless comment approval system.



ABOUT THE PRESENTATIONS



Middle Bridge across Sungei Punggol – Mr Chow Yee Mung, BBR Construction Systems Pte Ltd

Comprising of two 75 m spans with a middle span of 105 m, it will be the longest post-tensioned bridge in Singapore when completed. The speaker will share their construction experience for the foundation, segmental construction of the bridge using the balanced cantilever method with formtravellers and conventional scaffold system, as well as the installation of the structural health monitoring system using fibre optic sensing.

Mr Chow Yee Mung is a Construction Manager at BBR Construction Systems Pte Ltd and is currently the Project Manager for the Middle Bridge project. With his forte in bridge construction, he manages the operations of pre-stressing projects in Singapore. He was the Deputy Project Manager in the bridge deck construction of Industrial Ring Road Project Contract No. 3 – Western Area in Thailand using Movable Scaffold System. During his stint in Hong Kong, Mr Chow had managed the construction of Ma On Shan, T7 Highway Dept project (HK\$95m) and Fo Tan Vehicular Bridge Over Rail (HK\$24m).





Innovative Ground Improvement Method for Peaty Soil – Dr Chew Soon Hoe, NUS & Mr Henry Tam, HDB

Most of the ground settlement problems encountered in Singapore are due to presence of thick layer of soft clays or/and peaty soils. Conventional ground improvement methods are not suitable in solving such settlement problems in built-up area. LSM method, a newly developed innovative ground treatment method is introduced to curb these issues. Learn more on the LSM method and its results.

Dr Chew Soon Hoe graduated with PhD from the University of California at Berkeley, USA. He is currently an Assistant Professor with the Department of Civil Engineering, National University of Singapore (NUS) and also Deputy Director of the Centre for Protective Technology (CPT), jointly established by the Defence Ministry and NUS. Under the joint collaboration of IES, ACES and PUB, he is one of the key founding members in developing the training course and preparation of the practice manual for Erosion and Sedimentation Control for Construction Sites in Singapore.

Mr Henry Tam earned his engineering degree in Texas, US in 1997 and obtained his MBA from Imperial College (UK) in 2004. Before joining HDB in 2007, he has 10 years of work experience in geotechnical engineering, civil engineering as well as building projects. Henry has successfully undertaken many infrastructure projects in Singapore and Hong Kong. His project involvement includes the NEWater Transmission Mains Project, Hong Kong Lantau & Airport Railway Project, Upgrading of Alexandra Canal, Upgrading of Telok Blangah Road Semi-Expressway, and the Circle Line stage 4 & 5 projects.

The Changi Experience - Contemporary Technology of Terminal 3 – Er Patrick Lam, CPG Consultants Pte Ltd

Changi Airport Terminal 3 has an imposing scale with a facade of soaring glass and an expanse of sky-lit roof that canopies large span, multi-level open spaces. The engineering solutions provided embraces a low energy design approach - a major design criteria. Thermal stratification and fire safety engineering to achieve maximum flexibility and cost-efficiency, integration of environmental control systems, incorporating shading into the design to reduce need for cooling, and combining natural daylight with use of artificial light will be discussed.



Er Patrick Lam is a Senior Consultant (Mechanical) of CPGairport, the airport development consultants of CPG Consultants Pte Ltd . He has, for the past 35 years, provided a range of services including mechanical and building physics and special airport systems for Changi Airport, Singapore. As a key member of the planning and design team, Patrick leads to provide engineering solutions for overseas airport projects in India, Fiji, China, Myanmar, Vietnam and Pakistan. Patrick graduated with a Bachelor of Science (Engineering) (Honours) degree from the University of Hong Kong and Masters of Science (Fire Safety Engineering) from the University of Western Sydney, Australia.

Innovative Solution In Enhancing Vertical Accessibility – Mr Tan Sze Tiong, HDB



The Lift Upgrading Programme (LUP) aims to enhance flat's accessibility and improve convenience to residents. Under this programme, apartment blocks are upgraded to achieve direct lift access for all flats. In looking for cost-effective solutions to enable more blocks to be eligible for LUP, HDB is always exploring new technologies, solutions and construction methods. The presentation will highlight some of the new initiatives in the area of lift shaft development, lift technology and barrier free accessibility solutions.

Mr Tan Sze Tiong graduated with a B.Eng Honours (2nd Upper) from the National University of Singapore. He joined the Housing & Development Board (HDB) where he carried out design and construction supervision of several residential projects - prefabricated high-rise buildings, typical for HDB projects. Presently, Mr Tan is heading the Building Specialist Unit 8 of the Building Technology Department. His portfolio includes development of new solutions for the lift upgrading programme, energy and maintenance optimisation study. He is also involved in the pilot implementation of new lift systems, lift shaft and full barrier free accessibility (BFA) solutions for lift upgrading.



SIGN US UP!

We are interested in attending

Advancing innovation technologies and sustainability

on 9 May 2008 (Friday) @ Sheraton Towers Singapore

Name	Designation	Email	PE / SIA Reg No. (if applicable)

Particulars of contact person

Name : Dr/Mr/Mrs/Ms _____

Designation : _____

Organisation : _____

Address : _____

_____ Postal ()

Email : _____

Contact No. : _____ Fax No. : _____

Cheque No. : _____ Bank : _____ Cheque Amount : S\$ _____

Please fax the registration form to 6552 0417. Attn: Ms Edina

REGISTRATION & PAYMENT

Please complete the registration form and forward it together with your cheque at least **10 days** before the commencement of the seminar to :

c/o Singapore Concrete Institute
Blk 342 Ang Mo Kio Ave 1
#03-1563, Singapore 560342
Attn: Ms Edina

Crossed Cheque should be made payable to
"Singapore Concrete Institute"

WHO SHOULD ATTEND

- Architects
- Building Owners
- Consultants
- Contractors
- Developers
- Engineers
- Facilities Managers
- Project Managers
- Site Staff / Engineers
- Suppliers

ENQUIRIES

For further enquiries, please contact : **Ms Edina**
Tel : 6552 0674, Fax : 6552 0417
Email : scinst@singnet.com.sg

CANCELLATION

The Organisers reserve the right to change the seminar venue, cancel or reschedule the seminar if necessary or warranted by circumstances beyond our control.

There will be no refund of fees for withdrawal. However, if the registered participant is unable to attend, a representative may be allowed to attend at no extra cost. Please inform us of the changes by fax or via email 3 days before the commencement of the seminar.