

CPD



A seminar organized by
Singapore Institute of
Architects

PROGRAMME

Designing For Pre-fabrication

Date : 24 February 2012, Friday
Venue : Singapore Institute of Architects
 SIA Theatre - Level 1
 79 Neil Road S(088904)
Time : 1.30PM - 5.30PM

PROGRAMME

1.30 - 2.00pm	Registration
2.00 - 2.40pm	Presents by Ms Yuen Yi May (Surbana)
2.40 - 3.20pm	Presents by Mr Lim Han Kwong (Tiong Seng)
3.20 - 3.40pm	Tea Break
3.40 - 4.20pm	Presents by Mr Michael Seah (Robin Village)
4.20 - 5.00pm	Presents by Mr William Ling (Emerging Tech)
5.00 - 5.30pm	Q & A

SIA Member	S\$ 75.00
BOA Registered Architects/ CIJC Member	S\$ 100.00
Non-Member	S\$ 125.00

Registration on First-Come-First-Serve Basis
 BOA-SIA CPD Accreditation **6 points**

SYNOPSIS

For more than 10 years, the Building Industry in Singapore has been improving productivity for construction process through pre-fabrication and the use of pre-cast building components. We can also improve productivity in the design cum submission processed for buildings intended to apply these technology and specifications by having better understanding of the concepts.

One of the ways to improve productivity is through pre-fabrication and the use of pre-cast building components.

However, for the architect and designer not familiar with the pre-fabrication process, this can be a daunting exercise. Questions such as the following have to be asked and the right answers found –

- Is the project suitable for pre-casting?
- When should the decision to pre-cast be made?
- How does pre-casting and pre-fabrication affects the design process?
- What pre-cast components are available in the market?
- What sort of resources and help is available for a designer of pre-cast components?

This seminar brings together a very experienced team of architect, main contractor, specialist consultant and manufacturer to address some of these issues from their respective viewpoints.

SPEAKER PROFILE



Yuen Yi May, Vice President (Architectural) of Surbana International Consultants Pte Ltd

Yi May graduated from NUS in 2000, and had received BOA Prize & Medal, SIA Medal, Lee Kuan Yew Gold medal and was placed on the Dean's List for outstanding academic performance.

She was with HDB in Jul 2000 as an Architect and continued her career in Surbana International from Jul 2003. She became a Registered Architect with BOA in 2004 and has also served as Qualified Person (Architectural) for projects of various type and scale since Apr 2006. She now assists in leading a team of 15 architects.

Yi May provides creative yet practical design solutions to meet clients' requirements while complying with statutory requirements. She is also resourceful, versatile and efficient in producing results effectively.

Her award-winning projects include: Marine Crescent Gardens Precinct (Honorable Mention, 8th SIA Architectural Design Awards 2006, Upgrading of Public Housing category, and Clementi Meadows (HDB Design Award 2008).

Present on **"Versatility of designing using pre-fabrication"**

Pre-fabrication offers many advantages, of which standardization is one of the key components. Through pre-cast standardization, projects can achieve lower cost of mold fabrication, efficient use of precast land area and increase in overall productivity.

The design process need not be limited by the precast standardization. Instead, an understanding of the processes and limitations of such precast standardization and with the right application from the design to the construction phases, it could offer the same versatility in design as other building processes.

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SINGAPORE INSTITUTE OF ARCHITECTS

2012/012/MS/JT



Designing For Pre-fabrication

SPEAKER PROFILE



Lim Han Kwong, Senior Manager of Tiong Seng Contractors Pte Ltd

Present on **"Do You Believe in Precast Technology"**

The Precast technology has been in the construction industry. Resources required for construction are scarce in Singapore. It includes land - for transportation and housing of businesses (storage yard for plant, equipment and materials, concrete batching plants, parking space etc) and dormitories for foreign workers; workforce – professionals like engineer and architect, and skilled and general workers, and construction materials – aggregate, sand, cement, timber, etc. As a result, more taller buildings and deeper basements are built; more infrastructures are built underground like mass rapid transit system where possible; more foreign professionals and skilled workforce to fill in the shortages, and more import of construction materials including water to pick up with the construction volume.

The resources scarcity issue, in particularly the manpower, has become more acute as the number of foreign workforce has increased sharply in the past few years to meet the unplanned high demand in construction and other industries. However, the productivity did not improve but drop when compare to other countries especially the construction sector. In view of the gloomy global economic outlook and sustainable construction, productivity is one of the keys to ensure business sustainability and survivability.

Better productivity can be achieved in various forms and one of them is by engineering approach. Precast technology is one of the approaches can be adopted to improve productivity, reduce in-situ work, achieve good quality of work, and same time offer a safe and green workplace. However, it can only be successful if all concern parties including the architect, engineer, contractor and specialist truly believe in precast technology.



Michael Seah Chun Hian, Managing Director of Robin Village Development Pte Ltd

Michael graduated from the Loughborough University of Technology, United Kingdom, with a Bachelor of Civil Engineering in 1989. He is currently the Managing Director of Robin Village Development Pte Ltd.

With more than 30 years of experience in precast, Michael was involved in many notable local projects, such as the Marina Bay Sands integrated Resort, the Resort World at Sentosa and the HDB Hub. He was also involved in precast detailing design for residential and commercial buildings in Malaysia, Indonesia and Thailand, and in precast consultancy for works in Dubai and Japan.

Present on **"Architectural Precast"**

With the increasing need to improve productivity in the construction industry, precast technology is starting to gain popularity. However, the use of such technology would require certain understanding especially in the joint design as well as penalization in order to realize its full potential. Precast technology can be employed for both Architectural and Structural panels. For Architectural panels, various types of finishes and forms can be incorporated which normal method of construction is unable to do. Such finishes include polished concrete, granite, marble, acid edging as well as different architectural forms or features. For Structural precast concrete, columns, walls, beams and slab can be precast and later installed on site. Such method of construction improves cycle time and hence buildings can be completed much earlier and with good quality.

This seminar will feature some of the projects where Architectural and Structural precast components that have been used in the local industry. Examples connections and waterproofing details as well as some of the common issues will also be discussed.



William Ling, Chief Executive Officer of Emerging Technology Construction Pte Ltd

William having worked in the construction industry mainly in the building construction since 1980 and had won many bids like the ministry of Education Headquarter at Buona Vista, MayBank tower (construction excellence award) and others especially through alternative design and method of construction namely Precast for projects like the Changi Cluster A (contract value SGD 200 million), Private residential housing for 6 towers of 22 storey of executive condominium using precast.

Emerging Tech currently is being engaged in working as the precast consultant with Larsen & Toubro and their ongoing project is 6 towers of 24 storey affordable housing in Mumbai using 90% precast. Emerging Tech has also researched and developed with Dr Ting Seng Kiong (former NTU currently with SIT) and Dr Wong Sook Fung(former NTU, currently with Temasek Polytechnic) on the ECC precast.

Present on **"Application of Engineered Cementitious Composite Precast"**

It is evident that the fiber reinforced cementitious composites are, increasingly, being used day by day in the structural and construction works owing to the synergetic action from two components viz. fiber and mortar matrix. Incorporation of a very nominal percentage of fibers into a mortar mixture produces a strong and durable composite that leads the product of smart material properties. Up to 80% of the cement can be replaced by fly ash, reducing material cost and making the material more environmentally friendly. Cementitious materials can be made to be stronger, more ductile and more durable than conventionally used building materials for building enclosures, such as wall paneling systems, siding and roofing tile.

Overview of the progress and development for fiber cement -based building and construction products that recognizes the various barrier topics and the science-based interventions required to resolve them.

REGISTRATION FORM

Designing For Pre-fabrication

- 24 February 2012, Friday
- 2.00pm - 5.30pm
- SIA Theatre - Level 1 (79 Neil Road)

(All seminar fees are inclusive of GST)

SIA Member	S\$ 75.00
BOA Registered Architects/	S\$ 100.00
CIJC Member	
Non-Member	S\$ 125.00

Closing Date for Registration **20 Feb 2012**
BOA-SIA CPD Accreditation **6 points**

PARTICULARS

Name (as in Passport): _____

NRIC No: _____

Membership No: [] SIA _____

[] CIJC (Pls specify Institution) _____

[] BOA Reg No _____ [] Non-Member

Organization: _____

Address: _____

Tel: _____ S ()

HP: _____ Fax: _____

Email: _____

Contact Person: _____

Fees paid are non-refundable under all circumstances. Replacement of participant will be allowed only if written notification is made at least 3 days before the event.

Where a Non-Member replaces a Member (must be from the same organization) the fee difference will have to be made good to SIA prior to the event.

MULTIPLE REGISTRATION

NAME:	NRIC NO.	SIA/BOA NO.	ORG.	AMT:
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				

PAYMENT OPTIONS

Please tick your payment mode:

[] **By Cheque**
Bank/Chq # : _____ Amt S\$: _____
Local Cheque (must be drawn in Singapore) should be crossed and made payable to "Singapore Institute of Architects".

Please mail to:
Singapore Institute of Architects
79B Neil Road, Singapore 088904
Please indicate your name and company/institution (if any) and seminar date/title on the back of the cheque.

[] **By Cash**
You can drop by the SIA office to make cash payment between 9.30 am - 5.30 pm on weekdays.
Address:
Singapore Institute of Architects
79B Neil Road, Singapore 088904

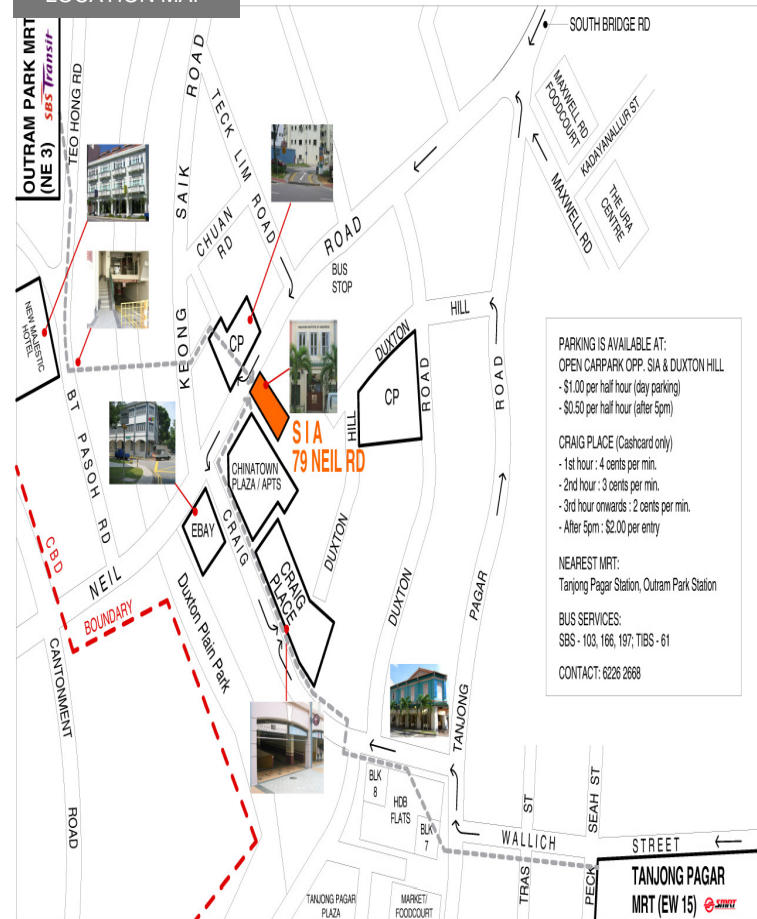
•All registration will be on a **First-Come-First-Served** basis and will be accepted **upon receipt of both registration form and payment to SIA**. Registration by fax will only be confirmed **upon receipt of payment**.

Cheque payment for this activity **should not be** combined with payment for other SIA events/courses.

Registration Confirmation No:-

For Enquiry (Ms Jacey Tay):
Tel: (65) 6226 2668
Fax: (65) 6226 2663
Email: cpd@sia.org.sg

LOCATION MAP



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