



# IES – SIA Joint Webinar:

## SINGAPORE GREENPLAN 2030 AND ADVANCED ENERGY CONVERSATION

Climate change is a global challenge which prompts Singapore in taking firm actions to build a sustainable future. The Singapore Green Plan 2030 which was announced on 10 Feb 2021 is a whole-of-Nation movement to advance Singapore's national agenda on sustainable development and outlines the national green targets for the next 10 years.

The wide-ranging plan cuts across all sectors of society ranging from infrastructure development, research and innovation to training program. The aim is to get the whole nation together as it seeks to transform into a more sustainable future. Of all aspects, City in Nature, Sustainable living, Green Economy and Resilient Future will have direct impact and involvement in the Built Environment Industry.

This webinar will share the insights of the Green transformation of our industry in the light of government directions, architects' responses and industries' innovation.

Date: 29 June 2021, Tuesday

To Register, Click [HERE](#)

Time: 3pm to 6pm

For CIJC Members, Click [HERE](#)

Fees: \$20 (IES Members / CIJC Members) / \$40 (Non Members)

*(Price exclude 7% GST)*

CPD Program: STUs (Structural) / PDUs for PEs and CEngs ( All To Be Confirmed)

# ABOUT SYNOPSIS AND SPEAKER

## SINGAPORE GREEN BUILDING MASTERPLAN AND OVERVIEW OF THE GREEN MARK 2021 FRAMEWORK

The Singapore Green Building Masterplan (SGBMP) is one of the key initiatives which was recently launched under the wider Singapore Green Plan 2030 to further accelerate the transformation of the BE sector as part of our national sustainability efforts.

As part of the SGBMP, BCA has also developed the new Green Mark (GM) 2021 framework. The key sustainability indicators have been refreshed and enhanced to push buildings to be healthier, smarter, and more resilient. It will also place stronger focus on outcome based indicators, such as energy and carbon, to address climate change.

Mr **Ang Kian Seng** graduated with a Diplome D'ingenieur in Mechanical Engineering from the Ecole Nationale Supérieure de Mécanique, Nantes (French government scholarship). His post-graduate qualifications include a Graduate Diploma in Finance Management at SIM, the Stanford-NUS Executive Programme in International Management and the IMD Business School's Breakthrough programme for Senior Executives. He currently heads the Environmental Sustainability Group in the Building and Construction Authority of Singapore (BCA) and he is also the current Treasurer of the Singapore Green Building Council (SGBC).

His portfolio includes the BCA Green Mark Scheme which certifies buildings on their level of environmental friendliness and energy efficiency. He plays an instrumental role in the formulation and implementation of BCA's Green Buildings Masterplans.

Mr Ang began his career in the Public Works Department in 1990 as a project engineer, handling projects such as the CTE tunnels, the National Dental Centre and the new Woodlands Checkpoint. In 1998-2000, he was seconded to the Ministry of National Development to oversee construction industry policies. Subsequently, Mr Ang has managed various portfolios in BCA such as procurement, quality, innovation development, playing a key role in the introduction of the BCA Green Mark Scheme in 2005.

# ABOUT SYNOPSIS AND SPEAKER

## THE BUILT ENVIRONMENT AND ITS ROLE IN THE SINGAPORE GREEN PLAN 2030

This talk will look at the role of the built environment in the Singapore Green Plan, through the lens of the Singapore Institute of Architect's 7 EDGs (Environmental Design Goals), its metrics and measurables, and how these would shift the levers of sustainability in the built environment. Aligning with the five Green Plan pillars: City in Nature, Energy Reset, Sustainable Living, Green Economy and Resilient Future, it highlights how the built environment and its professionals can collaborate with other sustainability-related fields, and achieve the goals of the Green Plan.

Ar. **Tan Szue Hann** is an award-winning Architect, strategist and thought leader in sustainability and sustainable development. Szue Hann is currently Director of Sustainable Development at a leading global hospitality chain and Chairman of Sustainability, Singapore Institute of Architects, professional body for Architects in Singapore. He has also been a Board Member of the Singapore Green Building Council since 2017. In 2021, he was an invited Co-Founder of IxSA (Innovation x Sustainability Alliance), a global non-profit think tank, with a group of global sustainability leaders.

Ar. Tan graduated with Masters of Architecture from the National University of Singapore (NUS) with a visiting fellowship to the University of California Los Angeles (UCLA) in 2007 and a BA Arch (First Class Honours) in 2006. He was awarded the Lee Kuan Yew Medal and Board of Architects Prize.

Ar. Tan is also an appointed World Cities Summit Young Leader and BCA Built Environment Young Leader and was Singapore's 2015-16 BCA-SGBC Young Green Architect of the Year.

His portfolio includes the award-winning ParkRoyal on Pickering with WOHA; and the BCA SkyLab, a rotatable test bed for new technologies, which won a Minister's Award on Singapore's National Day, 2017. He has spoken in numerous conferences including SWITCH, the Asia Pacific Urban Forum, and COP25 in Madrid.

# ABOUT SYNOPSIS AND SPEAKER

## SOLAR ENERGY CONSERVATION OF BUILDINGS WITH GLASS FAÇADE USING HEAT TRANSMISSION CONTROL AND NANOTECHNOLOGY

In a tropical climate like Singapore, it is a challenge and extensively cost for buildings to keep cool and comfortable for its occupants. Building owners, architects, building façade is one of the crucial design factors which not only gives iconic feature of the building but also determines the impact of solar-energy conservation and heat performance of the building. Since building façade can constitutes of almost 50% of the thermal loads in buildings, balancing the aesthetics and heat performance are the key issues during building design process. However, with more modern buildings adopting large amount of glass façade windows, heat performance reduction has become an unavoidable issue which posted a challenge to maintain thermal comfort and yet to achieve an excellency in the Green Mark rating.

In general, a building in tropical countries will require about 40%-50% of its energy consumption to cool a building or to maintain “comfort” room temperature by using air conditioning during hot weather. More can be done to reduce this energy consumption. Thus, Heat Rejection is aimed to reduce the solar heat gain from a building through improving on the glass heat reduction performance of the glass façade.

Mr. **Zhang Jinwei** graduated from the Nanyang Technological University (NTU), Singapore with masters degree in Material Science specialised in solar reduction and energy saving nano-material.

With several years of experience in the field of sputtering process and target manufacturing, he is currently the chief scientist in Zonling Thin Films Singapore, Asian HQ for Dalian Allied Nanotech under the Singapore Green Construction Development Alliance. His major portfolio focusses on implementing heat rejection and energy saving technology through nanotechnology in manufacturing work class high qualify environmental-friendly solar films.