



# CONCRETE EVOLUTION: Transforming Productivity Through Innovation

11<sup>th</sup> November 2024

**American Concrete Institute**  
Singapore Chapter

## 2024 Annual Seminar

Theme: Boosting Productivity and Efficiency in Modern Construction with Advanced Materials

[admin@concrete.org.sg](mailto:admin@concrete.org.sg)

PEB PDUs: pending

<https://www.concrete.org.sg>

BOA-SIA CPD: pending



**Date** 11th Nov 2024 | 0830 to 1730

**Venue** Crowne Plaza Changi Airport

Supported by:



Centre of Innovation  
Built Environment - Advanced Materials  
(COI BE-AM)



Centre for Advanced  
Materials and  
Structures (CAMS)



WHO SHOULD ATTEND		REGISTRATION FEE	
<ul style="list-style-type: none"> <li>Architects</li> <li>Contractors</li> <li>Consultants</li> <li>Concrete Suppliers</li> <li>Developers</li> <li>Engineers</li> <li>Project Managers</li> <li>Site Engineers</li> <li>Site Supervisors</li> <li>Suppliers</li> <li>Sub-Contractors</li> <li>Technical Officers</li> <li>Researchers</li> </ul>		<b>ACI-SC/SCI/IES/ACES /SRMEG/RMCAS/TJ Alumni Member</b>	<b>S\$300</b>
		Non-Member	<b>S\$350</b>
		Student	<b>S\$150</b>



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Introduction		Date
<p>As the construction industry continues to evolve, the need for innovative solutions that enhance productivity and efficiency has never been more critical. With the theme “Boosting Productivity and Efficiency in Modern Construction with Advanced Materials”, ACI-SC 2024 Annual Seminar organized by ACI Singapore Chapter promises to be a premier event for professionals, academics, and industry leaders who are committed to advancing the field of concrete technology. Our seminar brings together a distinguished panel of speakers from across the globe to share their insights, research, and experiences on a wide range of topics, including advanced materials, digital transformation, and sustainable construction practices.</p>		11 <sup>th</sup> November 2024 Monday
		Time
		8.30am – 17:30pm
		Venue
		Crowne Plaza Changi Airport 75 Airport Boulevard, #01-01, Changi Airport Terminal 3, Singapore 819664
Topics and Speakers		
Speaker	Topic	
<b>Lu Jin Ping</b> , President, American Concrete Institute-Singapore Chapter	Welcome Speech	
<b>Er. Thanabal Kaliannan</b> , Commissioner of Building Control, Group Director (Building Resilience), BCA	Opening address	
Future Trends in Construction Productivity and Efficiency with Advanced Materials		
<b>Prof Liu Jiaping</b> , Southeast University, China	Mitigation Strategies for Shrinkage Cracking of concrete	
<b>Dr. Jeyatharan Kumarasamy</b> , Land Transport Authority, Singapore	Productivity initiatives in the land transport infrastructure development	
<b>Dr. Du Hongjian</b> , National University of Singapore	Enhancing Sustainability Education through Structural Concrete Design Competition	
Advancing Productivity in Contemporary Construction Practices		
<b>Dr. Justin Yeoh Ker Wei</b> , National University of Singapore	AI and BIM applications to enhance Concrete building design and maintenance	
<b>Assoc. Prof. Muhd Norhasri Muhd Sidek</b> , Universiti Teknologi MARA (UiTM), Malaysia	Non destructive test (NDT) for building materials	
<b>Dr. Herbert Zheng Wei</b> , Glorious Concrete (H.K.) Ltd / Orientfunds Precast Ltd, Hong Kong SAR	DfMA with Lightweight Concrete	
Cutting-Edge Techniques for Enhancing Construction Efficiency		
<b>Dr. Tan Jun Yew</b> , Samwoh Ready Mix Pte. Ltd, Singapore	Revolutionizing Construction: Latest Advances in Concrete Technology for Enhanced Efficiency	
<b>Dr. T. Tamilselvan</b> , Joe Green Pte Ltd, Singapore	High Strength Lightweight Concrete for Productivity and Efficiency in Modern Construction	
<b>Assoc. Prof. Yang En-Hua</b> , Nanyang Technological University, Singapore	High performance fibre-reinforced cementitious composites for speedy pavement rehabilitation	
Digital Transformation in Construction: Tools and Strategies		
<b>Dr. Wang Jun</b> , China West Construction, China	Exploration and Reflection on Intelligent Manufacturing Technology for Concrete	
<b>Daryl Chew Kok Hoong</b> , PylonAI Pte Ltd	Transforming our Built Environment (BE) – harnessing the power of IoT technology and data-driven solutions for a smarter and sustainable future	
<b>Chang Qingyang</b> , Concrete AI, Singapore	Optimizing Construction with Concrete Maturity Method and Temperature-Matched Curing for Shorter Cycle Times	



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**Er. Thanabal's** career in the built environment sector covers infrastructure design, supervision and regulatory work, including standards development. During his stint in the Public Works Department, he had designed a wide range of infrastructure covering buildings, municipal facilities, and bridges, including the elegant

Robertson and Jiak Kim Bridges across the Singapore River that are now iconic landmarks. In his current regulatory role, he was involved in the development of policies, frameworks and standards, ensuring that buildings remain safe, which includes the development and publication of the previous 2 editions of BC1 in 2008 and 2012 respectively.



**Mr Lu Jin Ping** is currently the President of American Concrete Institute - Singapore Chapter and the Managing Director of Hitchins International Pte Ltd, Singapore. Mr Lu has more than 30 years of experience working in areas of research & development, testing and technical consultancy for construction materials. Mr Lu serves as Advisory Committee member of

Temasek Polytechnic, School of Applied Science and Member of Board of Directors, International Congress on Polymers in Concrete (ICPIC). Mr Lu has also presented more than 50 papers at various international conferences in the region and has published articles on testing, performance and research on construction materials. He was the co-author of the book "Multifunctional Concrete Technology" published in 2022.



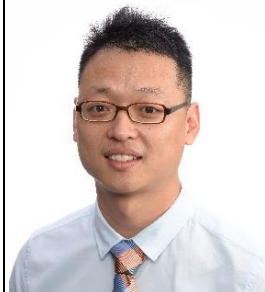
**Prof Jiaping Liu** is an Academician of the Chinese Academy of Engineering 中国工程院院士, Chair Professor at Southeast University, and Director of State Key Laboratory of High Performance of Civil Engineering Materials. His primary area of research is in high-performance cement-based materials with emphasis on shrinkage-induced cracking control and development of ultra-high-

performance concrete. Dr. Liu has invented several novel chemical admixtures to reduce the shrinkage-induced cracking, enhance the mechanical performance, and tailor the rheological property. Such admixtures have been successfully applied to more than 110 key projects. Dr. Liu holds over 90 patents as the first author, has published more than 200 technical paper, and has participated in editing and writing 22 standards or statutes. His research findings have awarded one National Second Prize for Technological Invention and four National Second Prizes for Scientific and Technological Progress.



**Dr Jeyatharan Kumarasamy** graduated in 1985 from University of Peradeniya, Sri Lanka with B.Sc. (Eng.) First Class Honours and obtained Ph.D. in Soil Mechanics in 1992 from Cambridge University, UK. Jeya is working in the Land Transport Authority since 2022 and has over 30 years of professional experience in various projects, largely in the underground infrastructure

projects. He currently holds Director (Civil Design) post in the Infrastructure Design and Engineering group and concurrently holding the post of a Deputy Chief Specialist (Ground Engineering). Prior to joining LTA, he has been working with international consultants on various civil and underground infrastructure projects for over 10 years. He is a registered Professional Engineer (Civil) in Singapore. He is the immediate Past President of the Tunnelling and Underground Construction Society, Singapore (TUCSS) and was an Exco member of the International Tunnelling Association from 2019 to 2022.



**Dr Du Hongjian** worked as a Research Fellow and then as a Senior Research Fellow at NUS and a Lecturer at Swinburne University of Technology, Australia. Dr Du joined CEE as a lecturer in 2020. Hongjian has a strong research focus on the digital fabrication of reinforced concrete to increase construction automation and the

development of low-carbon building materials to combat climate change. Hongjian provides professional consultancy to the construction and concrete. He holds a few inventions and patents related to green cement and low-carbon building materials. He is the co-founder of CIRCRETE, a deep-tech startup visioned to decarbonize the built environment.



**Dr. Justin Yeoh** is a Senior Lecturer in Civil and Environmental Engineering at NUS. Previously, he worked as a post-doctoral research fellow at NUS and a project management consultant. Dr. Yeoh teaches Construction Management, BIM, Digitalization, Construction Technology, and Productivity Analytics at NUS. He advises on digital processes and

technologies in construction for private and government entities and conducts research on digital technologies in construction. His research includes using computer vision for UAV-based inspections and AI for engineering decisions. He is exploring construction robots integrated with digital twins. Dr. Yeoh also led a BIM-related research project for structural code compliance and is a member of international technical committees in Computing for Civil Engineering.



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**Dr. Muhd Norhasri Muhd Sidek** is an Assoc. Prof. at School of Civil Engineering, Universiti Teknologi MARA (UiTM) Malaysia. His career in UiTM started at UiTM Perlis then to UiTM Pulau Pinang and presently at UiTM Shah Alam. During his academic career, in 2015 he pursued his internship and training at France majoring in cement studies and Kyoto University in 2019 majoring in advance materials and non-destructive test. His research interest are concrete, sustainable materials, Nano materials, Ultra High Performance Concrete (UHPC) and non-destructive test (NDT) for building materials. Currently, he is a registered Professional Technologist (Ts) from Malaysian Board of Technology (MBOT) and currently an active reviewer for Construction and Building Materials, Elsevier since 2016 until present



**Dr. Herbert Zheng** is the CEO of Glorious Concrete (H. K.) Ltd. and Orientfunds Precast Ltd. He has nearly 35 years of experience in the concrete construction industry. Dr. Zheng earned his bachelor's degree from Tongji University in Shanghai in 1990 and his Ph.D. in concrete technology from the University of Hong Kong in 2001. Dr. Zheng was a member of ACI Construction Liaison Committee and a past president of ACI China Chapter. He specializes in high-performance and ultra-high-performance concrete and its precast products. He also manages concrete batching plants and precast factories. He has improved mix design theories and management models and is currently researching concrete genome theory.



**Dr. Tan Jun Yew** is a construction industry veteran with 20 years of experience driving innovation and sustainability. His expertise has been instrumental in shaping Singapore's infrastructure development particularly in pavement management. As Assistant General Manager at Samwoh Ready Mix Pte. Ltd., he pioneers eco-friendly concrete solutions and has led various initiatives in quality control, mix design, and technical training. His strategic leadership has earned the company numerous prestigious accreditations and certifications. With a Ph.D. in Civil Engineering from the National University of Singapore, Dr. Tan has published numerous technical papers and presented at local and international conferences and served as reviewer at prestigious journals.



**Dr Tamilselvan** is the R&D Director of JOE Green Pte Ltd. He obtained his Bachelor and Doctorate degree from National University of Singapore and thereafter served as Senior Research Fellow in the Department of Civil and Environmental Engineering for more than 10 years. He has experience in supervising many research projects and his research interest includes fracture mechanics, high strength lightweight concrete, and recycling of waste in concrete. He has jointly published more than 30 international refereed journals and conference papers including 9 patents. He also served as concrete specialist in construction industry, and as expert witness in high court cases.



**Dr. Yang, En-Hua** is Associate Professor with the School of Civil and Environmental Engineering at the Nanyang Technological University. He received his PhD degree in Civil Engineering (Materials) from the University of Michigan. Dr. Yang specializes in cement-based material characterization and tailoring and micromechanics-based fiber cement optimization. His principal areas of research are high performance fiber-reinforced cementitious composites, intelligent cement-based materials, and waste to resource for construction materials. He is experienced in the Leadership in Energy and Environmental Design (LEED) green building rating system and is a LEED Accredited Professional certified by the U.S. Green Building Council. He currently serves as Associate Editor of Journal of Sustainable Cement-based Materials, Associate Editor of Frontiers in Built Environment - Construction Materials, Guest Editor of Engineering Structures, and Section Editor of Handbook of Cementitious Composites.



**Dr Wang Jun** obtained his PhD in Engineering in 2011 and is a professor-level senior engineer and recipient of the State Council Special Government Allowance. He is currently the Deputy General Manager of China West Construction Group and Vice Chairman of the China Concrete Standardization Technical Committee (SAC/TC458). His primary research areas include high-performance concrete, the recycling of solid waste, green and low-carbon concrete technologies, and high-performance admixtures. He has been organizing research and application of intelligent concrete manufacturing technology for more than ten years. He has organized or directed over 10 super-high (400 meters and above) buildings concrete execution and application in China, like Wuhan Greenland Center (construction height 475 m), Tianjin 117 Mansion (construction height 597 m), etc. Under his direction, the super-height pumping in the Tianjin 117 Mansion project reached 621 m and set a Guinness World Record.



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**Daryl Chew** is currently COO of PylonAI. Prior to PylonAI, Daryl was an Assistant Director at the Ministry of National Development (MND), where he is responsible for the formulation and review of policies pertaining to the Built Environment. He spearheaded the ICPH's Research and Development (R&D),

Innovation, and Sustainability programmes, and was an active advocate for Design for Manufacturing and Assembly (DfMA) methodologies and the concept of Digital Fabrication and Process Transformation. Concurrently, he served as an Adjunct Lecturer at the Building and Construction Authority (BCA) Academy.



**Chang Qingyang** is the Co-founder and CEO of ConcreteAI, a Singapore-based construction technology company that originated from the National University of Singapore (NUS). ConcreteAI specializes in reducing concreting cycle times and optimizing concrete designs to minimize carbon footprints in construction projects.

With a background in civil engineering from NUS and experience in both construction and startups, Qingyang is dedicated to harnessing technology to streamline construction processes. She is a strong advocate for data-driven strategies that enhance efficiency and quality across the construction industry.

## REGISTRATION

Please register early to avoid disappointment.

**Registration is only confirmed upon receipt of payment.**

**No walk-in registration is accepted on actual day.**

Please scan QR code below for registration:



Or click the Registration [LINK](#)

For corporate registration, please email your contact details and list of participants to [liwei@concrete.org.sg](mailto:liwei@concrete.org.sg) for invoice or E-invoice for Government Agencies.

For further enquiries, please contact: The Chair of Seminar:

Dr Geng [ceegg@nus.edu.sg](mailto:ceegg@nus.edu.sg) or [admin@concrete.org.sg](mailto:admin@concrete.org.sg)

## PAYMENT

Payment for the seminar must be made before 15 Oct 2024 by

**Paynow:**



**Crossed cheque** payable to "ACI (Singapore Chapter)" and mail to: ACI (Singapore Chapter)

13 Hillview Crescent  
Singapore (669437)

**Internet banking:**

ACI (Singapore Chapter) Bank Name: DBS Bank Code: 7171 Branch Code: 028  
Account No: 0280025505

**Telegraphic Transfer:** DBS Bank Ltd Address: 12 Marina Boulevard, Marina Bay Financial Centre Tower 3, Singapore 018982, Bank Code: 7171, Branch Code: 028, Account No: 0280025505, Swift Code: DBSSGSGG (Please email a copy of the TT slip to us. The payer is responsible for all bank charges incurred)

**Withdrawal**

There will be no refund for withdrawal but replacements are allowed. Request for withdrawal must be made in writing 3 days before the seminar.

The full fee will be charged for withdrawal or no-show on the day of the seminar.

**Cancellation**

The organisers reserve the right to amend any details relating to the seminar, revise the seminar fees without prior notice, cancel or postpone the seminar.

**Others**

The CPD points indicated for the seminar is subject to change and final approval by the relevant professional accreditation bodies.

The materials supplied to the company and individual applicant for the seminar ("Materials") are for their personal reference only and the company and individual applicant are not supposed to otherwise use the Materials.