



NUS Special Lecture

TOPIC	DESIGN AND CONSTRUCTION OF COMPLEX STEEL STRUCTURES
SPEAKER	J Y Richard Liew, Professor Department of Civil & Environmental Engineering, NUS
Abstract	This lecture presents the recent large-scale complex structures in Singapore that are perceived to have significant impact in transforming Singapore to become a global city. Four complex steel structures including The Art Science Museum, The National Stadium, Gardens by the Bay Cool Moist Conservatory, and Changi Jewel Roof required advanced analysis software and building information model for pre-construction visualization, computer numerical control data for fabrication, and information sharing between designers and builders. Because of their unique shapes and complex joint details, they were more difficult to fabricate and construct and thus special efforts were needed to identify problems earlier, and to design practical joint details for transportation and safe construction. These projects, besides being grand, they were developed with thoughtful plan to merge with the immediate environments they inhabited. The projects presented in this lecture also explore sustainable and green construction with an aim to lower carbon emissions and reduce their impact on biodiversity, use less energy, water and other resources, and thus minimize their impact to the built environment. This is made possible with the advancement in high strength and lightweight materials, design expertise, fabrication technology and erection technique, and more importantly, the close cooperation and commitment of designers and contractors sharing knowledge and working as a team to ensure successful transformation of an innovative design to a successful completed project of architectural and structural marvel.
DATE	11 th November 2019, Monday
TIME	16.00 pm – 17.00 pm (Refreshment will be serve at 15.30)
VENUE	Lecture Theatre 7A, 9 Engineering Drive 1, Singapore 117575

Speaker Biography



Prof Richard Liew a Professional Engineer in Singapore, a US chartered engineer and a Chartered Professional Engineer of the Association of Southeast Asian Nations. He is a Fellow of the Academy of Engineering Singapore, an Honorary Fellow and the Past President of Singapore Structural Steel Society. Prof Liew is world-renowned as an expert of advanced analysis and the application of theory of stability and plasticity in structural and offshore engineering with emphasis on robustness and hazard assessments including the effects due to fire, blast and impact loads. He has authored and co-authored six books and published over 700 technical papers. He received several research and design awards, including the 2017 best research paper prize from IStructE UK and 2013 Structural excellent award (overseas category) from Hong Kong Institute of Engineers. He is a key person responsible for the development of Singapore's codes of practices for steel structures and steel-concrete composite structure.

ALL ARE WELCOME