



World
Engineers
Summit
Singapore

9-15
September

The Sands Expo and Convention Center, Singapore



Summit | Exhibition | WFEO General Assembly | Networking Opportunities | Awards | Competitions

World Engineers Summit 2013 Programme

Innovative and Sustainable Solutions to Climate Change

Qualified for 20 PDUs / 12 STUs



In conjunction with:
WFEO General Assembly 2013



Organised by:
The Institution of Engineers, Singapore

Contact Us

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www.wes2013.org

Time	Programme								
08:00	Registration								
09:00	WES 2013 / IGBC 2013 / BEX Asia 2013 Joint Opening Ceremony								
	Guest of Honour: Mr Teo Chee Hean <i>Deputy Prime Minister; Minister for Home Affairs; Coordinating Minister for National Security; Minister-in-charge of the Civil Service, Singapore</i>								
10:10	Networking Tea Break								
10:50	Summit Keynotes								
	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Dr Noeleen Heyzer <i>Under-Secretary-General of the United Nations; Executive Secretary, Economic and Social Commission for Asia and the Pacific (ESCAP)</i></p> </div> <div style="text-align: center;">  <p>Dr Bindu N. Lohani <i>Vice President, Knowledge Management and Sustainable Development, Asia Development Bank</i></p> </div> <div style="text-align: center;">  <p>Dr Roland Busch <i>Member of Managing Board and CEO, Asia Pacific and Infrastructure & Cities, Siemens AG</i></p> </div> </div> <p><i>Q&A session will be moderated by Prof Tommy Koh, Ambassador-at-Large, Ministry of Foreign Affairs, Singapore</i></p>								
12:50	Networking Lunch								
14:15	Summit Keynotes								
	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Dr Suzana Kahn-Ribeiro <i>Green Economy Sub-Secretary, Rio de Janeiro State Secretariat of Environment, Brazil</i></p> </div> <div style="text-align: center;">  <p>Ms Yolanda Kakabadse <i>International President, World Wildlife Fund (WWF)</i></p> </div> </div> <p><i>Q&A session will be moderated by Prof Tommy Koh, Ambassador-at-Large, Ministry of Foreign Affairs, Singapore</i></p>								
15:45	Networking Tea Break								
16:15	WES 2013 Sustainability Leadership Forum								
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%; background-color: #1a3d54; color: white; padding: 5px;">Moderator</th> <th colspan="3" style="width: 75%; background-color: #1a3d54; color: white; padding: 5px;">Panel Members</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 10px;">  Prof Tommy Koh <i>Ambassador-at-Large, Ministry of Foreign Affairs, Singapore</i> </td> <td style="text-align: center; padding: 10px;">  Dr Vivian Balakrishnan <i>Minister for the Environment and Water Resources, Singapore</i> </td> <td style="text-align: center; padding: 10px;">  Mr François Guibert <i>Executive Vice President & President, Greater China & South Asia Region, STMicroelectronics</i> </td> <td style="text-align: center; padding: 10px;">  Dr Selda Gonsel <i>Vice President, Global Commercial Technology, Projects & Technology, Shell</i> </td> </tr> </tbody> </table>	Moderator	Panel Members			 Prof Tommy Koh <i>Ambassador-at-Large, Ministry of Foreign Affairs, Singapore</i>	 Dr Vivian Balakrishnan <i>Minister for the Environment and Water Resources, Singapore</i>	 Mr François Guibert <i>Executive Vice President & President, Greater China & South Asia Region, STMicroelectronics</i>	 Dr Selda Gonsel <i>Vice President, Global Commercial Technology, Projects & Technology, Shell</i>
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17:45	End of Programme								

12 September 2013, Thursday (Morning Session)

Time	Programme		
	Session 1 Environmental Policies	Session 2 Sustainable Energy	Session 3 Food and Water Security
09:00	Session Keynotes		
	 <p>Dr Yeh Shin-Cheng <i>Deputy Minister, Environmental Protection Administration, Taiwan</i></p>	 <p>Ms Madiha El Mehelmy Kotb <i>President, American Society of Mechanical Engineers, USA</i></p>	 <p>Prof Asit K. Biswas <i>Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore; Founder and President, Third World Centre for Water Management, Mexico</i></p>
	 <p>Mr Choi Shing Kwok <i>Permanent Secretary, Ministry of the Environment and Water Resources, Singapore</i></p>	 <p>Mr Chee Hong Tat <i>Chief Executive, Energy Market Authority, Singapore</i></p>	 <p>Mr Chew Men Leong <i>Chief Executive, PUB, Singapore</i></p>
10:30	Networking Tea Break		
11:00	Technical Paper Presentations		Session Keynote
	<p>Contour Protective Life</p> <p>Prof Roberto Silva <i>Conselho Regional de Engenharia e Agronomia da Bahia (CREA-BA), Brazil</i></p>	<p>A Middle Path to Sustainable Energy</p> <p>Mr Venkatesan Kumar <i>CEO, A1 Process Associates, Singapore</i></p>	 <p>Prof Paul Teng <i>Dean, Graduate Studies and Professional Learning, National Institute of Education, Singapore; Adjunct Senior Fellow (Food Security), S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore</i></p>
	<p>Resource Efficiency Policy in Germany</p> <p>Mr Sascha Hermann <i>Managing Director, VDI Zentrum Ressourceneffizienz GmbH, Germany</i></p>	<p>Challenges & Opportunities of Hybrid Renewable Power System into Remote Electrification in Sarawak</p> <p>Mr Goh Wei Chiun <i>Senior Engineer, Sarawak Energy Berhad, Malaysia</i></p>	<p>Technical Paper Presentations</p> <p>Evaluation of the LARS-WG Stochastic Weather Generator for Climate Change Impact on Rich in Taiwan</p> <p>Ms Hsieh Chia-ying <i>Research Assistant, National Science and Technology Centre for Disaster Reduction, Taiwan</i></p>
	<p>Promotion of Policy on Waste Incineration in Taiwan and Integration of Related Carbon Reduction Applications</p> <p>Mr Eric Tiao <i>Vice President, KD Holding Corporation, Taiwan</i></p>	<p>Micro Hydro-Powered Electricity Generator</p> <p>Prof Ehsan Mesbahi <i>Newcastle University, Singapore Campus, Singapore</i></p>	<p>The Changing Environment of Water Security & Sustainability in Singapore</p> <p>Dr Adhityan Appan <i>Partner, LBW Consultants, Singapore</i></p>
	<p>A Comparative Study of Green Building Certification Criteria in US (LEED Criteria) and Singapore (BCA Green Mark Criteria)</p> <p>Mr Alagu Sundaram <i>Lecturer, Ngee Ann Polytechnic, Singapore</i></p>	<p>Feasibility Study of Geothermal Energy in Singapore</p> <p>Mr Tan Teck Gee <i>Student, Newcastle University, Singapore Campus, Singapore</i></p>	<p>Flocculative Properties of Active Proteins in Moringa Oleifera</p> <p>Mr Andrew Kon <i>Senior Lecturer, Singapore Polytechnic, Singapore</i></p>
	Session Panel Discussion	Session Panel Discussion	Session Panel Discussion
13:00	Networking Lunch		

12 September 2013, Thursday (Afternoon Session)

Time	Programme		
	Session 4 Innovative and Sustainable Technology	Session 5 Corporate Social Responsibility on Climate Change	Session 6 Sustainable & Innovative Development
14:00	Session Keynotes		
	 <p>Prof Armin Aberle Chief Executive Officer, Solar Research Institute of Singapore (SERIS), National University of Singapore</p>	 <p>Mr Ben Gunneberg Secretary General, Programme for the Endorsement of Forest Certification (PEFC)</p>	 <p>Prof Pan Jiahua Professor of Economics and Director, Institute for Urban and Environmental Studies, Chinese Academy of Social Sciences (CASS), China</p>
	 <p>Mr Neil Gilmour Vice President, Integrated Gas Development, Shell</p>	 <p>Mr Michael Kwee Coordinating Director, Banyan Tree Global Foundation, Singapore</p>	<i>Speaker to be advised.</i>
15:30	Networking Tea Break		
16:00	Technical Paper Presentations		
	<p>Application of Ocean Energy in Marine Aquatic Floating Farm</p> <p>Dr Ivan Tam Senior Lecturer, Newcastle University, Singapore Campus, Singapore</p>	<p>Focusing CSR on Climate Change: Why and How</p> <p>Dr Corazon PB. Claudio Chair / President, EARTH Institute Asia; Chair, Management Association of the Philippines - Committee on Climate Change & Sustainable Development</p>	<p>Scientific Planning and Support for High Performance Building Design: A Case Study in Singapore</p> <p>Mr Bharath Seshadri Researcher, Energy Research Institute @ Nanyang Technological University, Singapore</p>
	<p>Development of Climatic Mapping Tool for Estate Environmental Evaluation</p> <p>Dr Steve Kardinal Jusuf Research Fellow, National University of Singapore, Singapore</p>	<p>Becoming Carbon Neutral - A Corporate Response to Climate Change</p> <p>Ms Caroline Holmstrom Corporate Sustainability Executive, Parsons Brinckerhoff, Australia</p>	<p>Use of Plastics for Sustainable and Innovative Urban Planning and Development</p> <p>Mr Navinchandra Vasoya Managing Director, LVJ Projects Private Limited, India</p>
	<p>Innovative and Sustainable Design of Temporary Support System for Deep Excavation with Temporary Ground Anchors & Partial Top-Down Method for Singapore DTL3 Project</p> <p>Mr David Ng Chew Chiat Meinhardt Infrastructure Pte Ltd, Singapore</p>	<p>Deep Insights to Business Value Creation from Sustainability</p> <p>Mr Nick Fleming Chief Sustainability Officer, Sinclair Knight Merz, Australia</p>	<p>Secular Trends in Ocean Tides Along the Coast of Japan</p> <p>Dr Vivian Chua Assistant Professor, National University of Singapore, Singapore</p>
	<p>Automatic Carbon Tool for Building Design in Singapore</p> <p>Dr Huang Yi Chun Assistant Professor, National University of Singapore, Singapore</p>	<p>Session Panel Discussion</p>	<p>Singapore's Challenge in Reducing Embodied Energy of Construction Materials for Sustainability</p> <p>Mr Khoo Jyh Hao Director, Ultracon Overseas Pte Ltd, Singapore</p>
	<p>Session Panel Discussion</p>		<p>Future Climate - Engineering Solutions</p> <p>Mr Daniel Kenning Splendid Engineering, United Kingdom</p>
18:00	End of Programme		

13 September 2013, Friday (Morning Session)

Time	Programme		
	Session 7 Natural Disaster Mitigation & Management	Session 8 Environmental Engineering Education	Session 9 Women in Engineering
09:00	Session Keynotes		
	 <p>Morakot Post Disaster Reconstruction Management Using Public and Private Resources for Disaster Prevention and Relief Efforts</p> <p>Dr Chern Jenn-Chuan <i>President, Chinese Institute of Engineers; Minister Public Construction Commission, Taiwan</i></p>	 <p>Has Climate Change Impacted the Educational Goals for Environmental Engineers?</p> <p>Prof Perry L. McCarty <i>Silas H. Palmer Professor Emeritus, Environmental Engineering and Science, Department of Civil and Environmental Engineering, Stanford University, USA</i></p>	 <p>The Diversity Advantage for Innovative and Sustainable Outcomes in Engineering</p> <p>Dr Marlene Kanga <i>National President, Engineers Australia, Australia</i></p>
	 <p>Comparative Analysis & Classification of Natural Disasters, Catastrophes and Calamities</p> <p>Prof S.C. (Chan) Wirasinghe <i>Professor of Civil Engineering, Schulich School of Engineering, University of Calgary, Canada</i></p>	 <p>Prof John C. Crittenden <i>Director, Brook Byers Institute for Sustainable Systems, United States, Hightower Chair and Georgia Research Alliance (GRA) Eminent Scholar in Environmental Technologies, Georgia Institute of Technology, USA</i></p>	 <p>Prof Janie Fouke <i>College of Engineering, Nanyang Technological University, Singapore</i></p>
10:30	Networking Tea Break		
11:00	Technical Paper Presentations		Session Keynote
	<p>Current Status of Rainwater Drainage Control System in Urban Areas in Japan</p> <p>Dr Kazumasa Ito <i>Senior Advisor, CTI Engineering, Japan</i></p>	<p>Work in Progress - Building Environmentally and Socially Minded Students in A Globalised World</p> <p>Dr Noel Kristian <i>Lecturer, Singapore Polytechnic, Singapore</i></p>	<p><i>3rd Keynote Presentation is at 11:00. Speaker to be advised.</i></p>
	<p>Impacts of Climate Change on Flooding Scenario in Segamat River Basin, Malaysia</p> <p>Ir. Dr Teo Fang Yenn <i>Head of River and Flood Management Unit, National Hydraulic Research Institute of Malaysia, Ministry of Natural Resources and Environment, Malaysia</i></p>	<p>Towards a Chemical Engineering Curriculum Model for Education for Sustainable Development</p> <p>Mr Chua Poh Hui <i>Lecturer, Singapore Polytechnic, Singapore</i></p>	<p>Technical Paper Presentations</p> <p>Women's Perception on Building More Sustainable Transport Environment</p> <p>Asst. Prof Lidia Zakowska <i>Cracow University of Technology, Poland</i></p>
	<p>Modelling of Flood Risk Mitigation and Management of Mississippi River</p> <p>Prof Yasuyuki Shimizu <i>Professor, Hokkaido University, Japan</i></p>	<p>Session Panel Discussion</p>	<p><i>Speaker to be advised.</i></p>
	<p>Effects of Volcanic Eruption on River Flooding - A Historical Review</p> <p>Prof Syunsuke Ikeda <i>Emeritus Professor, Tokyo Institute of Technology, Japan</i></p>		<p>WiE Panel Discussion</p>
	<p>Designing an Aerial Sensor Network for Disaster Management</p> <p>Mr Cho Zin Myint <i>Lecturer, School of Engineering, Shindwin College, Myanmar</i></p>		
	<p>Session Panel Discussion</p>		
13:00	Networking Lunch		

All information is correct at the time of print (22 July 2013). IES and Reed Exhibitions reserve the right to make any changes to the programme or speaker line-up without any notice.

13 September 2013, Friday (Afternoon Session)

Time	Programme		
	Session 10 Integrated Environmental Management Systems	Session 11 Climate Change: Financing Adaptation & Opportunities	Session 12 Professional Ethics and Conduct: Key Prerequisites for Sustainability
14:00	Session Keynotes		
	 <p>Dr Corazon PB. Claudio Chair / President, EARTH Institute Asia; Chair, Management Association of the Philippines - Committee on Climate Change & Sustainable Development</p>	 <p>Mr Anthony Fox Partner, Zouk Capital LLP, United Kingdom</p>	<i>Speaker to be advised.</i>
	 <p>Mr Joseph Hui Kim Sung Deputy Chief Executive Officer (Technology & Corporate Development), National Environment Agency, Singapore</p>	 <p>Er. Edwin Khew Managing Director, Anaergia Pte Ltd, Singapore</p>	 <p>Mr Kamel Ayadi Chairman, Anti-Corruption Standing Committee, World Federation of Engineering Organisations (WFEO)</p>
15:30	Networking Tea Break		
16:00	Technical Paper Presentations		Session Keynote
	<p>Why Integrating Energy and Environmental Management Systems Can Improve Energy Performance and Reduce Costs</p> <p>Mr Eric Gwo-Tai Huang Global Product Manager, Energy/Sustainability, SGS Taiwan Ltd, Taiwan</p>	<p>Mr Peter Kennedy Managing Director, CLSA Capital Partners, Singapore</p>	 <p>Trends in Corruption in the Global Engineering/ Construction Industry, 2000 - 2009</p> <p>Mr William P. Henry Member, Anti-Corruption Standing Committee, World Federation of Engineering Organisations (WFEO)</p>
	<p>Sustainable Transport for the Masses</p> <p>Ir. Benedict Indran Minconsult Sdn Bhd, Malaysia</p>	<p>Mr Glen Plumbridge Partner, Sustainable Development Capital (Asia) Limited, Hong Kong</p>	Technical Paper Presentations
	<p>Research of Distributed Generation Connected to the Tianjin Electricity Grid</p> <p>Mr Gan Zhi-Yong Tianjin Electric Power Research Institute, China</p>	Session Panel Discussion	<p>Improving Recognition of Sustainability in Ethical Standards</p> <p>Mr Michael Bevan Associate Director Registration, Engineers Australia, Australia</p>
	<p>An Approach Towards Environmental Management and Sustainable Development - the Kandy and Inle Lake Examples</p> <p>Ms Evelyn Valencia Assistant Development Manager, Nanyang Technological University, Singapore</p>		<p>The Catastrophic Failure of the Global Engineering Community</p> <p>Mr James Polkinghorne Director, Asia Civil Pte Ltd, Singapore</p>
	Session Panel Discussion		Session Panel Discussion
18:00	End of Summit Programme		
19:00	WES 2013 Award Presentations cum Gala Dinner (By Invitation Only)		

14 September 2013, Saturday

Technical Site Visits

(Applicable to delegates on 3-day passes only)

Route 1: Semakau Landfill



The Semakau Landfill project represents an innovative approach towards conventional waste management solutions. It is a physical architecture of Singapore's strategic planning and superb engineering, addressing the nation's perpetual constraint of available land use and expanding need for effective waste disposal management. It is created by enclosing the sea-space between two small islands with an engineered impermeable bund. Effective environmental protection measures have been taken to protect its surrounding waters and ecosystem.

Visitors to Semakau Landfill will get to know how Singapore's effort in environmental protection and nature conservation has created a landfill thriving with rich marine biodiversity and a place for nature based recreational activities. They will also learn about Singapore's future challenges in solid waste disposal and the need to reduce and recycle waste to extend the lifespan of the landfill.

Route 2: Marina Barrage



Marina Barrage creates Singapore's 15th reservoir, and the first in the heart of the city. As the island's largest and most urbanised catchment, it provides not only water supply but also flood control and a new lifestyle attraction. It was given the Superior Achievement Award by the American Academy of Environmental Engineers six months after it opened.

Route 3: Punggol Waterway



Punggol Waterway runs through the Punggol Waterway Park. Both serve to increase park and water frontage for the housing estate and provide a green respite for residents. Designed with four themes to cater to residents of all ages, the park provides residents opportunities for leisure activities such as jogging and cycling which can be carried out along the promenade.

Route 4: one-north



one-north is designed to combine educational institutes, residences and recreational amenities with research facilities and business parks, to create an ideal work-live-play-learn environment conducive for creative minds to excel and where innovation reigns. It is to be a melting pot of talent, ideas and business opportunities.

WORKSHOP



Workshop on Infrastructure Climate Risk Assessment: Tools and Processes

This one day workshop will provide infrastructure practitioners, planners, managers and decision-makers with information about, and practice with, a practical tool and process that systematically assesses the risks of current and future climate on civil infrastructure. It will include a session on the principles, applications and limitations of climate data and climate models for infrastructure risk assessment.

Content

- >> The Need for Infrastructure Climate Risk Assessment
- >> Current Trends and Future Climate for Singapore and the Asia Pacific Region
- >> Principles of Risk Assessment
- >> Infrastructure Risk Assessment - Introduction to the PIEVC Engineering Protocol
- >> Case Study 1 - Costa Rica Sewage Treatment Plan Assessment
- >> Infrastructure Component and Climate Parameter Matrix Definition
 - Small Group Discussion
 - Group Debrief
- >> Applications of Infrastructure Climate Risk Assessment - The Process and Results
- >> Case Study 2 - Vulnerability/ Risk Assessment of Highway Bridge Infrastructure in Honduras
- >> Introduction to Climate Data and Future Climate Projections for Infrastructure Risk Assessment and Engineering - A Mini-Session
- >> Risk Assessment Matrix Completion
 - Introduction and Small Group Discussion
 - Plenary De-brief
- >> Panel Discussion: Planning and Organising an Infrastructure Climate Risk Assessment

Methodology

Two facilitated group sessions will demonstrate the steps in the Protocol through hands-on, small group exercises to define the infrastructure components and climate parameters and to undertake a qualitative risk assessment using completed case studies to illustrate real life applications. There will be a session dedicated to explaining the availability and application of climate data and climate modeling for risk assessment and engineering purposes. Electronic copies of presentation materials and some background materials will be provided on a USB key to each participant.

Who Should Attend

This workshop will be of interest to engineers and geoscientists who are involved in the pre-design, design, operation, maintenance and management of civil infrastructure. The need to consider current and future climate for these activities applies to new infrastructure or rehabilitating or retrofitting existing infrastructure. It will also be relevant to municipal planners, managers and operators of infrastructure as well as state and territorial regulators and policy-makers to better understand the challenges that civil infrastructures face with current and future climate.

Jointly organised by



Workshop Details

Date : 10 September 2013
Time : 9.00am to 5.30pm
Fee : \$350.00 (excl.GST)
Venue: The Sands Expo and Convention Centre, Singapore

Please register at
www.wes2013.org/registration

Speakers

Eng. I. (Irene) Campos Gomez
Colegio Federados de Ingenieros y de Arquitectos de Costa Rica (CFIA), Executive Director of the Costarican Institute of Cement and Concrete. Past President, Pan-American Union of Engineering Organizations (UPAD I)

Dr. Chris Gordon
Director, Centre for Climate Research Singapore, Meteorological Service Singapore

Dr. Rupa Kumar Koli
World Meteorological Organization – Climate Prediction and Adaptation Branch

Ing. Jorge F. Paz
Vice-President Colegio de Ingenieros Civiles de Honduras (CICH)

Mr Darrel Danyluk
FEC, P.Eng.- Vice-President, World Federation of Engineering Organizations; Chair, WFEO Standing Committee on Engineering and the Environment

Mr David Lapp
FEC, P.Eng. – Manager, Professional Practice, Engineers Canada Secretary, WFEO Committee on Engineering and the Environment

For more information, please contact us at +65 6780 4576 or email wes2013@reedexpo.com.sg

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