

Centre for Infrastructure &
Construction Industry Development

CICID 10th Anniversary Conference

Innovation, Integration and Implementation:
The Next Decade of Infrastructure Development
and Construction in Hong Kong

31st May 2013,
Rayson Huang Theatre, The University of Hong Kong



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FOREWORD

The construction industry is one of the major pillars of Hong Kong's economy. Over the years, many world-class infrastructure facilities have been constructed in our city. With the ongoing ten mega infrastructure projects and a huge demand for housing facilities, it is anticipated that the construction industry in Hong Kong will continue to grow in the years to come.

While enjoying the prosperity of infrastructure and construction developments in recent times, there are many challenges facing the construction industry. Examples of these include a global demand for emission reductions and energy efficiency of constructed facilities, the increasing project scale and complexity, the complex supply chains and hence poor contractual relationships, a labour shortage, the need to improve the image and safety records of the industry, etc.

Whether construction companies, professionals and researchers can capitalise on the challenges and turn them into opportunities depends on our preparedness to change. These changes should not only be limited to planning, design and construction, but they should also extend to the ways in which infrastructure and construction contracts and projects are managed and implemented.

The aim of this conference is to stimulate construction stakeholders rethinking how to "innovate", "integrate" and "implement" infrastructure and construction projects so as to position Hong Kong as a leader in construction industry development over the next decade.

With the keynote address delivered by the Secretary for Development, Mr. Chan Mo-po Paul, MH, JP and the lectures given by a strong list of distinguished speakers, I have every confidence that participants of this conference will not be leaving empty-handed.

Finally, I would like to take this opportunity to thank the Speakers, Donors, Supporting Organisations and Organising Committee of this conference for their significant and much appreciated contributions to this conference.

Ir Professor Lee Chack-fan, SBS, JP

Chairman

Centre for Infrastructure and Construction Industry Development





CICID 10th Anniversary Conference

Innovation, Integration and Implementation: The Next Decade of
Infrastructure Development and Construction in Hong Kong

Friday, 31st May 2013 at Rayson Huang Theatre, The University of Hong Kong

Conference Programme

Time	Topics of Speech	Speakers
09:00 - 09:05	Welcome Speech	Prof. Roland T. Chin <i>Deputy Vice-Chancellor and Provost, The University of Hong Kong</i>
09:05 - 09:30	Keynote Address	Mr. Paul M.P. Chan, MH, JP <i>Secretary for Development, Development Bureau, HKSAR Government</i>
Group Photo		
Session 1: Zero Carbon Building and Sustainable Construction Session Chairman: Ir Prof. C.F. Lee, SBS, JP <i>Chairman, Centre for Infrastructure and Construction Industry Development, The University of Hong Kong</i>		
09:30 - 09:50	Experience Gained from the First Zero Carbon Building in Hong Kong	Ir Prof. Christopher To <i>Executive Director, Construction Industry Council</i>
09:50 - 10:10	Novel Zero Carbon Building Design Initiatives	Ir Dr. Raymond Yau <i>Arup Fellow, Director, Ove Arup & Partners Hong Kong Ltd.</i>
10:10 - 10:30	Contributing to Zero Carbon through T&C and System Optimization	Ir Cary Chan <i>General Manager, Technical Services & Sustainability, Swire Properties Ltd</i>
10:30 - 10:50	Building Automation - The Key to Zero Carbon Future	Ir Conrad T.C. Wong, JP <i>Chairman, Hong Kong Green Building Council</i>
10:50 - 11:00	Question & Answer	
11:00 - 11:20	Tea Break	
Session 2: Building Information Modelling Session Chairman: Ir James Blake, OBE, JP <i>Honorary Advisor, Centre for Infrastructure and Construction Industry Development, The University of Hong Kong</i>		
11:20 - 11:40	Application of BIM and RFID in Public Housing Projects	Ms. Ada Y.S. Fung, JP <i>Deputy Director (Development & Construction), Housing Department, HKSAR Government</i>
11:40 - 12:00	Proactive Construction Management System: Connecting BIM to Reality	Ir Prof. Heng Li <i>Chair Professor, Department of Building and Real Estate, Hong Kong Polytechnic University</i>
12:00 - 12:20	Maturity of BIM for the Hong Kong Construction Sector	Ir Francis C.S. Leung <i>Founding Chairman, Hong Kong Institute of Building Information Modelling</i>
12:20 - 12:30	Question & Answer	
12:30 - 14:00	Lunch	



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Time	Topics of Speech	Speakers
Session 3: Construction Delivery and Integration Session Chairman: Ir Prof. S.C. Wong, JP <i>Head, Department of Civil Engineering, The University of Hong Kong</i>		
14:00 - 14:20	A New Page of the NEC Expedition - DSD's Initial Experience on 5 More NEC Pilot Contracts	Ir Wai Tsui, JP <i>Deputy Director, Drainage Services Department, HKSAR Government</i>
14:20 - 14:40	NEC3: A Caveat and Maximising its Potential	Dr. Arthur McInnis <i>Professional Consultant, Faculty of Law, Chinese University of Hong Kong</i>
14:40 - 15:00	Synergising Supply Chains for Total Asset Management	Ir Prof. Mohan M. Kumaraswamy <i>Professor, Department of Civil Engineering, The University of Hong Kong</i>
15:00 - 15:20	New Directions in Construction Dispute Resolution	Ir Prof. Gary Soo <i>Barrister-at-Law, Gary Soo's Chambers</i>
15:20 - 15:30	Question & Answer	
15:30 - 15:50	Tea Break	
Session 4: Project Implementation Session Chairman: Ir Prof. Mohan M. Kumaraswamy <i>Executive Director, Centre for Infrastructure and Construction Industry Development, The University of Hong Kong</i>		
15:50 - 16:10	Advancing Performance of Complex Mega Infrastructure Projects	Ir T.C. Chew <i>Projects Director, MTR Corporation Limited</i>
16:10 - 16:30	Enhancing Productivity through Off-site Prefabrication	Dr. Wei Pan <i>Assistant Professor, Department of Civil Engineering, The University of Hong Kong</i>
16:30 - 16:50	Improving Construction Safety in view of Increasing Volume of RMAA Works	Ir Prof. Albert P.C. Chan <i>Professor, Department of Building and Real Estate, Hong Kong Polytechnic University</i>
16:50 - 17:10	Factors leading to Success of Hong Kong Infrastructure and Construction Industry	Ir Prof. Steve Rowlinson <i>Professor, Department of Real Estate and Construction, The University of Hong Kong</i>
17:10 - 17:20	Question & Answer	
17:20 - 17:30	Closing Remarks	Ir Prof. S. Thomas Ng <i>Executive Director (Designate), Centre for Infrastructure and Construction Industry Development, The University of Hong Kong</i>



KEYNOTE SPEAKER |



Mr. Paul M.P. Chan, MH, JP

*Secretary for Development
Development Bureau, HKSAR Government*

Mr. Chan has been appointed Secretary for Development of the Hong Kong Special Administrative Region (SAR) Government since 30 July 2012.

Mr. Chan is a Certified Public Accountant. He is a former President of the Hong Kong Institute of Certified Public Accountants and a former Chairman of The Association of Chartered Certified Accountants, Hong Kong.

Before joining the Government, Mr. Chan held a number of public service positions including member of the Legislative Council; Chairman of Legal Aid Services Council; Board Member of the West Kowloon Cultural District Authority; non-official member of the Strategic Development Commission; Council Member of the Chinese University of Hong Kong and member of the Citizens Advisory Committee on Community Relations of the Independent Commission Against Corruption.





INVITED SPEAKERS



Ir Prof. Christopher To

Executive Director, Construction Industry Council

Christopher To is currently the Executive Director of the Construction Industry Council and was previously Secretary General of the Hong Kong International Arbitration Centre. He holds Adjunct Professorships from a variety of academic institutions and is involved with educational reform and governance of such institutions. He is a member of various learned societies and actively participates at various activities of the Inter-Pacific Bar Association and the Hong Kong Corporate Counsel Association. In 2001 Christopher was the youngest Director to be awarded Director of the Year Award in Hong Kong and in 2007 he was named as a Young Global Leader by the World Economic Forum.



Ir Dr. Raymond Yau

Arup Fellow, Director, Ove Arup & Partners Hong Kong Ltd.

Raymond Yau is Arup Fellow and Director of Arup Hong Kong. He is a building services engineer and building sustainability consultant who has over 25 years of experiences in the integrated design of sustainable and environmental responsive buildings and sustainable building physics. He is the project director responsible for the total engineering design of the CIC Zero Carbon Building in HK. Raymond has been awarded Principal Innovator of the Champion project CIC Zero Carbon Building under Construction Category of the Hong Kong Institution of Engineers Innovation Award for Engineering Industry 2013.

Raymond is serving as the Member of Expanded Building Committee of Buildings Department and Energy Efficiency and Conservation Sub-Committee of Environment Bureau, HKSAR Government. He is Adjunct Associate Professor at Department of Architecture of CUHK, Director and Vice-Chair of Technical Review Committee of BEAM Society and members of various committees of HKGBC. Raymond is Fellow Member of HKIE and CIBSE.



Ir Cary Chan

General Manager, Technical Services & Sustainability, Swire Properties Ltd

Cary Chan is a professional engineer and is currently responsible for overseeing the sustainability policies and strategies for Swire Properties Limited. Over the years, he has carried out a lot of researches and energy saving initiatives with substantial improvements in energy performance of buildings. Some of his work has won international awards, which includes Low Carbon Operation, Client of the Year award by the Chartered Institution of Building Services Engineers in 2010 and ASHRAE Technology Award by American Society of Heating, Refrigerating and Air-Conditioning Engineers in 2006 & 2013. He is also active in serving the professional and business communities with his expertise. He is currently a Director of Hong Kong Green Building Council, Business Environment Council and BEAM Society Limited. Cary also chairs the Industry Standards & Research Committee which is setting out standards for sustainable environment for the local industry.

Cary is also a member of the Energy Advisory Committee and taskforce member in the establishing of the Mandatory Building Energy Code for Hong Kong.



INVITED SPEAKERS



Ir Conrad T.C. Wong, JP

Chairman, Hong Kong Green Building Council

Conrad Wong has over 25 years of construction project management experience. He is Vice Chairman of Yau Lee Holdings Limited, Managing Director of Yau Lee Construction Company Limited and Yau Lee Wah Concrete Precast Products Ltd., Vice Chairman of REC Engineering Company Limited as well as Chief Executive Officer of VHSoft Technologies Company Limited.

Conrad is active in public and community services. He has been appointed as the Chairman of the Hong Kong Green Building Council, the Chairman of Occupational Health and Safety Council, the Member of the Antiquities Advisory Board, the Member of MPF Industry Schemes Committee, as well as the Member of Vocational Training Council. In the past, he served as the President of the Hong Kong Construction Association (2005-2011) and the President of the International Federation of Asia and West Pacific Contractors' Associations and the Chairman of Pneumoconiosis Compensation Fund Board and the Member of Construction Industry Council.



Ms. Ada Y.S. Fung, JP

*Deputy Director of Housing (Development & Construction)
Hong Kong Housing Authority, HKSAR Government*

Ada Fung is an Architect by profession. She is an active member in the Architectural field as well as in the construction industry in Hong Kong.

In her career as Deputy Director of Housing, she supervises the Development & Construction Division of the Housing Department, overseeing all facets of public housing development work in Hong Kong. Her duties cover project management, planning, design and contract management, as well as establishing operational policies on procurement, design, construction, quality, performance assessment, dispute resolution, research and development, safety and the environment. She also promotes partnering, value management, risk management, ethical integrity, site safety, corporate social responsibility, sustainable development, community engagement, green building and Building Information Modeling and product certification in the industry.

Ada is the President of the Hong Kong Institute of Architects (2013-2014) and Chairperson of the APEC Architect Monitoring Committee of Hong Kong (2012/13 - 2014/15), and the past Chairperson of the Architects Registration Board (2010/11 - 2011/12).



Ir Prof. Heng Li

Chair Professor, Department of Building and Real Estate, Hong Kong Polytechnic University

Heng Li is a Chair Professor of Construction Informatics at The Hong Kong Polytechnic University. Heng started his academic career from Tongji University since 1987. He then researched and lectured at the University of Sydney, James Cook University and Monash University before joining Hong Kong Polytechnic University. During this period, Heng has also worked with engineering design and construction firms and provided consultancy services to both private and government organizations in Australia, Hong Kong and China. He has conducted many funded research projects related to the innovative application and transfer of construction information technologies, and he has published 2 books, more than 200 journal papers in major journals of his field and numerous conferences papers in proceedings.



INVITED SPEAKERS



Ir Francis C.S. Leung

Founding Chairman, Hong Kong Institute of Building Information Modelling

Francis Leung is the Director and Head of BIM of WSP in Asia region implementing the latest technology of Building Information Modelling providing professional BIM service. Francis is a renowned BIM specialist. He is the Founding Chairman of The Hong Kong Institute of Building Information Modelling (HKIBIM) established in 2009.

Francis is a graduate of HKU Civil and Structural Engineering in 1988. He is a practicing engineer with the qualification of MHKIE, MStructE. He is also a Registered Structural Engineer in HK and attained the Grade 1 Registered Structural Engineer qualification in China.



Ir Wai Tsui, JP

Deputy Director, Drainage Services Department, HKSAR Government

Wai Tsui joined the Government of Hong Kong in 1981. Since then, he worked in various positions, responsible mainly for the design and construction of major infrastructure projects, including marine structures, reclamation, new town development and highways. He also spent several years in the Works Branch, in which policies of public works in Hong Kong were formulated and carried forward. He was posted to the Drainage Services Department in 2005 and is currently the Deputy Director of the Department, responsible for the development and implementation of capital works projects, operation and maintenance of facilities relating to wastewater and stormwater drainage services.



Dr. Arthur McInnis

Professional Consultant, Faculty of Law, Chinese University of Hong Kong

Arthur McInnis has an international reputation which is tied to some 150 or so publications in the construction, contracting and planning fields including *The New Engineering Contract: A Legal Commentary* (London: Thomas Telford, 2001, 700 pp); *Hong Kong Construction Law* (Singapore: 3 vols looseleaf, Butterworths, current)

Arthur was the Honorary Legal Advisor to the Joint Contracts Committee, the body which has lately published the new Standard Form of Building Contract (Private) for Hong Kong.

He was a member of the Centre for Infrastructure and Construction Industry Development (CICID) and a former co-director of the Asian Institute of International Financial Law (AIIFL) both at the University of Hong Kong.

Arthur's expertise in the field of construction, projects and dispute resolution is diverse with long experience at both Baker and McKenzie and Clifford Chance in Hong Kong.





INVITED SPEAKERS



Ir Prof. Mohan M. Kumaraswamy

Professor, Department of Civil Engineering, The University of Hong Kong

Mohan Kumaraswamy obtained his B.Eng. (Civil) in Sri Lanka, and his M.Sc. and Ph.D in UK. More recently, he was awarded a DSc by Loughborough University, UK for published work constituting a sustained, substantial and original contribution to knowledge.

Before joining HKU in 1992, Mohan was in industry and worked on designs, construction and construction management and led many innovative projects and internationally funded consultancies.

Mohan has been active in many professional bodies. For example, he was the first Sri Lanka representative of CIOB, a Vice Chairman of CIOB Hong Kong in 1996-97 and Chairman of the HKIE Civil Division in 1997-98. He has contributed to industry development bodies such as the CIC and its precursors and has been the Executive Director of CICID since its launch in 2002.

Also active internationally, his particular initiatives include those as Joint Co-ordinator of the CIB Task Force (TG72) on Public Private Partnerships and as Editor-in-Chief of the journal of 'Built Environment Project and Asset Management' (BEPAM).



Ir Prof. Gary Soo

Barrister-at-Law, Gary Soo's Chambers

Gary Soo is a practising Barrister and a Chartered Engineer and has been practising in areas of civil litigation involving commercial and construction disputes and arbitration. He is a listed panelist/arbitrator/mediator of various institutions in Hong Kong and Mainland China, and also of the World Trade Center Macau Arbitration Center.

In 2008, Gary took up the position to serve as the Secretary-General of the Hong Kong International Arbitration Centre, until May 2010. He is an Adjunct Professor of the Department of Civil Engineering, The University of Hong Kong.

He is now also serving as the Hon. Secretary of the Joint Mediation Helpline Office, the Chairperson of the Special Committee of Arbitration and Dispute Resolution of the Hong Kong Bar Association and is also the President of the Hong Kong Institute of Arbitrators.



Ir T.C. Chew

Projects Director, MTR Corporation Limited

T. C. Chew is currently the Projects Director of Hong Kong MTR Corporation Limited. T.C. has worked in the rail transit industry in the United Kingdom, Singapore, Hong Kong and overseas for over 35 years. He has held senior position in both contractor and client based organization on rail projects implementation over the last 15 years. He is a member of the Hong Kong Construction Industry Council and chaired its procurement committee. He is a Chartered Engineer, a fellow of the Royal Academy of Engineering, Hong Kong Academy of Engineering Sciences and a number of professional institutions in the United Kingdom and Hong Kong.





INVITED SPEAKERS



Dr. Wei Pan

Assistant Professor, Department of Civil Engineering, The University of Hong Kong

Wei Pan is specialised in sustainable construction and management and is based at The University of Hong Kong. He holds a BEng from Hunan University, and a MSc and a PhD from Loughborough University, UK. His research interest focuses on zero carbon building, off-site prefabrication, technological innovation and decision making. Wei is Chartered Builder, Chartered Environmentalist, and Fellow of the Higher Education Academy. His academic career is supported by over 10 years of experience in practice in the UK, China and Singapore in building design and engineering, construction project management and innovation management.



Ir Prof. Albert P.C. Chan

Professor, Department of Building and Real Estate, Hong Kong Polytechnic University

Albert Chan is a Chartered Builder, Engineer, Project Manager, and Surveyor by profession. He joined the Hong Kong Polytechnic University in 1996 and is currently an Associate Dean of the Faculty of Construction and Environment. His research interests include construction project management and construction health and safety.



Ir Prof. Steve Rowlinson

Professor, Department of Real Estate and Construction, The University of Hong Kong

Steve Rowlinson is a professor in the Department of Real Estate and Construction at the University of Hong Kong and has been in Hong Kong for almost a quarter of a century. His fields of expertise are construction site safety, procurement systems, sustainability, the impact of culture on performance, golf and skiing.

Steve has published 12 books and monographs and over 150 papers in international journals and conferences. He has graduated 15 PhD students at Hong Kong University and in Australia and is currently supervising about 10 more. He is an adjunct/visiting professor at Queensland University of Technology in Australia, Asian Institute of Technology in Thailand, Glasgow Caledonian University in Scotland and Chongqing University in China.

Over the past few years Steve has won over HK\$12 million in research grant income to study topics such as construction site safety, heat stress in construction workers, competitiveness in the Australian construction industry and relationship management. His most-recently published work is a study of the cost-effectiveness of safety initiatives in the Hong Kong construction industry.

His current research has focused on heat stress in construction workers in Hong Kong and has highlighted issues in relation to construction workers' health.



Centre for Infrastructure and Construction Industry Development



BACKGROUND

The Centre for Infrastructure & Construction Industry Development (CICID), which is in the Department of Civil Engineering of The University of Hong Kong, was established in November 2002. The aims include fostering continuous improvements, while targeting excellence in the construction industry in general and infrastructure development in particular, through the development of innovative strategies and techniques. The objectives include (a) developing an internationally recognised 'Centre of Excellence' for research, discourse and dissemination of innovations in infrastructure and construction engineering & management, and construction industry development methodologies; and (b) encouraging and supporting interdisciplinary research into planning, implementing and evaluating construction projects including mega/ multi-project infrastructure programmes.

OBJECTIVES

1. To develop an internationally recognised 'Centre of Excellence' for research, discourse and dissemination of innovations in infrastructure and construction engineering & management and construction industry development methodologies.
2. To encourage and support interdisciplinary research into planning, implementing and evaluating construction projects (including mega / multi-project programmes) in general and infrastructure projects in particular.
3. To develop a library, a database and a knowledge-base of major infrastructure and construction projects incorporating relevant engineering and management parameters and experiential knowledge.
4. To encourage and support useful case studies of innovation in infrastructure and construction engineering and management.
5. To organise workshops and conferences in this field and to publish the outputs.
6. To initiate and support other publications in this field.
7. To develop strategies and methodologies for innovative infrastructure and construction engineering and management.
8. To promote exchanges with industry and relevant research and professional organisations in this field, in Hong Kong and in other countries.

CONTACT

The Centre aims to establish close links with the industry and other research institutes through collaborative research and consultancy. It would be our pleasure to introduce more about our Centre to you at your convenience. Please contact us at:

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Inspiration with Excellence

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- *Building*
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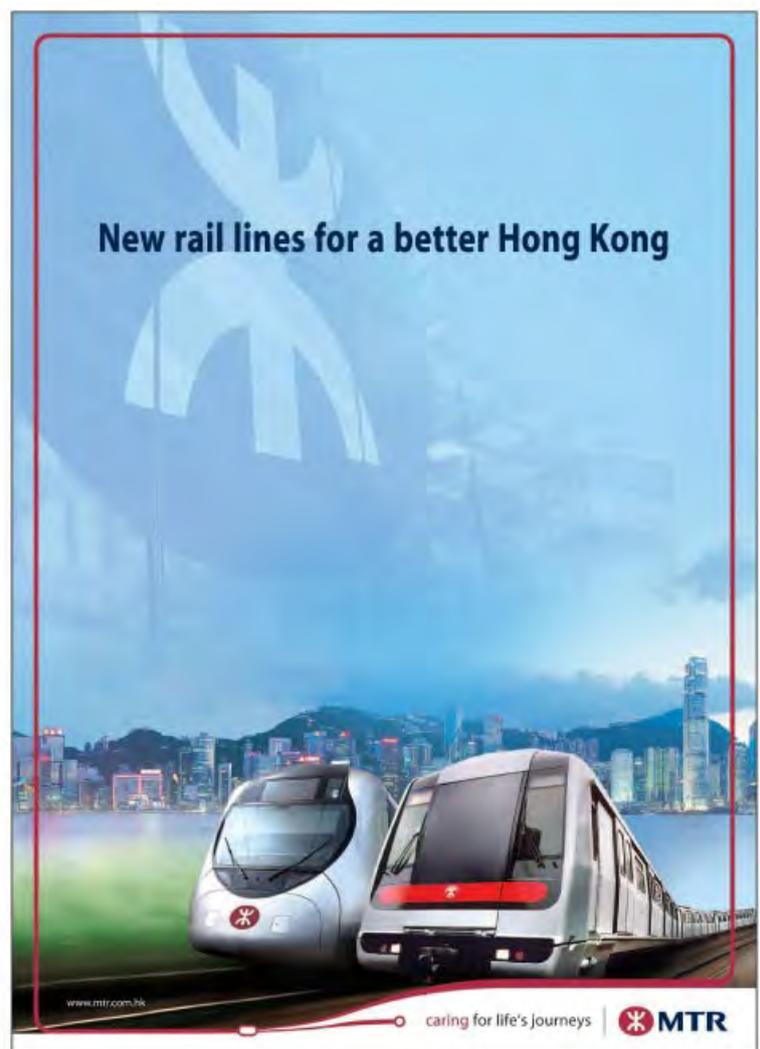
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