



中華人民共和國成立七十五周年
75th Anniversary of the Founding of
the People's Republic of China

機電工程署
EMSD



機電工程署研討會 EMSD Symposium 2024

高質量發展 領綠色未來 16 - 18 Dec 2024
Empowering High-quality Development for a Green Future



程序表 The Programme

時間 Time	流程 Rundown
0900 - 0905	活動開始 Event Opening
0905 - 0915	開幕致辭 Opening Address
0915 - 0925	歡迎辭 Welcome Remarks
0925 - 0935	活動啟動儀式及大合照 Event kick-off Ceremony and Group Photo
0935 - 0945	機電工程署微信公眾號啟動儀式 EMSD WeChat Official Account Launching Ceremony
0945 - 0955	政府物聯網比賽頒獎禮 GWIN Challenge Prize Presentation
0955 - 1005	氫能洗街車命名及繪畫比賽頒獎禮 Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest Prize Presentation
1005 - 1020	創新及科技交流合作備忘錄簽署儀式 Memorandum of Co-operation Signing Ceremony on Promoting the Adoption of Innovation and Technology
1020 - 1050	休息及展覽參觀 Break & Exhibition Visit
1050 - 1230	主題演講 Keynote Speeches
1230 - 1415	午宴 Lunch
1415 - 1555	分組專題演講 Parallel Sessions
1555 - 1610	休息及展覽參觀 Break & Exhibition Visit
1610 - 1750	分組專題演講 Parallel Sessions
1750 - 1800	展覽參觀 Exhibition Visit

分組專題演講 Parallel Sessions

新能源
New Energy

綠色交通
Green Mobility

智能機電
Intelligent E&M

高效建築
High-Performance Buildings

展覽 Exhibition

現場超過20家參展商的創新解決方案和產品，涵蓋行業、大學和研究機構
Over 20 exhibitors will showcase innovative solutions and products from trades, universities and research institutions

主辦機構
Organiser

機電工程署
EMSD



贊助
Sponsors

CLP 中電

Towngas

港燈
HK Electric

MTR

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Parallel Sessions		
1400 – 1415	Registration	
	Grand Stair	The Forum
1415 – 1555 (100 mins)	Intelligent E&M Moderator: CLP: Ir Kan IP EMSD: Ms KOT Yee Mei, Mimi	New Energy Moderator: TGC: Ir Jack LI EMSD: Mr LEE Chi Wa, Cheer
20 mins	“Smartgrid and Innovation” Mr Tony KWOK Associate Director - Smartgrid & Innovation, CLP Power Hong Kong Limited	“Develop Green Energy to support Carbon Neutrality” Ir Don CHENG Chief Operating Officer – HK Business, Hong Kong & China Gas Co. Ltd.
20 mins	“Shaping the Future Labs” Prof. HUANG Jianyu Chief Scientist, Institute of Architecture Design and Research, Chinese Academy of Sciences	“Renewable Energy Development and Energy Transition in North China Region” Mr LIU Hanwei Director, Division of Sector Regulation, North China Energy Regulatory Bureau of National Energy Administration
20 mins	“Accelerating Data-driven and Intelligence-led Smart City and Smart Healthcare” Mr WU Bin Robin, Chief Healthcare Industry Digitalization Expert, Huawei	“Nuclear Power for a Green Future” Prof. PAN Chin Head of the Department of Mechanical Engineering, the City University of Hong Kong

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20 mins	“The Standard for Green Intelligent Technologies and Artificial Intelligence for Building Electrical and Mechanical Systems in the Greater Bay Area” Ms ZHOU Quan Deputy Chief Engineer of Guangdong Provincial Academy of Building Research Group Co., Ltd.	Presentation by Mr. Jesse CHIN Director of Market Development & Surveillance Department, Energy Market Authority of Singapore
15 mins	Q&A	Q&A
5 mins	Souvenir Presentation & Group Photo	Souvenir Presentation & Group Photo
1555 – 1610	Tea Break & Exhibition at The Atrium	



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Parallel Sessions		
	Grand Stair	The Forum
1610 – 1750 (100 mins)	High-Performance Buildings Moderator: HKE: Mr Ronald DING EMSD: Ms YUEN Man Sha, Vanessa	Green Mobility Moderator: MTR: Ms Amy NG EMSD: Mr Nicholas LEE
20 mins	“Green Building Initiatives in HK Electric” Ir K.T. HUNG Chief Civil Engineer, the Hongkong Electric Co., Ltd.	“Driving Green: Sustainable Approaches to Railway Development and Operations” Ms Jessica CHAN Head of Sustainability, MTR Corporation Limited
20 mins	“High-Quality Development: Right Here, Right Now, With You” Ir. MA Siu Cheung Eric President of The Hong Kong Institution of Engineers	“Carbon-Neutral Aviation - The Importance of Sustainable Aviation Fuel” Ms Grace CHEUNG General Manager Sustainability, Cathay Pacific Airways Limited
20 mins	“Smart Building of the Future” Ir Prof. Thomas HO Chairman of Construction Industry Council	“On the Journey to Green and Diversified Development” Mr ZHANG Defu Deputy Director-General of Transport Department, China State Railway Group Co., Ltd.



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20 mins	<p>“Energy Storage Technologies in Modern Grids: Overview, Engineering Applications, and Challenges”</p> <p>Prof. CHUNG Chi Yung Head of Department and Chair Professor of Power Systems Engineering, the Hong Kong Polytechnic University</p>	<p>“Technological Innovation and Practice of Vehicle Intelligent Safety Testing and Evaluation”</p> <p>Mr TANG Yu Deputy Director of Intelligent Driving and Active Safety Department, China Automotive Engineering Research Institute Co. Ltd.</p>
15 mins	Q&A	Q&A
5 mins	Souvenir Presentation & Group Photo	Souvenir Presentation & Group Photo
1750 – 1800	Exhibition	
1800	End of Exhibition	



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Empowering High-quality Development for a Green Future

Guest of Honor



葉水球先生

中央人民政府駐香港特別行政區聯絡辦公室

教育科技部副部長



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Empowering High-quality Development for a Green Future

Guest of Honor



Mr TSE Chin Wan, BBS, JP

謝展寰先生

Secretary for Environment and Ecology
The Hong Kong Government or HKSAR Government

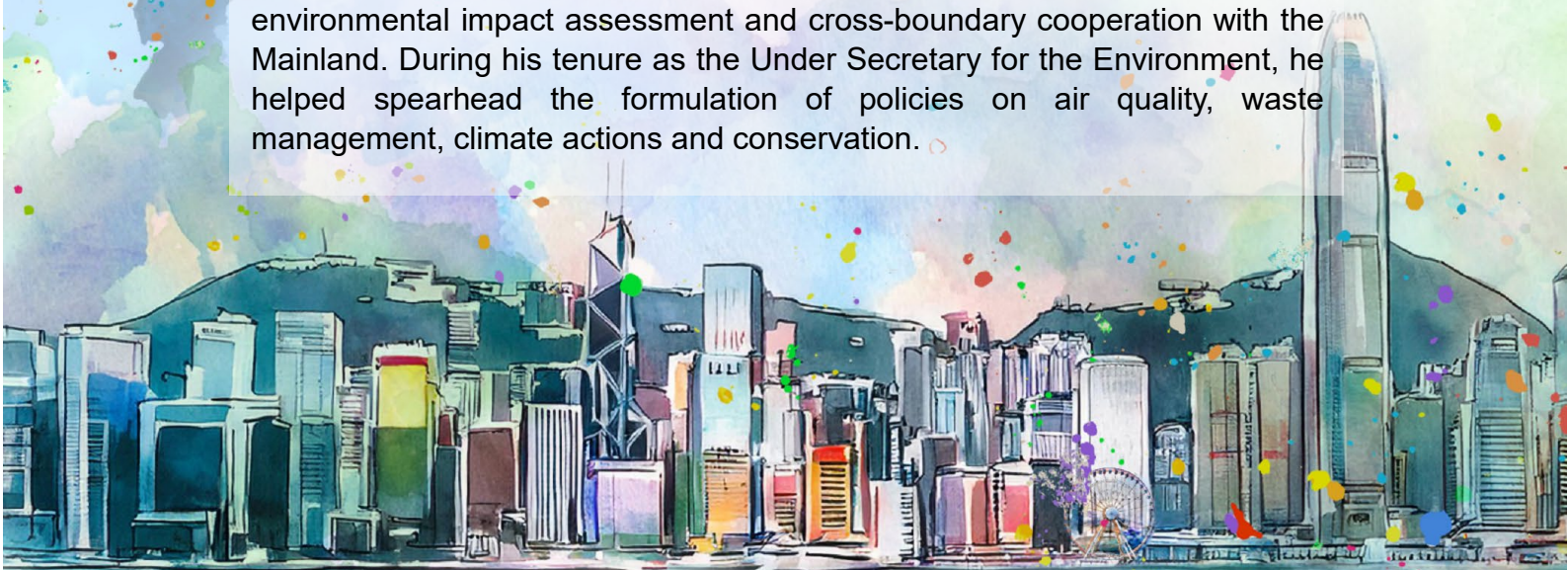
環境及生態局局長 香港特別行政區政府

BIOGRAPHY

Mr Tse Chin-wan was appointed the Secretary for Environment and Ecology on 1 July 2022.

Mr Tse joined the former Environmental Protection Agency in 1985 which was subsequently reorganised in 1986 to become the current Environmental Protection Department (EPD). Throughout the service with EPD, Mr Tse had taken up a wide range of duties at professional and senior managerial levels. He was appointed as a Deputy Director of Environmental Protection in 2013 and subsequently as the Under Secretary for the Environment in August 2017.

Mr Tse possesses a broad spectrum of experience in various areas of environmental protection, including law enforcement, computer modelling, environmental impact assessment and cross-boundary cooperation with the Mainland. During his tenure as the Under Secretary for the Environment, he helped spearhead the formulation of policies on air quality, waste management, climate actions and conservation.



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Guest of Honor



Mr David Lam, JP

林智文先生

Under Secretary for Development
The Hong Kong Government or HKSAR Government

發展局副局長 香港特別行政區政府

BIOGRAPHY

Mr David Lam was appointed the Under Secretary for Development on 1 September 2022.

Mr Lam is a town planner by profession with over 30 years of experience in the town planning industry. He joined the Government as an Assistant Town Planner in the Planning Department in September 1990; and was promoted to Government Town Planner in September 2019. Mr Lam was the Principal Assistant Secretary (Planning and Lands) in the Development Bureau from June 2018 to August 2022. He had also served in the former Planning and Lands Bureau and the former Home Affairs Bureau.

Mr Lam holds a Bachelor of Science Degree and a Master of Science (Urban Planning) Degree from the University of Hong Kong; and is also a member of the Hong Kong Institute of Planners.



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Guest of Honor



Mr. POON Kwok Ying, JP

潘國英先生

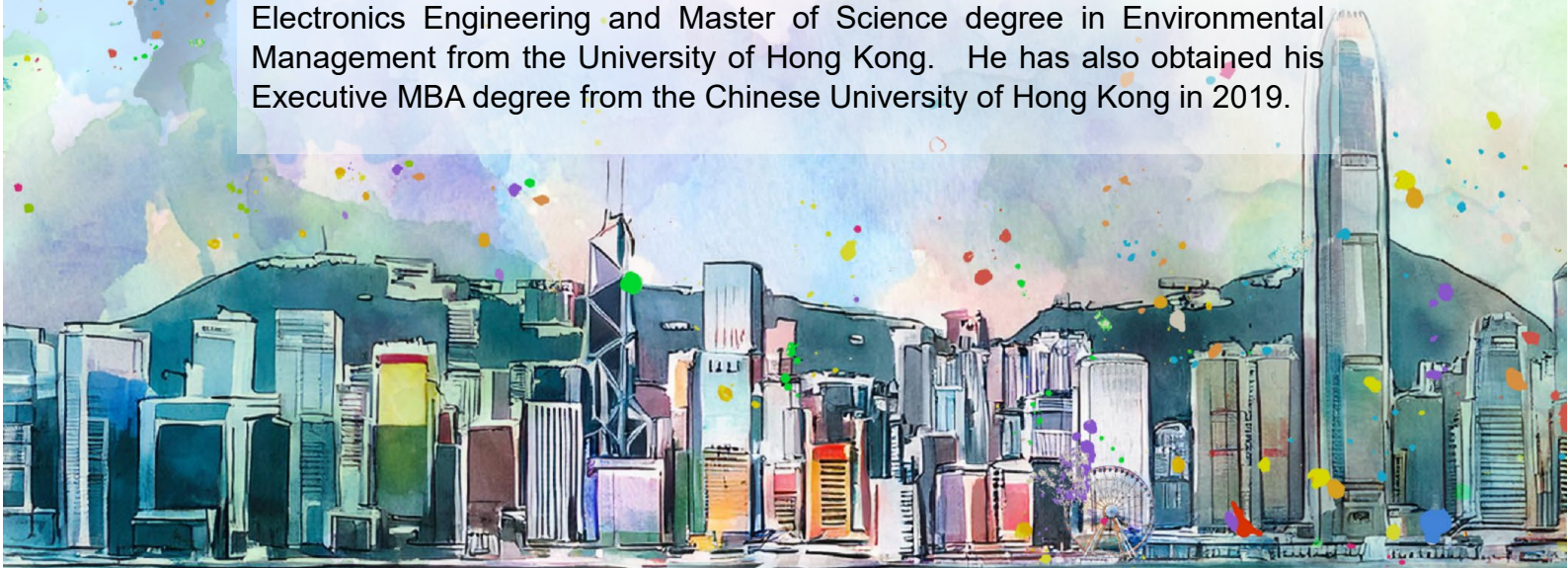
Director of Electrical and Mechanical Services
The Hong Kong Government or HKSAR Government

機電工程署署長 香港特別行政區政府

BIOGRAPHY

Mr Raymond KY POON is the Director of the Electrical and Mechanical Services Department. He is overseeing the engineering services for over 100 government departments and public organisations, as well as the enforcement of legislations in ensuring public safety on using electricity, gas, railway and other electrical and mechanical installations, and promoting energy efficiency and conservation and application of renewable energy in Hong Kong.

Mr POON has been working in the government for 30 years and taken up professional and managerial roles in the areas of engineering services, project management, business development as well as regulatory enforcement. Mr POON received his Bachelor of Engineering degree in Electrical and Electronics Engineering and Master of Science degree in Environmental Management from the University of Hong Kong. He has also obtained his Executive MBA degree from the Chinese University of Hong Kong in 2019.



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KEYNOTE



Overview of China's New Energy Storage, Hydrogen Energy Technology and Industry Development

中國新型儲能、氫能技術和產業發展概況

Mr. BIAN Guangqi 邊廣琦先生

Deputy Director of Energy Conservation and Technology Equipment Division
National Energy Administration

國家能源局 節能與科技裝備司副司長

ABSTRACT

The presentation provides an overview of the development of new energy storage and hydrogen energy technologies and industries in China to attain its "Dual Carbon" goals. It highlights advancements in energy storage technologies, emphasising their role in integrating renewable energy into the grid and the progress in hydrogen production, storage, transportation, and utilisation. The presentation will outline China's policy support, market trends, and technological innovations driving these industries while addressing challenges. This comprehensive overview underscores the strategic importance of these technologies in achieving China's energy transition goals, fostering industrial growth, and contributing to global carbon neutrality efforts.

BIOGRAPHY

Mr. Bian Guangqi is currently deputy director of Energy Conservation and Technology Equipment Division, National Energy Administration. He worked in the Ministry of Water Resources and the State Electricity Regulatory Commission, and was engaged in rural hydropower management and energy supervision. Currently, he is in charge of energy storage, hydrogen energy industry management and energy standardization.

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KEYNOTE



China's Railway Development Achievements and Future Prospects

中國鐵路發展成與未來展望

Mr. XIE Xiaodong 謝曉東先生

Director General of Planning and Standard Research
Institute

National Railway Administration

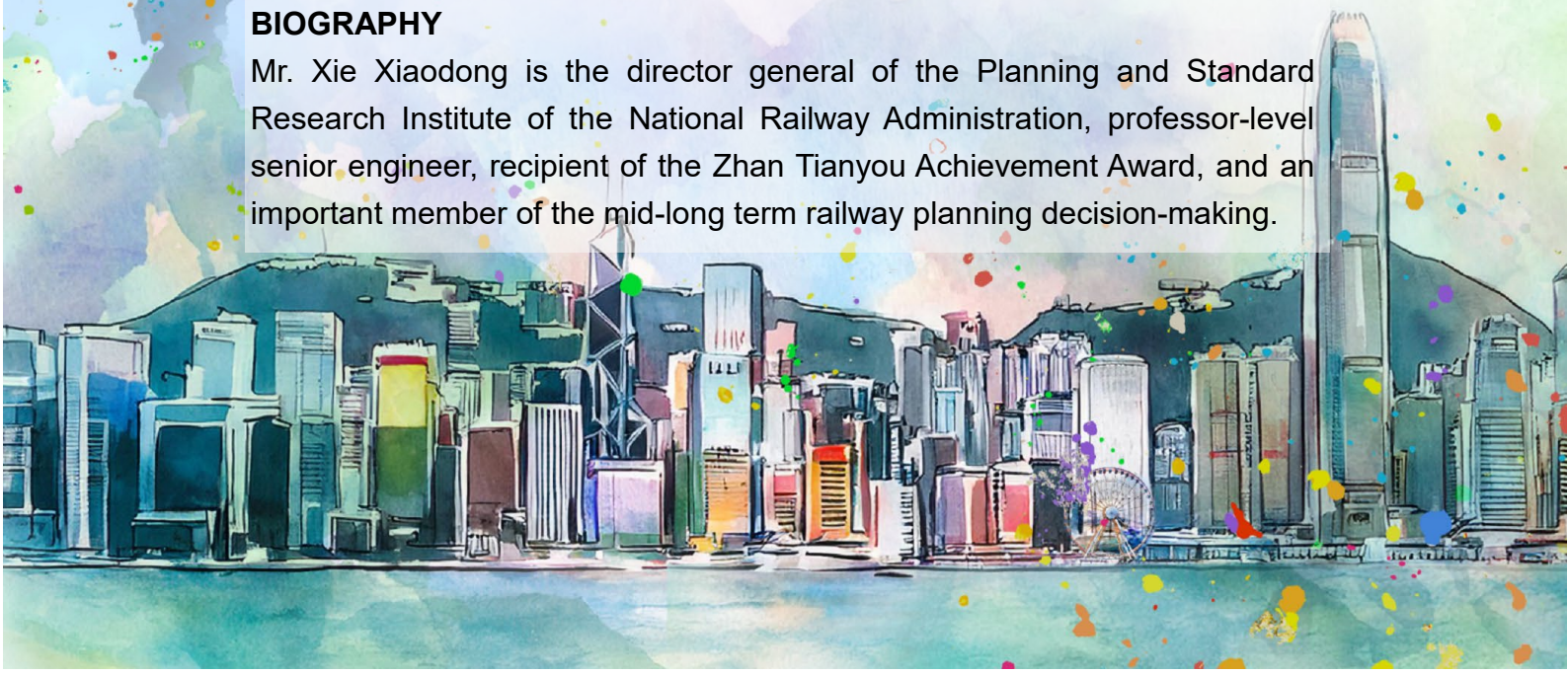
國家鐵路局 規劃與標準研究院院長

ABSTRACT

China Railway, serving as the main artery of the national economy and the backbone of the integrated transport system, stands as a strategic, pioneering and critical major infrastructure of the country. The presentation provides an overview of China Railway's achievement over the past two decades, highlighting the rise of high-speed rail (HSR) from nothing to something, from exploration to breakthrough, from manufacturing to creation, and from catching up to leading. The presentation will also share the future planning, outlook, and inspiration of China's Railway Development.

BIOGRAPHY

Mr. Xie Xiaodong is the director general of the Planning and Standard Research Institute of the National Railway Administration, professor-level senior engineer, recipient of the Zhan Tianyou Achievement Award, and an important member of the mid-long term railway planning decision-making.



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KEYNOTE



Research and Application of the Low Carbon Urban Flexible Energy System

低碳城市柔性能源系統研究與示範

Prof. LIN Borong 林波榮教授

Deputy Dean, School of Architecture
Tsinghua University

清華大學建築學院副院長

ABSTRACT

The presentation highlights the research and application of low-carbon urban flexible energy systems under the Dual Carbon Strategy. Prof. Borong Lin, Deputy Dean of Tsinghua University's School of Architecture, presents innovative solutions to address extreme climate impacts and urban energy challenges. The discussion emphasises key focus areas, including Zero-carbon power and heating systems, Flexible energy technologies, and Integrated source-grid-load-storage systems. Through case studies, such as a zero-carbon airport and low-carbon business districts, the presentation demonstrates scalable strategies for enhancing energy efficiency, reducing carbon emissions, and improving urban sustainability. This interdisciplinary approach aims to advance intelligent, low-carbon urbanisation through design, operation, and policy innovations.

BIOGRAPHY

Prof. Lin is the Changjiang Scholar Distinguished Professor, and specializes in innovative technologies for low-carbon buildings. He was selected as Highly Cited Chinese Scholars and the World's Top 2% Scientists, and was the winner of NSFC Distinguished Young Scholar, Xplorer Prize, and the 2nd National S&T Progress Award.

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Parallel Session: Intelligent E&M



Smartgrid and Innovation

Mr. Tony KWOK

Associate Director - Smartgrid & Innovation,
CLP Power Hong Kong Limited

ABSTRACT

The presentation delves into the smart grid and innovation journey that CLP has been going through to provide clean and reliable energy to customers amid adverse weather and the proliferation of renewable energy and electric vehicles. It will also cover the core elements of a smart electricity grid and other innovation initiatives to support a more reliable and flexible grid.

BIOGRAPHY

Mr. Tony Kwok is the Associate Director of Smartgrid & Innovation at CLP, overseeing the Smartgrid development journey and the introduction of innovative technologies to the grid operations that provide electricity supply to over 2.7 million customers in Hong Kong. His experience spanned across grid management, customer services and digital technologies. Over the years, he has been leading key transformation initiatives in supporting the company's vision as the Utility of the Future, driving complex and strategic initiatives such as the smart metering program and the development of the intelligent distribution grid to improve customer services, enhance operation efficiency and support the on-going energy transformation.



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Parallel Session: Intelligent E&M



Shaping the Future Labs

Prof. HUANG Jianyu

Chief Scientist

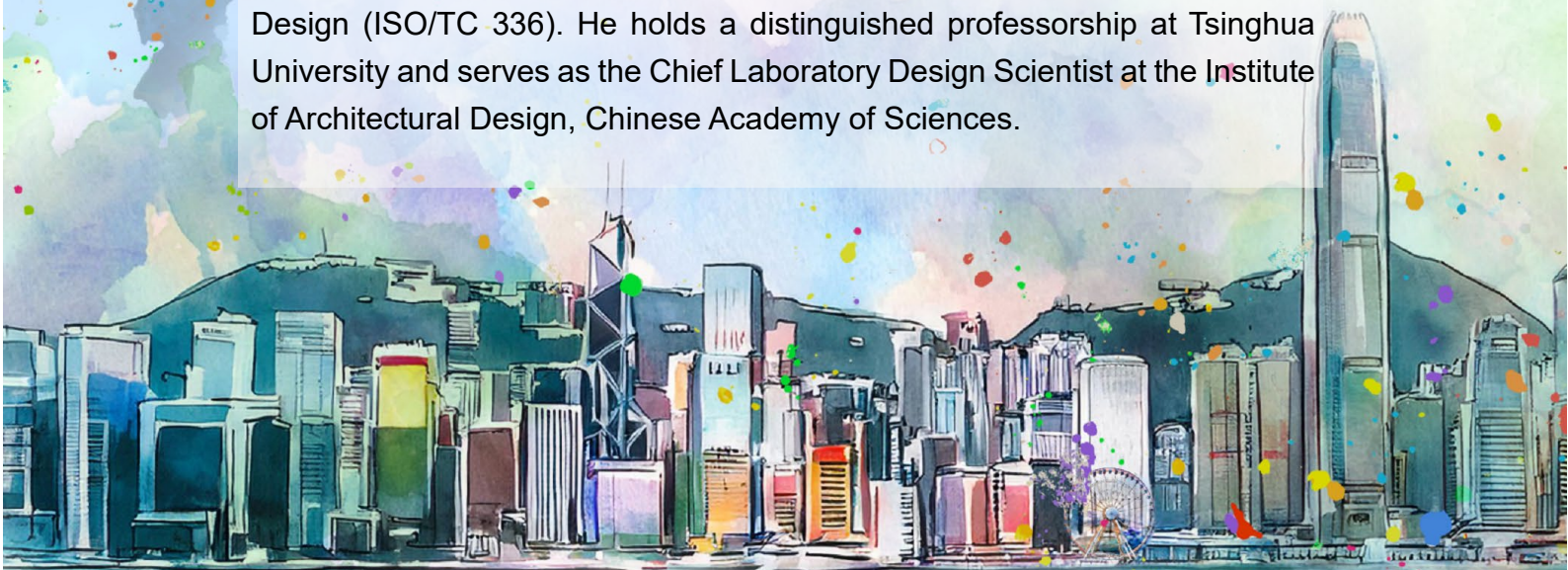
Institute of Architecture Design and Research,
Chinese Academy of Sciences

ABSTRACT

The 4th Industrial Revolution is reshaping society, with applications in the laboratories represented by Smart Laboratory. The ISO/TC 336, the International Organization for Standardization Technical Committee on Laboratory Design, has accurately identified global trends in laboratory technology and is fully committed to advancing the standardization of this disruptive innovation. The presentation will share a case study to introduce smart laboratory technologies, design concepts, application scenarios, standards development, and the impact on the future.

BIOGRAPHY

Mr. Jianyu HUANG is the Committee Manager of the International Organization for Standardization (ISO) Technical Committee on Laboratory Design (ISO/TC 336). He holds a distinguished professorship at Tsinghua University and serves as the Chief Laboratory Design Scientist at the Institute of Architectural Design, Chinese Academy of Sciences.



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Parallel Session: Intelligent E&M



Accelerating Data-driven and Intelligence-led Smart City and Smart Healthcare

Mr. WU Bin, Robin

Chief Healthcare Industry Digitalization Expert,
Huawei

ABSTRACT

The presentation examines the transformative impact of data-driven intelligence on urban development, focusing on smart cities and health care. It covers the trend of innovation driven by data and led by intelligence, accelerating data-driven and intelligence-led smart cities, and accelerating data-driven and intelligence-led smart healthcare. Through this comprehensive exploration, the presentation aims to demonstrate how leveraging data and intelligence can drive significant advancements in urban living and healthcare services.

BIOGRAPHY

Mr. Wu, Bin (Robin), Chief Healthcare Industry Digitalization Expert from Huawei Global Government and Public Utilities Dept, MBA, TOGAF9 Certified Enterprise Architect in 2010. More than 25 years of work experience, including over 10 years on global business and over 20 years of work experience in government and public utility industries such as digital government, smart city, healthcare, public security, transportation, and energy; previously served as Assistant Vice President of USTC Iflytek, HP Global Enterprise Service Bus ESB Development Manager, and NTT Dimension Data Asia Pacific Key Account Consulting and Delivery Executive.

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Parallel Session: Intelligent E&M



The Standard for Green Intelligent Technologies and Artificial Intelligence for Building Electrical and Mechanical Systems in the Greater Bay Area

Ms ZHOU Quan

Deputy Chief Engineer, Guangdong Provincial Academy of Building Research Group Co., Ltd

ABSTRACT

The presentation explores the collaborative efforts in establishing standards for building electrical and mechanical systems within the Greater Bay Area. It covers the background of these standards development, the current status of the re-commissioning standards, and the integration of AI data standards. The presentation concludes by proposing strategic recommendations for advancing technological standardization throughout the Greater Bay Area.

BIOGRAPHY

Ms. Zhōu committed to research and technical services on building energy conservation, low-carbon cities, and green construction. She has participated in the compilation of more than ten national standards, industry standards, or local standards, and obtained 2 invention patents.



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Parallel Session: New Energy



Develop Green Energy to support Carbon Neutrality

Ir Don CHENG

Chief Operating Officer – HK Business,
Hong Kong & China Gas Co. Ltd

ABSTRACT

The world is facing the challenge of climate change, and governments around the globe are committed to reducing carbon emissions and accelerating the energy transition. While maintaining its core business of providing safe and reliable clean energy, the presentation highlights Towngas's strategically expanded into new energy ventures. This expansion encompasses the supply of green methanol, hydrogen, and sustainable aviation fuel (SAF) for maritime, land, and aviation as well as industrial applications, helping various sectors achieve carbon neutrality.

BIOGRAPHY

Ir Don Cheng is the Chief Operating Officer - Hong Kong Business of the Hong Kong and China Gas Co. Limited. With 29 years in gas engineering and related fields, he now focuses on new energy initiatives, especially hydrogen energy and green methanol. He is also the Vice-Chairman of the Energy and Power Group at the Federation of Hong Kong Industries.



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Parallel Session: New Energy



Renewable Energy Development and Energy Transition in North China Region

Mr. LIU Hanwei

Director, Division of Sector Regulation, North China Energy Regulatory Bureau of National Energy Administration

ABSTRACT

The North China region is strategically positioned as a vital energy base and economic hub in China. It is crucial in ensuring national energy security and shaping economic development. The presentation provides a brief overview of renewable energy development in North China since the 13th Five-Year Plan, analyzing the efforts made by energy regulatory agencies and other sectors to promote renewable energy growth. It summarizes the progress in energy transition and constructing a new energy system while offering insights into future initiatives and directions for continued advancement.

BIOGRAPHY

1999 July: Graduated with a Master's degree from Tsinghua University
1999-2005: China Datang Power Generation Group, (China National Water Resources & Electric Power Materials & Equipment Group Co.Ltd)
2005-2013: North China Energy Regulatory Bureau of National Energy Administration, Division of sector Regulation



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Parallel Session: New Energy

Nuclear Power for a Green Future



Prof. PAN Chin

CLP Power chair professor of nuclear engineering and head of the Department of Mechanical Engineering, the City University of Hong Kong

ABSTRACT

Nuclear power with its low carbon nature will play a significant role for carbon neutrality in 2050-2060. It is projected that nuclear power will play a significant role like other renewables in China contributing about 18% of electricity at that time. The amount of nuclear power installation may be sixfold of the current installation of 56 units accounting for 54 GWe. The presentation explores nuclear safety, efficient use of nuclear fuels, and the minimization of high-level nuclear waste. Enhancing nuclear safety can be achieved through innovative passive system designs, such as natural circulation to warrant the cooling of reactor core and containment under any situation. The use of nuclear fuels will be much more effective with the development of next-generation nuclear fission power technology integrated with a closed fuel cycle. The technology may recycle the fissile fuels converted from the spent fuels and reduce the nuclear wastes simultaneously.

BIOGRAPHY

Professor PAN Chin is CLP Power chair professor of nuclear engineering and head of the Department of Mechanical Engineering at City University of Hong Kong. Prof. Pan's research focuses on multi-phase flow and boiling heat transfer. He published a book titled "Boiling Heat Transfer and Two-phase Flow" in Chinese in 2001 and has published more than 120 journal papers.

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Parallel Session: New Energy



Mr. Jesse CHIN

Director of Market Development &
Surveillance Department, Energy Market
Authority of Singapore



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Parallel Session: High-Performance Buildings



Green Building Initiatives in HK Electric

Ir K.T. HUNG

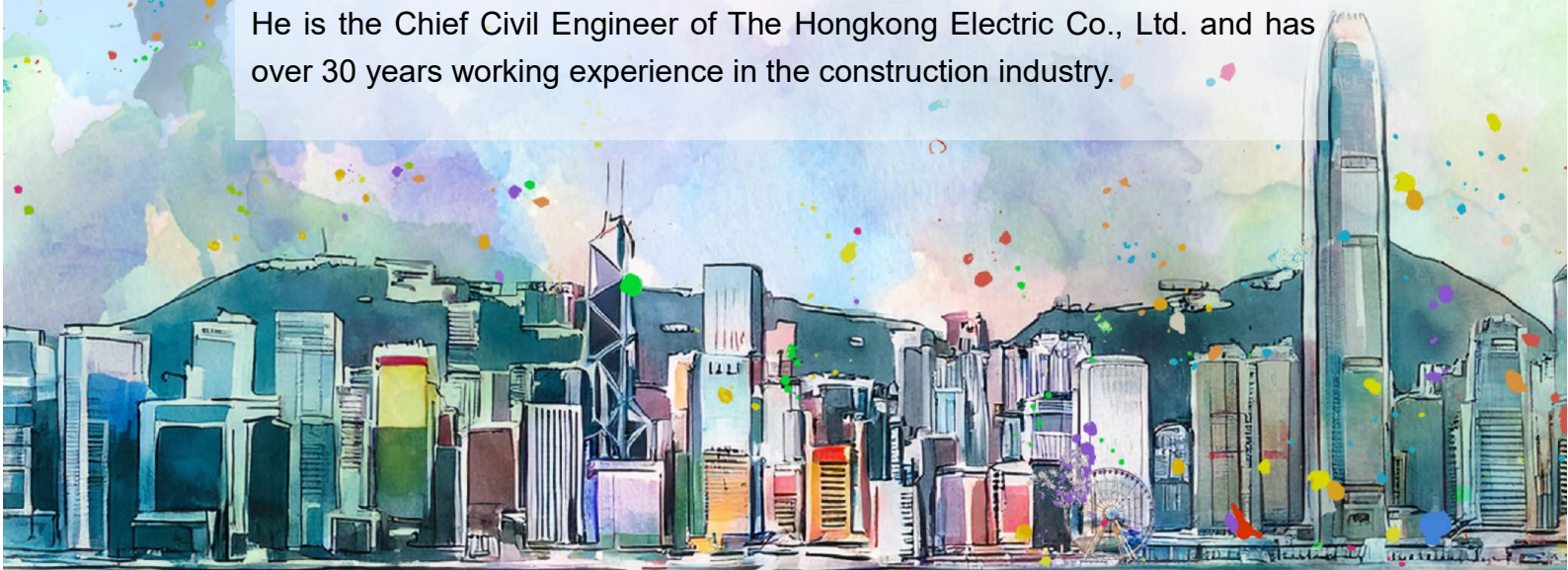
Chief Civil Engineer,
The Hongkong Electric Co., Ltd.

ABSTRACT

The presentation highlights HK Electric is committed to providing a world-class electricity supply to Hong Kong and strives to operate its business sustainably with a view to protecting the environment. HK Electric has included “green elements” in its projects for decades ago to reduce the environmental impacts of new buildings and enhance the health and well-being of occupants. These also lead to lower operating costs due to reduced energy and water consumption and combating climate change by reducing carbon footprint. The presentation will also showcase HK Electric’s green initiatives and efforts to promote “green” in its building projects.

BIOGRAPHY

Ir K.T. HUNG obtained his bachelor and master degree in Civil and Structural Engineering in The University of Hong Kong in 1990 and 1996 respectively. He is the Chief Civil Engineer of The Hongkong Electric Co., Ltd. and has over 30 years working experience in the construction industry.



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Parallel Session: High-Performance Buildings



High-Quality Development: Right Here, Right Now, With You

Ir MA Siu Cheung Eric

President,
The Hong Kong Institution of Engineers

ABSTRACT

As the world grapples with the challenges of climate change, urbanization, and population ageing, Hong Kong stands as a beacon of hope, demonstrating its ability to balance progress with preservation. The presentation explores the city's remarkable transformation from a modest trading hub to a global financial centre, highlighting its innovative spirit and dedication to high-quality development. From the iconic Hong Kong-Zhuhai-Macao Bridge to the pioneering seawater District Cooling System, Hong Kong's compactness has driven the development of innovative engineering concepts, sustainable urban mobility solutions, and pioneering smart city technologies. The presentation will illustrate how Hong Kong is poised to lead the way in setting benchmarks for high-density urban environments, ensuring a resilient, efficient, and sustainable future for generations to come.

BIOGRAPHY

Ir Eric MA is the President of The Hong Kong Institution of Engineers. He was an Executive Director and the CEO of New World Development Company Limited, an Executive Director and the CEO of NWS Holdings Limited, the Acting CEO of Hong Kong-Shenzhen Innovation and Technology Park Limited and Principal Consultant of the Hong Kong Science & Technology Parks Corporation. Ir Ma was previously the Secretary for Development of the HKSAR Government, overseeing policy areas ranging from urban planning to heritage conservation and addressing the supply-demand imbalance in land and housing. He was the Executive Vice President, Civil & Infrastructure, Asia Pacific, of AECOM prior to joining the HKSAR Government.

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Parallel Session: High-Performance Buildings



Smart Building of the Future

Ir Prof. Thomas HO

Chairman,
Construction Industry Council

ABSTRACT

The Smart Building of the Future should incorporate the Design for Safety from the planning stage, ensuring robust protection and resilience. The presentation highlights the utilization of the Modular Integrated Construction (MIC) and Modular Integrated Mechanical, Electrical, and Plumbing (MIMEP) systems, which streamline and enhance the efficiency of the construction process. The presentation will also share the Smart Facility Management System application to oversee building operations, optimizing energy use and maintenance and the robotics to enhance daily operations, boosting efficiency and safety. The presentation will illustrate through these discussions that the holistic approach improves operational performance and achieves significant social outcomes, such as increased accessibility, sustainability, and occupant well-being.

BIOGRAPHY

Ir Prof. Thomas HO is the Chairman of the Construction Industry Council (CIC). The mission of CIC is to CONNECT, LEAD and EXCEL. He possesses over 40 years of experience in construction industry. He has been dedicated to spearheading project management and general management, safety initiatives, sustainable development and innovation excellence in the construction industry. He is recognised by the industry as the figurehead in promoting excellence in construction management, safety leadership, as well as sustainable and quality construction. After joining CIC, he promoted Mi-Infinity, Integrated Common Data Environments and holistic Robotic Construction, he also insisted Design for Safety, High Productivity and Sustainability in the future of Construction. Livability and Well-being will be the ultimate game. In recognition of his advanced mindset in advocating innovative and green construction initiatives, Ir Prof. HO received the Outstanding Achievement Award from Hong Kong Institute of Construction Managers in 2018. He was appointed as a Fellow Member of the Hong Kong Academy of Engineering Sciences.

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Parallel Session: High-Performance Buildings



Energy Storage Technologies in Modern Grids: Overview, Engineering Applications, and Challenges

Prof. CHUNG Chi Yung

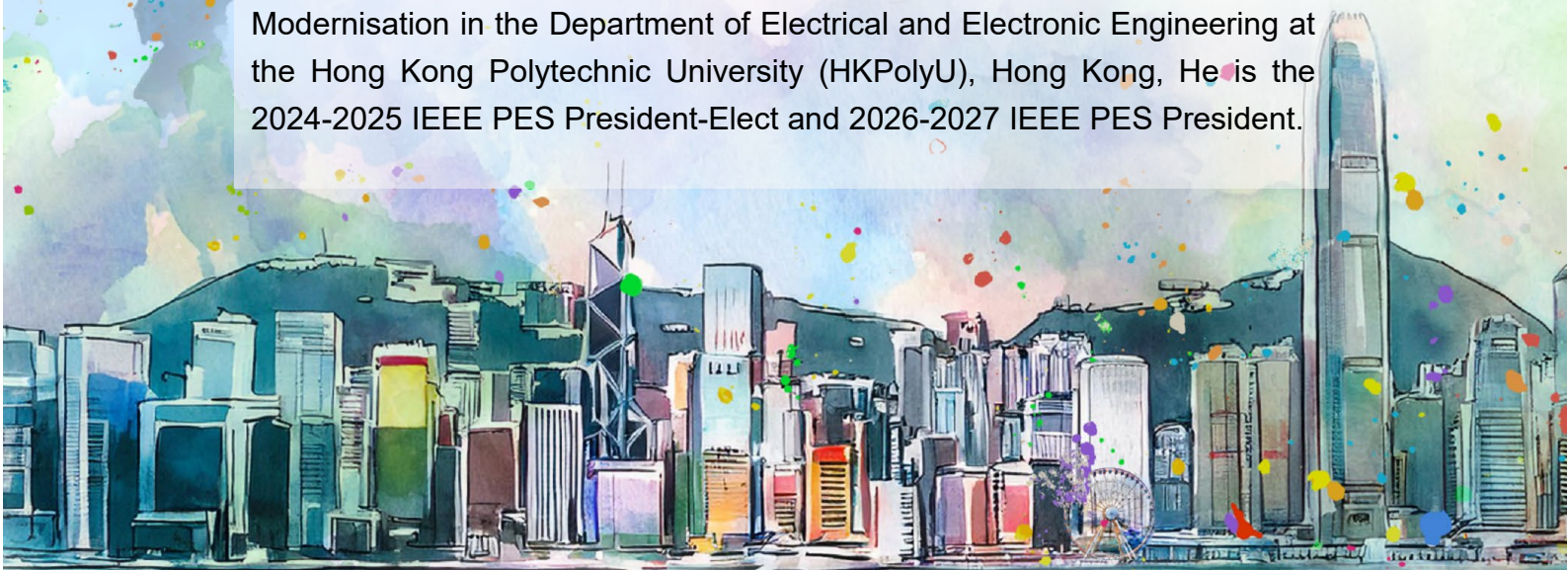
Head of Department and Chair Professor of Power Systems Engineering, the Hong Kong Polytechnic University

ABSTRACT

The energy storage system is crucial in modern grids, enhancing flexibility and facilitating renewable energy integration. The presentation comprehensively analyses various energy storage technologies within the context of modern grids, including their classification, applications, challenges, and potential solutions. From traditional pumped-storage hydroelectricity to emerging vanadium redox flow batteries, the aim is to deepen understanding of the similarities and differences among these technologies, ultimately promoting their implementation in Hong Kong.

BIOGRAPHY

Prof. C.Y. Chung is the Head of Department, Chair Professor of Power Systems Engineering and Founding Director of Research Centre for Grid Modernisation in the Department of Electrical and Electronic Engineering at the Hong Kong Polytechnic University (HKPolyU), Hong Kong. He is the 2024-2025 IEEE PES President-Elect and 2026-2027 IEEE PES President.



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Parallel Session: Green Mobility



Driving Green: Sustainable Approaches to Railway Development and Operations

Ms Jessica CHAN

Head of Sustainability,
MTR Corporation

ABSTRACT

With the purpose of “Keep Cities Moving”, MTR Corporation is committed to embedding sustainability principles into its business and operations to create long-term value for all stakeholders. MTR has identified three key focus areas to advance its environmental and social objectives. The presentation will elaborate MTR’s sustainability strategy for environmentally conscious railway systems, focusing on the integration of sustainable practices in railway construction and operations. It involves enhancing energy efficiency, reducing emissions, and promoting eco-friendly operations. By highlighting the importance of green initiatives in the railway sector, this discussion aims to showcase the pivotal role of sustainability in shaping the future of transportation infrastructure.

BIOGRAPHY

Ms Jessica Chan is a seasoned sustainability professional with over 25 years of experience in environmental and corporate sustainability. She serves on various international and local sustainability-related committees, acts as an advisor for two sustainability-related master courses at The Chinese University of Hong Kong and Lingnan University, and is a member of the Board of Examiners for HKMA’s Hong Kong Sustainability Award.

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Carbon-Neutral Aviation – The Importance of Sustainable Aviation Fuel

Ms Grace CHEUNG

General Manager Sustainability,
Cathay Pacific Airways Limited

ABSTRACT

Aviation is a hard-to-abate sector because of the use of carbon intensive jet fuel. At the same time, to support global decarbonisation efforts, all major international airlines, including Cathay Pacific, have committed to carbon neutrality by 2050. Significant challenges lie ahead in reducing the carbon footprint of international aviation without sacrificing its role in facilitating international tourism, trade, and providing the only means to rapidly travel long distances across the globe. The presentation will explore the challenges faced by this hard-to-abate sector and the critical role that Sustainable Aviation Fuel plays.

BIOGRAPHY

Ms Grace Cheung, General Manager Sustainability at Cathay Pacific, leads the Group Sustainability Department. Under her leadership, Cathay Pacific aims for net zero carbon emissions by 2050, with mid-term targets for sustainable aviation fuel and carbon intensity improvement. She also spearheaded efforts in circular economy, reducing single-use plastics. Grace represents Cathay in industry groups, chairs the oneworld alliance's Environment & Sustainability Board, and is Vice Chair of IATA's Sustainability & Environment Advisory Council.

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On the Journey to Green and Diversified Development

Mr. ZHANG Defu

Deputy Director-General of Transport Department,
China State Railway Group Co., Ltd.

ABSTRACT

The presentation provides a comprehensive overview of the development of railways in China from four key aspects: the overall status of railway operations, green railway construction, diversified business development, and passenger services. It will cover railway network, train operation, e-tickets, face-ID, internet meal orders, rail-air connection, tourism trains, high-speed express delivery, transport for public benefit and other interesting topics. Through this multifaceted exploration, the presentation aims to illustrate the dynamic evolution of China's railway system and its commitment to sustainability, innovation, and enhanced passenger experience.

BIOGRAPHY

Mr. Zhang Defu, Deputy Director-General and Senior Engineer of Transport Department of China State Railway Group Co., Ltd. (CR), has been engaged in railway operation and management for a long time. With a spirit of innovation and exploration, he has deep insight especially in railway transportation organization.



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Technological Innovation and Practice of Vehicle Intelligent Safety Testing and Evaluation

Mr. TANG Yu

Deputy Director of Intelligent Driving and Active Safety Department, China Automotive Engineering Research Institute Co., Ltd.

ABSTRACT

The presentation highlights the rapidly evolving landscape of Intelligent Connected Vehicles (ICVs) and their impact on the automotive industry. The presentation delves into three key areas: The development trend of ICV industry, including policy formulation, market scale, standards and regulations, and integration of vehicle-road-cloud; the Development trend of ICV technology, including the integration of artificial intelligence and intelligent driving, as well as the security challenges brought about by it; and Innovation and Practice of CAERI: Facing the new common industry requirements for intelligent safety testing and verification of automobiles, CAERI has made technological innovations and applied practices in the construction of China's characteristic scenario library, evaluation methods and standards, testing tools and equipment, etc.

BIOGRAPHY

Mr. TANG has been engaged in research in the field of ICV testing and evaluation technology, focusing on multi-pillar testing of intelligent driving in complex environments, typical scenario construction, and anthropomorphic evaluation. He has been authorized 12 invention patents and published 8 academic papers. He has won the first prize of China-SAE Science and Technology Award, the first prize of ITS-China Science and Technology Award, the first prize of the BRICS Industrial Innovation Contest, the Gold Medal at the International Exhibition of Inventions Geneva.



中華人民共和國成立七十五周年
75th Anniversary of the Founding of
the People's Republic of China

機電工程署研討會 EMSD Symposium 2024


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16 - 18 Dec 2024

16.12.2024

研討會
Symposium

 香港西九文化區M+
M+, West Kowloon Cultural District, HK

 9am - 6pm

17.12.2024

區域供冷系統開放日
District Cooling System
Open Day

 香港九龍啟德
Kai Tak, Kowloon Bay, HK

 10am - 12nn

18.12.2024

參觀大亞灣核能科技館
Site Visit to the Daya Bay
Nuclear Power Science and
Technology Museum

 廣東
Guangdong

 8:30am - 6pm

名額已滿
Quotas filled



活動網址
Event Website

http://www.emsd.gov.hk/en/emsd_symposium_2024/

