



Academic Conference	Asian University Alliance (AUA) Seminar on Smart and low carbon city
Hosts	HKUST
Conference Location	Mr and Mrs Lee Siu Lun Lecture Theater (LT-K), HKUST, Clear Water Bay, Hong Kong
Dates	30 May – 2 June, 2024
Program	Attached
Deadline for Abstract Submission	All presentations are invited speech
Concept notes	All presentations are invited speech
Abstract submitted to	All presentations are invited speech
Eligibility	Open to public
Fees	No registration fee

Asian University Alliance (AUA) Seminar on

Smart and low carbon city

Time: 30^{th} May $- 2^{nd}$ June, 2024

Location: Mr and Mrs Lee Siu Lun Lecture Theater (LT-K), HKUST, Clear Water Bay, Hong Kong Online broadcast link¹:

- Zoom
 - Day 2: <u>https://hkust.zoom.us/j/3910207677?omn=99873359569</u>
 - Day 3: <u>https://hkust.zoom.us/j/3910207677?omn=95687847756</u>
- Bilibili
 - Day 2: <u>http://live.bilibili.com/27798577</u>
 - Day 3: <u>http://live.bilibili.com/27798577</u>

Day 0 (30th May, Thursday)

Participants arrive at Hong Kong

Day 1 (31st May, Friday)²

9:00-10:40	Welcome and keynote speech
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Opening and Welcome Speech

Limin Zhang, Chair Professor, Department Head, The Hong Kong University of Science and Technology Key technologies and applications of multi-generation source flexible grid

Zhifu WU, Project Lead, State Grid Zhejiang Electric Power Company

Research and application of new human-oriented environmental control system and intelligent operation technology

Borong LIN, Professor, Associate Dean, Tsinghua University

Roadmap for promoting grid-interactive distributed energy sources

Shiming TIAN, Professorate Senior Engineer, Department Head, China Electric Power Research Institute

10:40-12:00 Session 1. Smart grid

Resilience of smart grid in extreme weather conditions

Na LUO, Senior Scientist, State Grid Smart Grid Research Institute

¹ Only Day 2 and Day 3 will be broadcasted. Day 1 is off the record.

² Official language of Day 1 is Chinese.

"One-Click Res	sponse" demand-side management business model in Zhejiang Power Grid	
Leveraging bui	Iding resources to provide grid services	
Xi ZHANG, Ser	nior Scientist, State Grid Smart Grid Research Institute	
Predicting build Dan WANG, Po	ling load flexibility using thermal-resistance and thermal-capacity model ostdoc, The Hong Kong University of Science and Technology	
12:00-13:30	Lunch (HKUST China Garden Restaurant)	
13:30-14:40	Keynote speech	
Grid-interactive smart HVAC system		
Chunyuan ZHENG, Senior manager of intelligent building business group, Midea		
Robust optimiz Pu YANG, IDC	ation to enhance cooling system energy efficiency for Tencent data center Tech Lead, Tencent	
14:40-15:30	Session 2. Energy-efficient data center	
Application and collaborative control of evaporative precooling technology for data centers in hot and humid regions		
Yundan LIAO, A	Associate Professor, Deputy Head, Guangzhou University	
AlphaDataCent	erCooling: A virtual testbed for optimizing data center cooling system	
Si WU, PhD, Th	he Hong Kong University of Science and Technology	
15:30-16:00	Tea break	
16:00-17:00	Keynote speech	
Occupant-centric digital twin platform for Variable-Air-Volume air conditioning system in commercial		
Viana 7HOU	Professor Tongii University	
Key technologi	es for smart centralized energy system	
Hao JIANG, Associate Dean, Smart Energy Research Institute, Shenzhen Energy Group		
17:00-18:00	Session 3. High-performance low-carbon building	
Exploring Vers	atile Applications of Solid Oxide Cells: From Efficient Co-generation to Green Hydrogen	
Production		
Jingyi WANG, J	Researcher, Harbin Institute of Technology (Shenzhen)	
Developing an <i>Mingchen LI</i> . P	automatic approach to generate Brick model from Building Information Modelling PhD. The Hong Kong University of Science and Technology	
Optimal chiller	sequencing for large-scale commercial buildings	
Siqi LI, PhD, The Hong Kong University of Science and Technology		
18:00-19:30	Dinner (Unibistro Restaurant)	
19:30-22:00	Hong Kong night view (Peak Tram to Victoria Peak)	

Day 2 (1 st June, Saturday)			
9:00-10:20	Welcome and keynote speech		
Opening and Welcome Speech Hong Kam LO, Chair Professor, Dean of School of Engineering, The Hong Kong University of Science and Technology			
SMART: God o Khee Poh LAM	or Devil is in the DATA , Chair Professor, Dean, National University of Singapore		
Indoor environment creation under the goal of carbon neutrality Yingxin ZHU, Professor, Former Associate Dean, Tsinghua University			
10:20-12:00	Session 4. Smart Building		
Inside the feedback loop: bridging technology and human experience in buildings Zhun Min Adrian CHONG, Assistant Professor, National University of Singapore			
Modeling for control: challenges and practices of model based smart control of building energy systems <i>Zhi'ang ZHANG, Assistant Professor, University of Nottingham (Ningbo)</i>			
Comparing different parameter identification techniques for optimal control purpose Parastoo MOHEBI, PhD, The Hong Kong University of Science and Technology			
A knowledge-i buildings Zhaoji WU, Ph.	nformed optimization framework for performance-based generative design of sustainable <i>D</i> , <i>The Hong Kong University of Science and Technology</i>		
12:00-13:30	Lunch (HKUST China Garden Restaurant)		
13:30-15:00	Keynote speech		
Overlooked aspects, hidden potentials and future challenges of AI for better building energy control <i>Cheol Soo PARK, Professor, Seoul National University</i>			
From Monitoring-based Problem Identification to Self-Correcting, Optimized Control Technology Guanjing LIN, Associate Professor, Tsinghua University (Shenzhen)			
Enhancing Sect Liu LIU, Senior	urity in Power Systems: A Safe Reinforcement Learning Approach Researcher, Tencent AI lab		
15:00-15:40	Session 5. Smart City		
An intelligent decision system for the low carbon renovation of old residences in China			
Combining Geographic Information System (GIS) and satellite image for urban-scale building energy modeling Shihong ZHANG PhD The Hong Kong University of Science and Technology			
15:40-16:20	Site visit HKUST Photovoltaic Integrated Green Roof (PVIGR) experiment platform		
16:20-16:40	Tea break		
16:40-18:30	Session 6. RGC Young Collaborative Research Fund C6003-22Y Progress		
Investigating Photovoltaic Integrated Green Roof (PVIGR) Systems through experimental stud			
Evaluation the solar potential in complex urban environment, a comparative study between Hong Kong and			
Guangzhou Man-sing Charles WONG Professor Associate Dean The Hong Kong Polytechnic University			
Deep-learning	Deep-learning based solar resource assessment and forecasting		
Mengying LI, Assistant Professor, The Hong Kong Polytechnic University			

A Health Perspective to Achieving Carbon Neutrality		
Linyan LI, Assistant Professor, City University of Hong Kong		
Simulating the Photovoltaic Integrated Green Roof (PVIGR) for optimal control		
Haoran CHANG, PhD, The Hong Kong Polytechnic University		
18:30-20:00	Dinner (Unibistro Restaurant)	
20:00-22:00	Victoria Harbor Night View	

Day 3 (2nd June, Sunday)

9:00-10:00 Keynote speech

Enhancing thermal management of Electric Vehicles with integrated smart driving components and a fully glass roof design

Ruobing ZHOU, Senior Engineering Manager, Bosch / Tsinghua University

Intelligent Environment Control and Passenger Thermal comfort Improvement for Vehicles *Maohui LUO, Associate Professor, Tongji University*

10:00-12:00 Session 7. Smart Vehicle Cabin

AI-based thermal management in Electric Vehicles

Siliang LU, Senior AI Scientist, Bosch

Hazard perception in SAE level 2 vehicles: From mental model to driver training

Dengbo HE, Assistant Professor, HKUST (Guangzhou)

Non-invasive measurements of thermal discomfort for thermal preference prediction based on occupants' adaptive behavior recognition

Yanchen LIU, Associate Professor, Guangzhou University/Tsinghua University

Co-optimizing battery, motor, and cabin for Electric Vehicles

Lige ZHAO, PhD student, The Hong Kong University of Science and Technology

12:00-13:30 Lunch (HKUST China Garden Restaurant)

13:30-15:00 Session 9. User behaviors in electric vehicles

Developing natural interface to enhance human-AI interaction: a psychological approach

Jingyu ZHANG, Professor, University of Chinese Academy of Sciences / Peking University

Exploring Users' Trust in Fully Driverless Vehicles After Their First Ride: An on-road study with traffic variation considered

Zhenyu WANG, PhD, HKUST (Guangzhou)

Modeling Battery Electric Vehicle Users' Charging Decisions in Scenarios with Both Time-Related and Distance-Related Anxiety

Jiyao WANG, PhD, HKUST (Guangzhou)

Participants depart from Hong Kong

Acknowledgement

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