

Applied Energy Symposium and Forum 2019

# Low Carbon Cities & Urban Energy Systems



**cue**

Low-carbon Cities & Urban Energy

2019 in XIAMEN  
OCTOBER 16-18

**i°ca e**

International Conference on Applied Energy

[www.applied-energy.org/cue2019](http://www.applied-energy.org/cue2019)

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- **Welcome to CUE2019**
- **Acknowledgments**
- **Committees**
- **Keynote Speakers**
- **Site Visits**
- **Practical Guide**
- **Program at a Glance**
- **Speaker's Guide**
- **Venue's Information**
- **Panel Sessions**
- **Oral Presentations**
- **Poster Presentations**
- **Note**
- **Conference4me**



# FUTURE ENERGY CENTER

**THE CHALLENGES** due to energy related emissions, increased energy demand and the fragile state of the global economy calls for rethinking global energy systems. Therefore, the research within the Future Energy Center at Mälardalen University focuses on renewable energy, energy efficiency and emission mitigation, as well as smarter modelling, optimization and management.

**FUTURE ENERGY CENTER** is an established and internationally competitive research environment to achieve scientific excellence and to enhance co-innovation with stakeholders from industry and other organisations. We develop innovative solutions and tools in the areas of energy, building and environmental engineering. The center comprises nine professors, fifteen senior researchers and more than forty graduate students.

**MER14** "MDH:s Evaluation for improved Research quality" was an evaluation of research conducted at MDH

in 2013 and 2014. According to the evaluation Future Energy Center carries out a world-class research.

### THREE FOCUS AREAS

The research at Future Energy Center is focused on three areas:

- TRACK 1** Renewable energy
- TRACK 2** Energy efficiency and emission mitigation
- TRACK 3** Smarter modelling/optimisation and management

**FUTURE ENERGY CENTER** offers studies at post-graduate level in Energy and Environmental Engineering. We are one of the partners of the Graduate School Reesbe (Resource-Efficient Energy Systems in the Built Environment). The center also has established collaborative partnerships with dozens of industrial partners. Scientists are actively participating in various international cooperation worldwide involving in organization of international conferences, establishment of virtual collaboration labs, and exchanges of students and professors.

## **i** CONTACT US [www.mdh.se](http://www.mdh.se)

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**MÄLARDALEN UNIVERSITY  
SWEDEN**

# Welcome to CUE2019



## **Welcome to CUE2019-Applied Energy Symposium 2019: *Low carbon cities and urban energy systems.***

Cities are rapidly getting on top of the agendas of various initiatives worldwide aimed at decreasing the cost and carbon footprint of energy products, services and activities. The demands and pressure on energy infrastructure and resources oblige city infrastructure and consumers to adapt intelligently to ensure efficient, affordable and sustainable solutions.

Developing intelligent energy solutions for resilient urban systems is a global and complex challenge which involves interdisciplinary fields. With this as theme of the conference, CUE2019 aims to provide a premier international forum for all stakeholders including academia, industry and policy decision makers to present and share latest findings in all aspects across this domain, discussing how smart technologies and services can integrate the production and use of energy to support a more sustainable and resilient urban system.

CUE2019 is organized by the international journal, Applied Energy and Applied Energy Innovation Institute (AEii), hosted by Xiamen University, and co-organized by National University of Singapore, Mälardalen University Sweden, The Institute of Urban Environment -Chinese Academy of Sciences, and Imperial College London, and supported by Chinese Society of Engineering Thermophysics, China Association for Science and Technology HOME Program and Fujian Association for Science and Technology. The event consists of two-day symposium and one-day lab/site tours for sharing the most recent progress of RD&Ds in urban energy systems.

We are looking forward to meeting you in Xiamen, China.

Prof. Ning Li  
Xiamen University

Prof. Jinyue Yan  
Editor-in-chief of Applied Energy

# Applied Energy Symposium MIT A+B (MITAB)

icae  
International Conference on Applied Energy

MAY 17-19, 2020  
MIT, Cambridge, USA

[www.applied-energy.org/mitab2020](http://www.applied-energy.org/mitab2020)

## Call for Papers: Applied Energy Symposium: MIT A+B , May 17-19, 2020, Cambridge, USA

Welcome to the Applied Energy Symposium: **MIT A+B**.

The IPCC report “Global Warming of 1.5°C” (Oct. 2018) issued a dire warning that unless CO<sub>2</sub> emissions are halved by 2030, devastating changes, which will be sooner than expected and irreversible, will occur in ocean and on land. Time is running out for transitioning to new energy systems globally. Logic and numbers show that the world must take a two-step approach: **(A)** deploy existing, industrially proven technologies at an unprecedented scale and pace, from now to 2050 -- when a house catches fire, firemen must run to the closest hydrants and stop disputing which water stream would be purer; and **(B)** develop new concepts and technologies that may replace the dirtier parts of **(A)** post-2050, at terawatt scale.

**Examples of conference topics** include, but are not limited to, the following:

- **Renewable energy:** solar energy (A or B), wind energy (A), bioenergy (A or B), and other renewables.
- **Clean energy conversion technologies:** fuel cells and electrolyzers (A or B), conversion of petroleum/gas/coal to high-valued materials and chemicals (A), hybrid energy systems, such as the combination of intermittent renewable energies and nuclear heat storage for load following, chemicals/materials/fuel production (A or B), multi-energy carrier energy systems (A or B).
- **Energy storage:** grid-scale batteries (A), battery management systems (A), fuel cell/ electrolyzer management systems (A), pumped hydro/compressed air (A), thermal energy storage (A or B), distributed energy storage (A).
- **Nuclear energy:** innovative concrete solutions and civil constructions (A), application of robotics and AI (A), shipyard constructed floating reactors (A), small modular reactors and micro-reactors (A or B), fast neutron reactors (B), fusion reactors (B).
- **Mitigation technologies:** Carbon capture and sequestration (B), nuclear waste (A), solar waste (A),

battery waste (A), reduced-CO<sub>2</sub> production of cement, bulk metals and chemicals (A or B).

- **Intelligent energy systems:** smart grids (A), ultra-efficient/superconducting power transmission (B), wireless power transmission (B); electrification of transportation and industrial production, such as electric cars/trucks (A or B), electrified air flight (A or B), microwave/plasma/electrochemical processing (A or B).
- **Sustainability of energy systems:** Environmental monitoring (A), social mobilization (A), consensus building (A), governmental policy making (A), international coordination (A).
- **Sustainable geoenergy:** geothermal (A or B), gas hydrate (A), unconventional natural gas (A), LNG, reducing methane and CO<sub>2</sub> emission (A) of oil and gas sector, sustainable geoenergy development and management (A).
- **Energy, food, water and air:** water and air treatment (A), reduced-CO<sub>2</sub> production of food (A), Water-Food-Energy Nexus (A).

Details and updated information are available at [www.applied-energy.org/mitab2020](http://www.applied-energy.org/mitab2020). If you have questions regarding this conference or submission, please contact Conference Organization Chair Dr. Ray (Zhenhua) Rui at MIT ([mitab@applied-energy.org](mailto:mitab@applied-energy.org)).

### Important Dates

Submission starts: November 1<sup>st</sup>, 2019

Submission deadline: Feb 1, 2020

Notification of acceptance: Feb 20, 2020

Conference: May 17 - 19, 2020

We look forward to meeting you at MIT, USA.

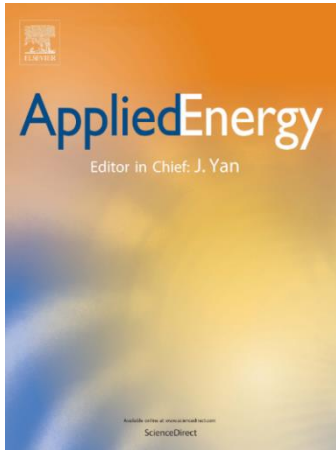
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Prof. Ju Li, Massachusetts Institute of Technology

Prof. Michael J. Aziz, Harvard University

Prof. Jerry Yan, Editor-in-chief of Applied Energy

# Acknowledgements



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## **MISSION/OBJECTIVES**

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Maximize the win-win benefits through international cooperation in focused topics.



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College of Energy, Xiamen University (COE-XMU) was established upon the former School of Energy Research to train professionals in clean and low-carbon energies and to develop and disseminate new energy technologies. COE is a key institute receiving privileged support from China's "985 Project" and "Double First-class Initiative". COE hosts a bachelor degree program in New Energy Science and Engineering and doctoral degree programs in Energy Efficiency Engineering, Nuclear Engineering and Materials, Energy Chemical Engineering and Photovoltaic Engineering. With its fledged academic system for training bachelors, masters and doctors with global perspectives, the College produces innovative talents of all-round development to serve China's national strategies, facilitate local economic development and help companies out of technological plight.



**Research Institute for Energy Efficiency Engineering** explores into energy efficiency issues in sectors including industry, building, transportation, economics and management. It develops, demonstrates and disseminates leading-edge energy efficient technologies, and conducts innovative RD&Ds of smart energy systems such as micro-grid, internet of energy, fuel cell based cogeneration and integrated energy systems.

**Research Institute for Chemical Energy** specializes in research of key materials, in-situ characterizations and industrial technologies unique to electrochemical storage and conversion systems, including electrode material, ceramic membrane, functional electrolyte additive and binder for lithium-ion battery etc.

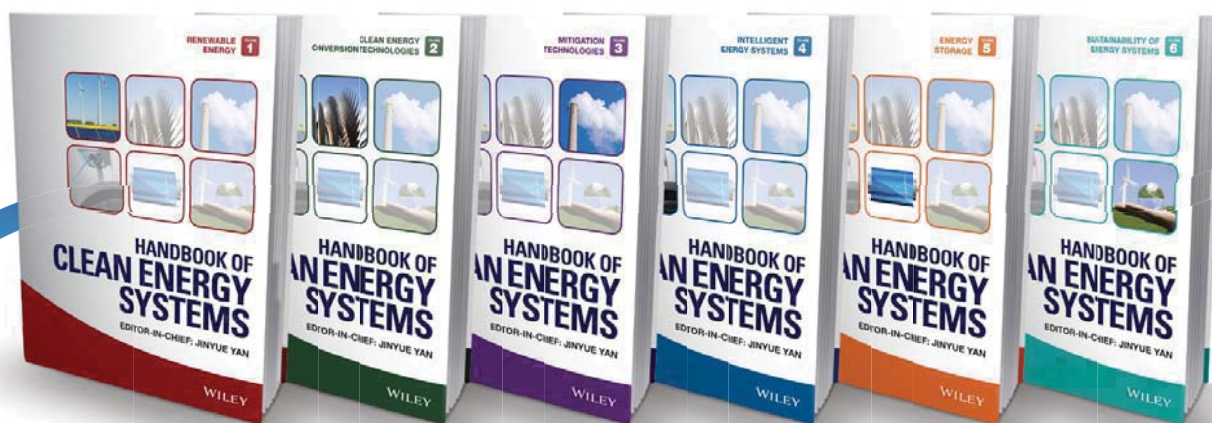
**Research Institute for Nuclear Energy** aims at providing talents and cutting-edge technologies for nuclear development and nuclear safety management, including advanced nuclear power systems, radiation behavior, digital I&C, fluid and corrosion, nuclear material R&D, nuclear technology application and information management.

**Research Institute for Bioenergy** focuses on key issues with multi-channel conversion of biomass and industrial application of key technologies including the production of functional materials, biogas, liquid fuels and bio-based high-value chemicals through biochemical, chemo-catalytic and thermochemical techniques.

**Research Institute for Solar Energy** looks at RD&Ds of key technologies in the solar photovoltaic sector, with a focus on photovoltaic materials, devices and systems. Major research includes 3G silicon heterojunction solar cell, up-and-down converting solar cell, CIGS solar cell, perovskite solar cell, graphene solar cell, nano solar cell, total carbon spectrum solar cell etc.



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# Keynote Speakers



**Prof. Dongxiao Zhang**

**Southern University of  
Science and  
Technology**

## ***Keynote: Big Data & Machine Learning for Energy Studies***

Professor Zhang is the Provost at Southern University of Science and Technology, Shenzhen, China. He is a Member of the U.S. National Academy of Engineering, an Honorary Member of Society of Petroleum Engineers, and a Fellow of Geological Society of America. He had held positions as Senior Scientist at Los Alamos National Laboratory, Miller Chair Professor at the Department of Petroleum and Geological Engineering at the University of Oklahoma, Chair Professor at the University of Southern California, Executive Dean of Graduate School and Dean of College of Engineering at Peking University. He has authored 2 books and published over 180 peer-reviewed papers. He earned both his Master's degree and Ph.D. in hydrology and water resources in 1992 and 1993, respectively, from the University of Arizona. Professor Zhang is an internationally well known expert in unconventional oil and gas production, groundwater hydrology, and geological carbon sequestration, whose research achievements in stochastic modeling, numerical simulation, inverse modeling and machine learning are widely adopted by his peers. Professor Zhang has been an associate editor for SPE Journal, Water Resource Research, Advances in Water Resources, SIAM Multiscale Modeling and Simulation, Journal of Computational Geosciences, Journal of Natural Gas Science and Engineering, and Vadose Zone Journal. He has served as a panelist on the RCUK Review of Energy, UK Research Councils, a member of US National Research Council's Committee on New Research Opportunities in the Earth Sciences, and a council member of World Economic Forum Global Agenda Council on New Energy Architecture.



**Dr. Nan Zhou**

**Lawrence Berkeley  
National Laboratory**

## ***Keynote: Making City Systems Energy Efficient, Low Carbon, and Resilient in a New Era***

Nan Zhou is a Staff Scientist, Department Head of the International Energy Analysis Department, and the Group Leader of the China Energy Group of Lawrence Berkeley National Laboratory. In addition, Dr. Zhou is also the director of the U.S.-China Clean Energy Center-Building Energy Efficiency (CERC-BEE), a presidential initiative started in 2009 by the president of the U.S. and the president of China. She has driven this program to meet challenging milestones while engaging with a complex joint U.S.-China stakeholder matrix and facilitated creation of a research program portfolio to focus on breakthrough energy efficiency building technologies, produced a list of new IP, technologies, and codes and standards. Nan is also selected to be the Co-Chair of 2016 Buildings Summer Study of American Council for an Energy-Efficient Economy (ACEEE) and Committee Member of China Green Building Council (China GBC) from 2015, and the Member of the Balaton Group from 2014. She is one of the two U.S. government designated Advisory Board Member of Asia Pacific Energy Research Centre under APEC since 2015, as well as an Advisory Board Member for the APEC Sustainable Energy Center since 2017. Dr. Zhou has been appointed as the Applied Energy Editorial Board member in 2017, She is also the Tianjin University president appointed Honorary Professor, as well as Honorary Professor of Chongqing University, and Xi'an Jiaotong University in China. She received 2013 Architectural Institute of Japan National Encouragement Prize. Dr. Zhou's research has focused on modeling and evaluating China's low-carbon development strategies, assessing building energy efficiency policies and technologies, and development and evaluation of China's appliance standards and labeling program. Additional work includes energy efficiency in industry; and assessments of energy efficiency policies. Dr. Zhou collaborates with and provides technical assistance to diverse governmental and non-governmental organizations and high level leaders in the world on energy efficiency, clean energy, and related topics. She has a total of more than 250 publications, with more than 80 referred journal articles on buildings and energy.

# Keynote Speakers



**Prof. Jianzhong Wu**  
**Cardiff University**

***Keynote: Decarbonisation of Heat Supply Using a Multi-Energy Approach***

Jianzhong Wu is a Professor of Multi-Vector Energy Systems and Head of Department of Electrical and Electronic Engineering at Cardiff University. He researches on Smart Grid and energy infrastructure (modelling, analysis and optimisation of integrated smart energy supply networks). He has contributed to more than 50 EU, EPSRC and industry funded projects as a Principal Investigator or a Co-Investigator. Currently he is a Co-Director of UK Energy Research Centre, a co-Director of EPSRC Supergen Energy Networks Hub, and a co-Principal Investigator of £24.5m WEFO funded FLEXIS project investing future integrated energy systems. He is also a co-investigator of the £5m EPSRC project on Multi-Scale Infrastructure Systems Analytics, £36m Active Building Centre, and the £12m Energy Revolution Consortium. He was the deputy leader of the Multi-Energy Theme of EPSRC HubNet, Principal Investigator of projects on dynamic demand funded by National Grid, and the Cardiff Principal Investigator of EU Horizon 2020 projects on “Peer to Peer Smart Energy Distribution Networks” and “MAGNITUDE”. He is a co-author of books “Smart Grid: Technology and Applications” (2012, Wiley) and “Smart Electricity Distribution Networks” (2017, CRC). He is an Associate Editor of Applied Energy (Impact Factor: 8.426). He is the Director of Applied Energy UNiLAB on Synergies between Energy Networks. He is Co-Director of INCOSE UK Energy Systems Interest Group, a member of Wales Smart Energy System Group, and the Scottish Power Energy Networks Strategic Stakeholder Panel for England and Wales.



**Prof. Fengqi You**  
**Cornell University**

***Keynote: Multi-Scale Life Cycle Optimization for Low-Carbon Urban and Campus Energy Systems***

Fengqi You is the Roxanne E. and Michael J. Zak Professor in Energy Systems Engineering at Cornell University (Ithaca, New York). He also serves as Chair of Cornell Systems Engineering PhD Studies and Associate Director of Cornell Energy Institute. He was on the faculty of Northwestern University from 2011 to 2016, and worked at Argonne National Laboratory as an Argonne Scholar from 2009 to 2011. He has published more than 120 peer-reviewed journal articles, and has an h-index of 54. His recent awards include American Institute of Chemical Engineers (AIChE) W. David Smith, Jr. Publication Award (2011), Northwestern-Argonne Early Career Investigator Award (2013), National Science Foundation CAREER Award (2016), AIChE Environmental Division Early Career Award (2017), AIChE Sustainable Engineering Research Excellence Award (2017), Computing and Systems Technology (CAST) Outstanding Young Researcher Award from AIChE (2018), Cornell Engineering Research Excellence Award (2018), ACS Sustainable Chemistry & Engineering Lectureship Award (2018), and AIChE Excellence in Process Development Research Award (2019), as well as a number of best paper awards. He is currently an Editor of Computers & Chemical Engineering, a Consulting Editor of AIChE Journal, and an editorial board member of several journals (e.g. ACS Sustainable Chemistry & Engineering and Industrial & Engineering Chemistry Research). His research focuses on novel computational models, optimization algorithms, statistical machine learning methods, and multi-scale systems analytics tools for smart manufacturing, digital agriculture, energy systems, and sustainability. For more information about his research group: [www.peese.org](http://www.peese.org)

## Oct 19

9:00 AM Depart from Conference Hotel

### Tour 1: Xiamen University--Siming Campus Tour

Siming Campus is located in Siming District, Xiamen, covering an area of 167 hectares. It mainly houses such academic divisions as the Humanities and Arts, Social Sciences, Natural Sciences, and Engineering and Technology.

### Tour 2: Xiamen University--Xiang'an Campus & Lab Tour

Xiang'an Campus is located in Xiang'an District, Xiamen, covering an area of 243 hectares. It mainly houses such academic divisions as Medicine and Life Sciences, Earth Sciences and Technology, and newly emerging disciplines and applied disciplines. It also houses the Southern Base of Confucius Institute Headquarters and Institute of Confucius Institute Directors.

**College of Energy, Xiamen University (COE-XMU)** was established upon the former School of Energy Research to train professionals in clean and low-carbon energies and to develop and disseminate new energy technologies. COE is a key institute receiving privileged support from China's "985 Project" and "Double First-class Initiative". COE hosts a bachelor degree program in New Energy Science and Engineering and doctoral degree programs in Energy Efficiency Engineering, Nuclear Engineering and Materials, Energy Chemical Engineering and Photovoltaic Engineering. With its fledged academic system for training bachelors, masters and doctors with global perspectives, the college produces innovative talents of all-round development to serve China's national strategies, facilitate local economic development and help companies out of technological plight.

**Laboratory of Marine Environmental Science (MEL)** was formally promoted to a state key laboratory in March, 2005. MEL is currently a primary research institution in China carrying out marine environmental science research. It was evaluated as one of the best State key labs in the Ministry of Science and Technology (MOST)'s last two nation-wide reviews (in 2010 and 2015). MEL is dedicated to cutting-edge research on global change. Emphasizing fundamental and interdisciplinary research, and utilizing technological innovation, MEL's focus is on marine biogeochemistry and its interactions with the marine ecosystem.



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Xiamen University

## Co-organized by

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Institute of Urban Environment, Chinese Academy of Sciences

Imperial College London

## Supported by

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Fujian Association for Science and Technology

Chinese Society of Engineering Thermophysics

## Date

October 16-18, 2019

## Time Difference

GMT + 8 hours

## Venue

Wyndham Grand Plaza Royale Yuzhou Xiamen

No.882 Zhongren Road, Huli, 361015 Xiamen, China



## How to get to the conference venue

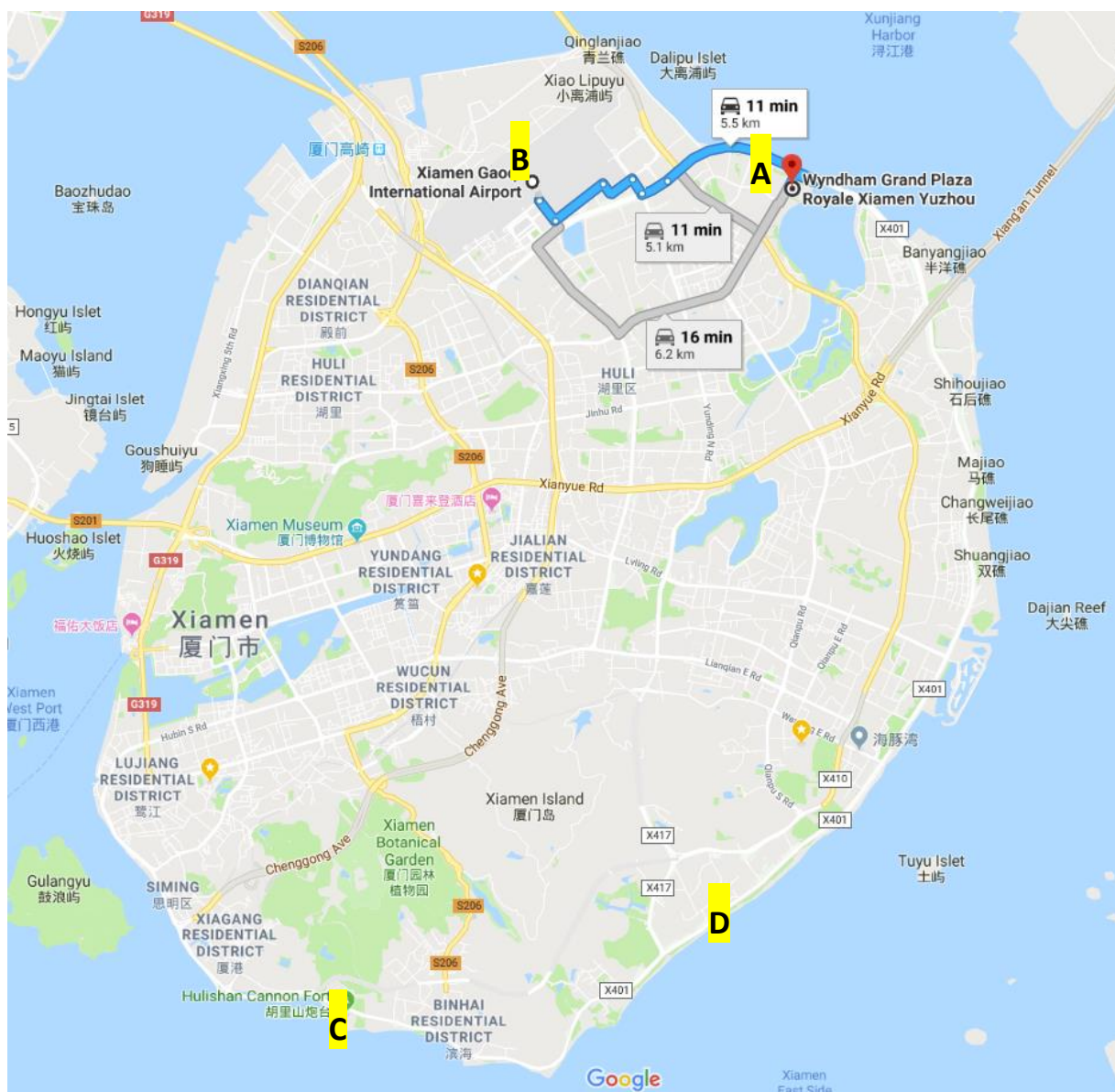
### By taxi

You can take a taxi to Wyndham Grand Plaza Royale Yuzhou Xiamen. However, the taxi fare will be at your cost.

Taxi: Direct distance from Xiamen Gaoqi International Airport to Wyndham Grand Plaza Royale Yuzhou Xiamen is about 5.5 km.

Fare: ~ 25 RMB

Duration: ~ 11 minutes



A. Wyndham Grand Plaza Royale Yuzhou Xiamen (<http://xiamen.wyndhamgr.com/yuzhou-home.html>)

B. Xiamen Gaoqi International Airport

C. Xiamen University – Siming Campus

D. Rongyu Guoyan Building

## About Xiamen

Xiamen is a coastal city in Fujian Province in China. It has been an important port for centuries and became one of China's earliest Special Economic Zones in the 1980s. The name Xiamen means "door to the house", referring to the city's centuries-old role as a gateway to China. Compared to most other cities in the region, Xiamen is definitely a very vibrant, affluent and modern place. The city is known for its mild climate, Hokkien culture and Gulangyu Island, as well as its relatively low pollution. In 2006, Xiamen was ranked as China's 2nd-"most suitable city for living", as well as China's "most romantic leisure city" in 2011. Xiamen and its surrounding countryside is known for its scenery and tree-lined beaches. Gulangyu, a former treaty port enclave, is a popular weekend getaway with views of the city and features many Victorian-style buildings. Xiamen's Botanical Garden is a nature lover's paradise. The Buddhist Nanputuo Temple, dating back to the Tang Dynasty, is a national treasure. Xiamen is also well known as a continuing frontline in the Chinese Civil War, with the nearby Jinmen Islands remaining under Taiwanese control. Water Garden Expo Park has a total area of about 6.76 km<sup>2</sup> (2.61 sq mi), with a land area of 3.03 km<sup>2</sup> or 1.17 sq mi consisting of five exhibition park islands, four ecological landscapes islands and two peninsulas, including the main pavilion, Chinese Education Park, Marine Culture Island, Spa Island, and other functional areas and related facilities.



Xiamen University (XMU), established in 1921 by renowned patriotic overseas Chinese leader Mr. Tan Kah Kee, is the first university founded by an overseas Chinese in the history of modern Chinese education. XMU has long been listed among China's leading universities on the national "211 Project", "985 Project" and "Double First-class" initiative, which have been launched by the Chinese government to support selected universities in achieving world-class standing. Xiamen University Malaysia Campus is the first overseas branch campus established by a prestigious Chinese university. Nestled snugly between green hills and the blue sea, XMU is renowned as China's "most beautiful university" for its excellent education facilities and beautiful environment.

# Program at a Glance

Registration: 14:00 - 20:00 Oct 16; 8:00 - 17:00 Oct 17; 8:00-11:00 Oct 18  
Conference: Oct 16 - 18

Time	Oct 16								
14:00-20:00	Registration								
19:00-20:00	Welcome reception								
Time	Day 1: Oct 17				Time	Day 2: Oct 18			
	Wyndham Grand Ballroom					Wuyuan Bay Room 3	Wuyuan Bay Room 5	Wuyuan Bay Room 6	Wuyuan Bay Room 7
08:30-09:00	Opening				08:20-08:40	Editor Forum	44	15	39
					08:40-09:00		80	96	41
09:00-09:40	Keynote 1				09:00-09:20		145	105	183
					09:20-09:40		50	91	182
09:40-10:20	Keynote 2				09:40-10:00	64	38	199	
					10:00-10:30	Tea/Coffee Break			
10:20-10:50	Tea/Coffee Break				10:30-10:50	12	146	5	156
10:50-11:30	Keynote 3				10:50-11:10	14	207	190	19
					11:10-11:30	168	81	218	21
11:30-12:10	Keynote 4				11:30-11:50	82	213	9	35
					11:50-12:10	122	171	59	67
12:10-12:50	Lunch				12:10-13:30	Lunch			
12:50-13:30	Poster Session								
	Wuyuan Bay Room 3	Wuyuan Bay Room 5	Wuyuan Bay Room 6	Wuyuan Bay Room 7		Wuyuan Bay Room 3	Wuyuan Bay Room 5	Wuyuan Bay Room 6	Wuyuan Bay Room 7
13:30-13:50	Panel Discussion	11	24	196	13:30-13:50	108	114	42	43
13:50-14:10		22	107	46	13:50-14:10	167	186	157	155
14:10-14:30		29	141	184	14:10-14:30	223	209	175	55
14:30-14:50		87	142	124	14:30-14:50	219	71	176	83
14:50-15:10		135	160	79	14:50-15:10	215		180	92
15:10-15:30	Tea/Coffee Break				15:10-15:40	Tea/Coffee Break			
15:30-15:50	17	88	99	26	15:40-16:00	3	61	227	100
15:50-16:10	30	98	106	25	16:00-16:20	148	103	31	34
16:10-16:30	27	151	109	37	16:20-16:40	133	132	221	138
16:30-16:50	86	173	121	140	16:40-17:00	185	147	137	144
16:50-17:10	75	198	164	143	17:00-17:20	191	136	230	206
17:30	Collection Point: Front Gate of the Wyndham Grand Plaza Royale Yuzhou Xiamen								
18:00-21:00	Conference Banquet Banquet Hall NO. 1, Rongyu Guoyan Building								

Transport- EV and eco-traffic

Building- Energy efficiency in buildings

Building- District heating and CCHP

Building- Demand response management & control

Industry- Distributed energy systems & blockchain

Industry- Energy storage

Industry- Materials for renewable and sustainable energy

Environment- Urban wastes to energy and resources

Environment- Nexus of energy-water in urban system

Environment- Climate change & Low carbon and ecological city indicators

Environment- Negative emission technologies

Integration- Integrated energy networks and Microgrids

Integration- Urban energy systems

Integration- Big data, AI and smart cities

Integration- Energy management, policy and economics

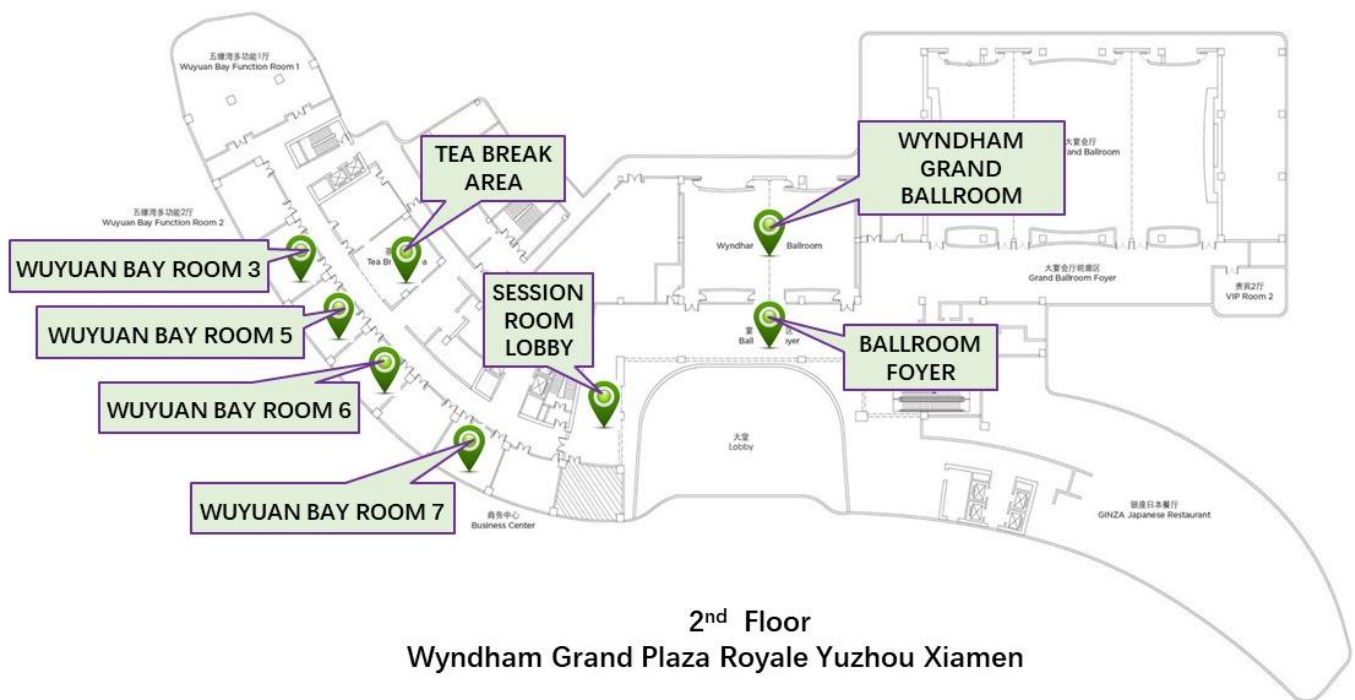
# Speaker's Guide

## Presentation

Length of presentation material should be in accordance with your allocated time. You are requested to load your presentation files before the session starts. Each oral presentation at the breakaway venues is limited to 20 minutes, which include 5 minutes questions and answers. Please refer to this program booklet for actual presentation times. You are kindly requested to be present in the relevant presentation venue at least 10 minutes before the session starts.

Each presentation room is equipped with a laptop computer with a data projector. PowerPoint is the standard presentation format. The computers in the meetings rooms are provided to Window-based PC Users. Conference volunteers will be available to assist you in case you encounter difficulties to use the IT equipment.

## Presentation Venues



# Venue's Information

**Welcome reception:** Ballroom Foyer, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen

**Opening and keynote speech:** Wyndham Grand Ballroom, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen

**Registration area:** 1st floor, Wyndham Grand Plaza Royale Yuzhou Xiamen

**Lunch:** Constellation All-day Dining, 1st floor, Wyndham Grand Plaza Royale Yuzhou Xiamen

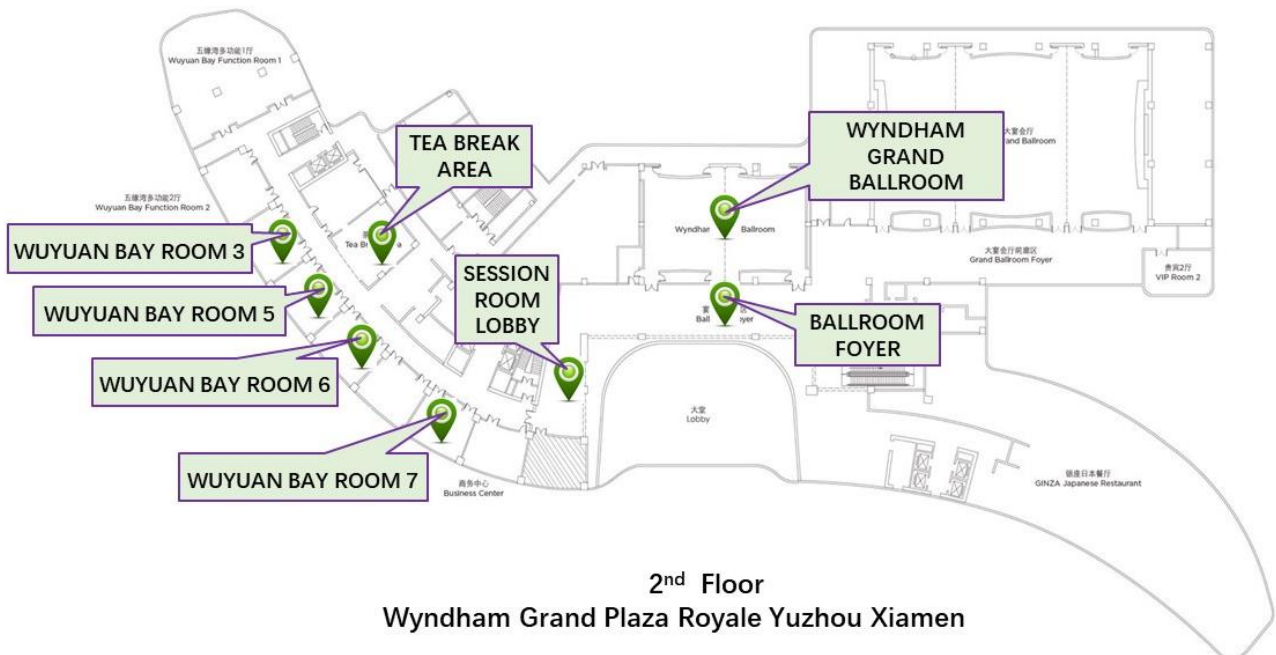
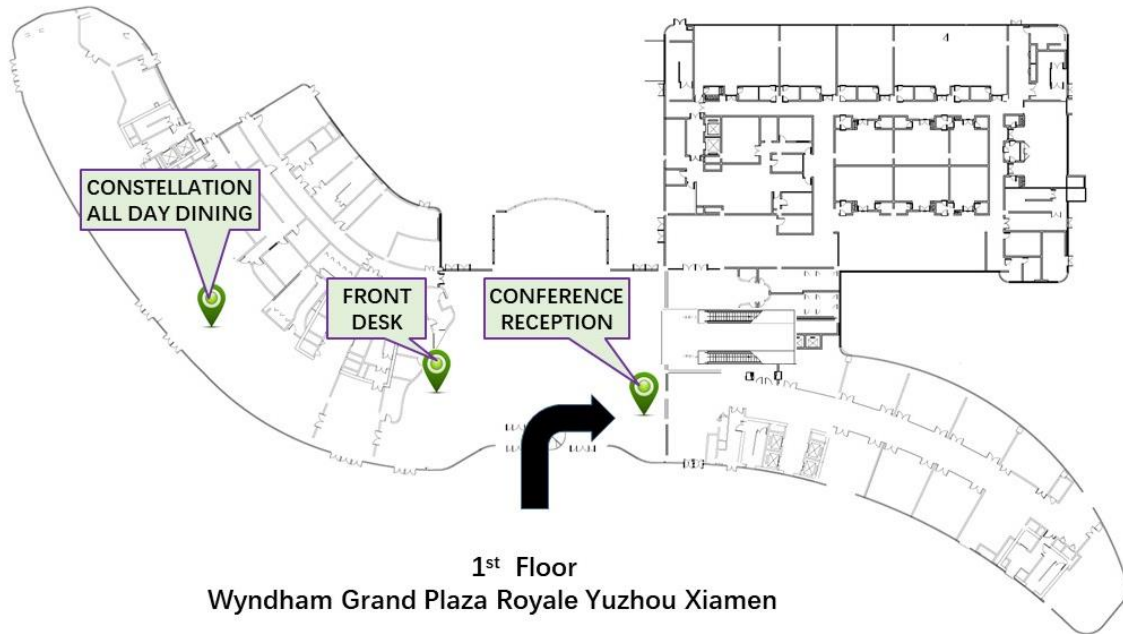
**Tea/Coffee Break:** Tea Break Area, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen

**Banquet:** Banquet Hall NO.1, 1st floor, Rongyu Guoyan Building

## Panels and presentations:

<i>Event</i>	<i>Venue</i>
<i>Panel sessions: Panel Discussion: Future &lt;&gt; Energy + Editor Forum Oral presentations: Transport - EV and eco-traffic + Integration - Energy management, policy and economics 3 + Integration - Comprehensive</i>	<i>Wuyuan Bay Rooms 3, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen</i>
<i>Oral presentations: Integration - Urban energy systems, Integrated energy networks and Microgrids 1-2 + Industry - Distributed energy systems &amp; blockchain + Industry - Energy storage 1-2 + Industry - Comprehensive</i>	<i>Wuyuan Bay Rooms 5, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen</i>
<i>Oral presentations: Integration - Energy management, policy and economics 1-2 + Environment - Urban wastes to energy and resources + Environment - Climate change and carbon emissions 1-2 + Environment - Nexus of energy-resources-environment in urban system</i>	<i>Wuyuan Bay Rooms 6, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen</i>
<i>Oral presentations: Building - District heating and CCHP + Building - Energy efficiency in buildings 1-4 + Building - Demand response management &amp; control</i>	<i>Wuyuan Bay Rooms 7, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen</i>
<i>Poster presentations</i>	<i>Session Room Lobby, 2nd floor, Wyndham Grand Plaza Royale Yuzhou Xiamen</i>

# Venue's Information



# Venue's Information

## How to get to the Banquet venue

### *By school bus*

There will be Xiamen University school bus collecting all guests, free of charge, at 17:30 PM at the front gate of the Wyndham Grand Plaza Royale Yuzhou Xiamen.

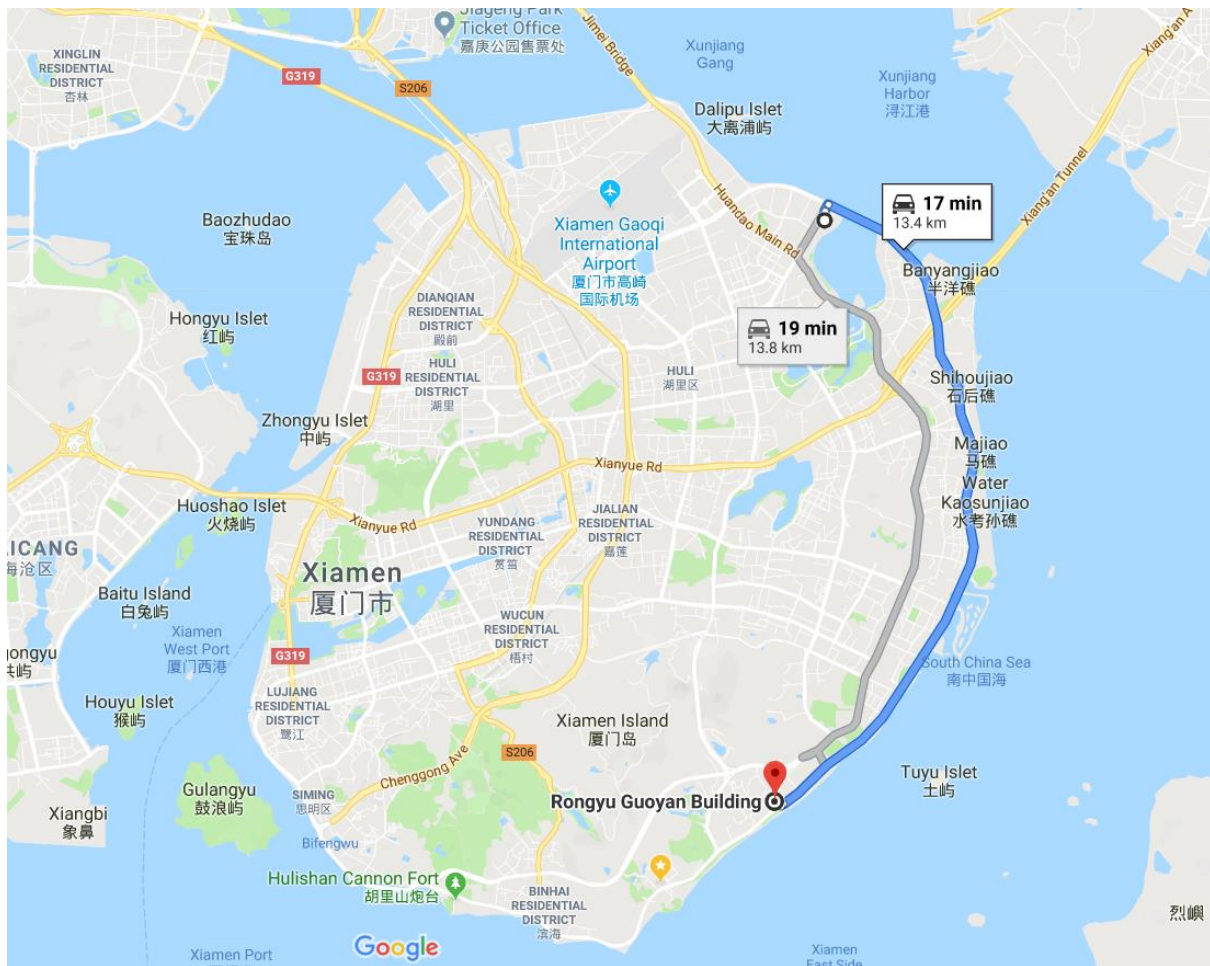
### *By taxi*

You can also take a taxi to Rongyu Guoyan Building. However, the taxi fare will be at your cost.

Taxi: Direct distance from Wyndham Grand Plaza Royale Yuzhou Xiamen to Rongyu Guoyan Building is about 13.5 km.

Fare: ~ 40 RMB

Duration: ~ 19 minutes



# Panel Sessions

## Panel Discussion: Future <> Energy, 13:30 PM – 15:10 PM, Oct 17

**Session chair:** Hailong Li (Mälardalen University)

**Participants:** Hongguang Jin (Institute of Engineering Thermophysics, Chinese Academy of Sciences); Ning Li (Xiamen University); Jianzhong Wu (Cardiff University); Fengqi You (Cornell University); Hongxing Yang (The Hong Kong Polytechnic University); Jinyue Yan (Editor-in-chief of Applied Energy); Dongxiao Zhang (Southern University of Science and Technology); Nan Zhou (Lawrence Berkeley National Laboratory)

What would the future energy system look like is one of the hottest topics of common interest worldwide. With the grim situation of global warming and complex uncertainties, there is an urgent need to find the most appropriate development pathways that are sustainable, reliable and affordable at the same time.

Considerable research is being undertaken on some aspects of future energy, but as a diverse topic, many facets remain unexplored, such as the development of low/zero/negative carbon energy technologies; development of IoT and smart cities; and cross-domain interactions of energy systems with traffic or other systems. In this session, we aim to bring together insights for future energy development to both share current research highlights and identify knowledge gaps.

Several honored guests are deliberately invited to discuss future energy issues. The live audience is warmly welcomed to raise questions and join the discussion. We focus on future energy issues, including, but not limited to:

- Low carbon, zero carbon and negative emission future energy systems
- Big data, IOT, intelligent and smart cities
- Technology and energy development pathways toward sustainable energy systems
- Energy systems planning, operation control & management
- Cross-domain interactions of energy system, traffic and urban planning

<b>Name</b>	<b>Affiliation</b>
<b>Prof. Hongguang Jin</b>	<b>Institute of Engineering Thermophysics, Chinese Academy of Sciences</b> <i>Prof. Hongguang Jin is the Academician of Chinese Academy of Sciences, Professor and Director of Laboratory of Distributed energy system and Renewable Energy, Institute of Engineering Thermophysics, Chinese Academy of Sciences, President of Chinese Society of Engineering Thermophysics. Experience and related research background in the fields of thermophysics, chemical engineering, simulation of energy-conversion processes, analysis energy systems, system synthesis for polygeneration system, demonstration of CCHP and solar thermal power plants.</i>
<b>Asso. Prof. Hailong Li</b>	<b>Mälardalen University</b> <i>Dr. Hailong Li is a Senior Lecturer and Associate Professor in the department of energy engineering and Future Energy Centre. His research interests mainly lie in the mitigation of the climate change and the efficient conversion and utilization of energy, which are in line with the research profile of 'Future Energy Center'. Currently, he is serving as the Assistant Editor of Applied Energy. He has been organizing the International Conference on Applied Energy (ICAE) since 2012.</i>
<b>Prof. Ning Li</b>	<b>Xiamen University</b> <i>Ning Li, Professor at College of Energy, Xiamen University. His research activities and fields of interest: experimental and theoretical studies of advanced nuclear energy systems, including (i) clean and low-carbon energy technologies; (ii) energy efficiency engineering, supercritical fluid energy conversion cycles; (iii) energy materials, nuclear fuels and nuclear waste. He is also the deputy director of the Nuclear Research Center of the UC, Berkeley, and a member of the Expert Committee of the National Nuclear Power Technology Corporation of China.</i>



# Panel Sessions

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<b>Prof.</b> <b>Jianzhong Wu</b>	<b>Cardiff University</b> <i>Jianzhong Wu is a Professor of Multi-Vector Energy Systems and Head of Department of Electrical and Electronic Engineering at Cardiff University. He researches on Smart Grid and energy infrastructure (modelling, analysis and optimisation of integrated smart energy supply networks). Currently he is a Co-Director of UK Energy Research Centre, a co-Director of EPSRC Supergen Energy Networks Hub. He was the deputy leader of the Multi-Energy Theme of EPSRC HubNet, Principal Investigator of projects on dynamic demand funded by National Grid, and the Cardiff Principal Investigator of EU Horizon 2020 projects on “Peer to Peer Smart Energy Distribution Networks” and “MAGNITUDE”.</i>
<b>Prof.</b> <b>Fengqi You</b>	<b>Cornell University</b> <i>Fengqi You is the Roxanne E. and Michael J. Zak Professor in Energy Systems Engineering at Cornell University (Ithaca, New York). His recent awards include National Science Foundation CAREER Award (2016), AIChE Environmental Division Early Career Award (2017), Computing and Systems Technology (CAST) Outstanding Young Researcher Award from AIChE (2018) and ACS Sustainable Chemistry &amp; Engineering Lectureship Award (2018). His research focuses on novel computational models, optimization algorithms, statistical machine learning methods, and multi-scale systems analytics tools for smart manufacturing, digital agriculture, energy systems, and sustainability.</i>
<b>Prof.</b> <b>Hongxing Yang</b>	<b>Hong Kong Polytechnic University</b> <i>Prof. Yang is now leading the Renewable Energy Research Group (RERG) in the Department of Building Services Engineering, The Hong Kong Polytechnic University. His research interests cover a number of R&amp;D topics in renewable energy applications and energy saving in buildings including solar cell materials, solar photovoltaic integration in buildings, wind power, hybrid solar-wind power, solar cooling and ground-coupled heat pump technologies. He is serving the International Journal of Applied Energy as an Associate Editor and other international journals as editorial board member.</i>
<b>Prof.</b> <b>Jinyue Yan</b>	<b>Mälardalen University</b> <i>Prof. Yan is chair professor of Energy Engineering at Mälardalen University &amp; Royal Institute of Technology, Sweden. He is director of Future Energy Profile. Prof. Yan's research interests include advanced energy systems, renewable energy, advanced power generation, climate change mitigation technologies and related environment and policy etc. He is the Chair of International Conferences on Applied Energy. He is an academician of European Academy of Sciences and Arts, and serves as the advisory expert to the UN, EU, &amp; ADB etc. Founder of ICAE, AEii, UNILAB, iCET.</i>
<b>Prof.</b> <b>Dongxiao Zhang</b>	<b>Southern University of Science and Technology</b> <i>Prof. Zhang is the Provost at Southern University of Science and Technology, China. He is a Member of the U.S. National Academy of Engineering, an Honorary Member of Society of Petroleum Engineers, and a Fellow of Geological Society of America. Prof. Zhang is an internationally well known expert in unconventional oil and gas production, groundwater hydrology, and geological carbon sequestration, whose research achievements in stochastic modeling, numerical simulation, inverse modeling and machine learning are widely adopted by his peers.</i>
<b>Dr.</b> <b>Nan Zhou</b>	<b>Lawrence Berkeley National Laboratory</b> <i>Nan Zhou is a Staff Scientist, Department Head of the International Energy Analysis Department, and the Group Leader of the China Energy Group of Lawrence Berkeley National Laboratory. Dr. Zhou's research has focused on modeling and evaluating China's low-carbon development strategies, assessing building energy efficiency policies and technologies, and development and evaluation of China's appliance standards and labeling program.</i>

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# Panel Sessions

## Editor Forum: 8:20 AM – 10:00 AM, Oct 18

**Participants:** Jinyue Yan (Editor-in-chief of Applied Energy); Hongxing Yang (Associate Editor of Applied Energy)

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<b>Name</b>	<b>Affiliation</b>
<b>Prof. Jinyue Yan</b>	<b>Editor-in-chief of Applied Energy</b> <i>Prof. Yan is chair professor of Energy Engineering at Mälardalen University &amp; Royal Institute of Technology, Sweden. He is director of Future Energy Profile. Prof. Yan's research interests include advanced energy systems; renewable energy; advanced power generation; climate change mitigation technologies and related environment and policy etc. Prof. Yan published about 400 papers including papers in Science, Nature Energy &amp; Nature Climate and hold 10+ patents. Prof. Yan is the editor-in-chief of Applied Energy journal &amp; editor-in-chief of Handbook of Clean Energy Systems. He is the Chair of International Conferences on Applied Energy. He is an academician of European Academy of Sciences and Arts, and serves as the advisory expert to the UN, EU, &amp; ADB etc. Founder of ICAE, AEii, UNiLAB, iCET.</i>
<b>Prof. Hongxing Yang</b>	<b>Associate Editor of Applied Energy</b> <i>Prof. Yang received his BEng in 1982 and MEng in 1985 in the Division of HVACR Engineering of Tianjin University, China. He obtained his PhD in 1993 in the Mechanical Engineering Department, University of Wales College of Cardiff, UK. He is now leading the Renewable Energy Research Group (RERG) in the Department of Building Services Engineering, The Hong Kong Polytechnic University. His research interests cover a number of R&amp;D topics in renewable energy applications and energy saving in buildings including solar cell materials, solar photovoltaic integration in buildings, wind power, hybrid solar-wind power, solar cooling and ground-coupled heat pump technologies. He has completed a number of research projects in recent years for local industry and government and he has received awards from local and world organizations. He has supervised 27 PhD students and 20 of them have graduated. He has over 300 academic papers and 6 professional books published including more than 160 SCI journal papers published. According to the Shanghai Ranking's Global Ranking of Academic Subjects 2016, he is on the list of 150 world most-cited researchers with impactful research in the disciplines of Civil Engineering. He is serving the International Journal of Applied Energy as an Associate Editor and other international journals as editorial board member. He was also part-time Taishan Scholar of Shandong Province and specially appointed Chair Professor of Tianjin Chengjian University.</i>

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**Room: Wuyuan Bay Room 5**

**Session Name: Integration- Urban energy systems, Integrated energy networks and microgrids 1**

**Session Chair: Pei Liu (Tsinghua University) and Xiaohua Xia (University of Pretoria)**

Time	Paper ID	Author	Paper Title
13:30-13:50	11	RUI JING, ZHIHUI ZHANG, JIAN LIN, CHAO MENG, NILAY SHAH AND YINGRU ZHAO	A SYSTEM VALUE APPROACH QUANTIFYING THE CONTRIBUTION OF INDIVIDUAL ENERGY TECHNOLOGIES IN INTEGRATED URBAN ENERGY SYSTEMS
13:50-14:10	22	KAI ZHUO LIM, KANG HUI LIM, XIAN BIN WEE, JEFF XU, KUAN CHUN YEH, SAJIDUL HAQUE SIRAJI, YINAN LI AND XIAONAN WANG	OPTIMIZATION OF RESIDENTIAL ELECTRICAL CONSUMPTION WITH ELECTRIC CONSUMPTION SCHEDULING AND DISTRIBUTED ENERGY STORAGE DEVICES
14:10-14:30	29	WEI WANG, YINGRU ZHAO AND XIAONAN WANG	A COMBINED APPROACH FOR ANALYZING THE IMPACT OF SPATIAL CLUSTERING ON LARGE-SCALE URBAN ENERGY SYSTEM OPTIMIZATION
14:30-14:50	87	YANG YANG, YI DING AND HENGYU HUI	OPTIMAL SCHEDULING OF RESERVE AND GAS STORAGE IN INTEGRATED ELECTRICITY AND GAS SYSTEM CONSIDERING RELIABILITY REQUIREMENTS
14:50-15:10	135	JULIANA NEPEMBE, XIANMING YE AND XIAOHUA XIA	GAME THEORY BASED OPTIMAL BATTERY POWER FLOW MANAGEMENT IN A PEER-TO-PEER ENERGY SHARING NETWORK

**Room: Wuyuan Bay Room 6**

**Session Name: Integration- Energy management, policy and economics 1**

**Session Chair: Delin Fang (Beijing Normal University) and Casper Agaton (Utrecht University)**

Time	Paper ID	Author	Paper Title
13:30-13:50	24	CHUN SING LAI, TRISTANO SAINATI, GIORGIO LOCATELLI AND LOI LEI LAI	PROJECT FINANCING FOR GENERATION INTEGRATED ENERGY STORAGE: A U.K. CONTEXT
13:50-14:10	107	BOQIANG LIN AND RANRAN LUAN	ARE GOVERNMENT SUBSIDIES EFFECTIVE IN IMPROVING INNOVATION EFFICIENCY? BASED ON THE RESEARCH OF CHINESE WIND POWER INDUSTRY
14:10-14:30	141	CHRISTOPHER CURINGTON, BOLA MICHELLE JU, TAE-HYOUNG TOMMY GIM AND STEVEN JIGE QUAN	ENERGY POLICY EVOLUTION AND REGIME CHANGES IN SEOUL, SOUTH KOREA 1996-2019: IMPLICATIONS FOR PLANNERS
14:30-14:50	142	ZHENGUO WANG, QIANG LIU, SHENXIONG LU, XIAOXIAO CHEN, XIAOMING ZHOU AND YI DING	A REVIEW OF SMART ENERGY AND INTEGRATED ENERGY SERVICE BUSINESS MODEL
14:50-15:10	160	LEI LIU, JIE CHEN, XUAN LI AND TONG WU	HOW RAPID DEVELOPMENT AND POLICY CHANGES INFLUENCE ENERGY CONSUMPTION IN CHINA: A STUDY OF SICHUAN PROVINCE

**Room: Wuyuan Bay Room 7**

**Session Name: Building- District heating and CCHP**

**Session Chair: Hui Hong (Institute of Engineering Thermophysics, Chinese Academy of Science) and Wei Han (Institute of Engineering Thermophysics, Chinese Academy of Science)**

Time	Paper ID	Author	Paper Title
13:30-13:50	196	JIAQI YUAN, CHENGLIAO CUI, ZIWEI XIAO, CHONG ZHANG AND WENJIE GANG	ENERGY AND ECONOMIC PERFORMANCE OF DISTRIBUTED ENERGY SYSTEM INTEGRATED WITH THERMAL STORAGE SYSTEM
13:50-14:10	46	YUZE DAI, JUN SUI, FENG LIU, CONG XU, WEI HAN AND HONGGUANG JIN	A NOVEL HYBRID AIR-CONDITIONING SYSTEM COMBINED WITH SEA SPRAY AEROSOL REMOVAL DRIVEN BY LOW-TEMPERATURE HEAT SOURCE
14:10-14:30	184	XIAWEI LIAO, XU ZHAO, WENFENG LIU, RUOSHUI LI, XIAOXI WANG AND WENPENG WANG	EVALUATING BLUE WATER FOOTPRINT OF ENERGY DEMANDS IN CHINA'S SIX MEGACITIES
14:30-14:50	124	HAIJING LIU, YIQUN PAN AND ZHIZHONG HUANG	EVALUATING THE PERFORMANCE OF CCHP SYSTEM IN A FULL PROCESS OF PROJECT
14:50-15:10	79	VINCENZO LISO AND CARSTEN BOJESEN	ASSESSMENT OF HEAT PUMPS FOR DISTRICT HEATING APPLICATIONS

**Room: Wuyuan Bay Room 3**

**Session Name: Future <> Energy**

**Session Chair: Hailong Li (Mälardalen University)**

13:30-15:10	<b>Panel Discussion: Future &lt;&gt; Energy</b>		
15:10-15:30	<b>TEA/COFFEE BREAK</b>		

**Room: Wuyuan Bay Room 3**

**Session Name: Integration- Comprehensive**

**Session Chair: Xianhai Zeng (Xiamen University) and Zhang Bai (China University of Petroleum (East China))**

# Day 1

# Oral Presentations

Time	Paper ID	Author	Paper Title
15:30-15:50	17	NZEBA ANTOINETTE KALALA, MUKALU SANDRO MASAKI, FARSHAD BARZEGAR AND XIAOHUA XIA	THERMAL MANAGEMENT OF HYBRID ENERGY STORAGE SYSTEMS BASED ON SPATIAL ARRANGEMENT
15:50-16:10	30	SEUNGHOO JUNG, TAEHOON HONG AND HYUNA KANG	ECONOMIC ANALYSIS OF DIFFERENT BUSINESS MODELS FOR ENERGY PROSUMERS: FOCUSING ON THE ROOFTOP SOLAR PV SYSTEM
16:10-16:30	27	JONGBAEK AN, TAEHOON HONG, MINHYUN LEE AND HAKPYEONG KIM	OPERATION PLANNING FOR RESIDENTIAL BATTERY ENERGY STORAGE SYSTEM WITH THE PHOTOVOLTAIC SYSTEM IN TERMS OF LIFE-CYCLE COST
16:30-16:50	86	QUANCONG ZHANG, ZHIKAI CAO, YONG SHA, BINGHUI CHEN AND HUA ZHOU	MODELING, SIMULATION AND SYSTEMATIC ANALYSIS FOR HIGH-TEMPERATURE ADIABATIC FIX-BED PROCESS OF SNG WITH NOVEL CATALYSIS
16:50-17:10	75	YAOLI ZHANG, XINGYU LIU, WENSHEN WEI, TIANJI PENG, GANG HONG AND CHAO MENG	MOBILE CHARGING: A NOVEL WAY TO SOLVE THE CHARGING PROBLEM IN URBAN AREAS

**Room: Wuyuan Bay Room 5**

**Session Name: Integration- Urban energy systems, Integrated energy networks and microgrids 2**

**Session Chair: Koen van Dam (Imperial College London) and Vincenzo Liso (Aalborg University)**

Time	Paper ID	Author	Paper Title
15:30-15:50	88	MINGLEI BAO, YANG YANG AND YI DING	QUANTIFYING THE IMPACTS OF WINDSTORMS ON RESILIENCE OF URBAN ENERGY SYSTEMS
15:50-16:10	98	XIANMING YE, LIJUN ZHANG, XIAOHUA XIA AND FARSHAD BARZEGAR	OPTIMAL BATTERY SIZING FOR A SOLAR HOME SYSTEM CONSIDERING BATTERY OPERATION AND CAPACITY LOSS
16:10-16:30	151	MIN GUO, MINGCHAO XIA AND QIFANG CHEN	A REVIEW OF REGIONAL ENERGY INTERNET RESEARCH FROM THE PERSPECTIVE OF ENERGY COMMUNITY
16:30-16:50	173	JIAN LIN, NIANYUAN WU, LI LI, XINGYI ZU, XUYUE ZHENG AND YINGRU ZHAO	AN IMPROVED MULTI-OBJECTIVE OPTIMIZATION APPROACH FOR URBAN ENERGY SYSTEMS BASED ON RELATIVE IMPROVEMENT POTENTIAL
16:50-17:10	198	SHIWEI XIE, JIEYUN ZHENG, JUEYING WANG, ZHIJIAN HU, LINYAO ZHANG AND ZHI CHEN	OPERATION OPTIMIZATION OF URBAN MULTI-ENERGY SYSTEMS CONSIDERING CHARGING ROUTES IN THE TRANSPORTATION NETWORK: A MIXED USER EQUILIBRIUM METHOD

**Room: Wuyuan Bay Room 6**

**Session Name: Integration- Energy management, policy and economics 2**

**Session Chair: Lei Liu (Sichuan University) and Chun Sing Lai (Leeds University)**

Time	Paper ID	Author	Paper Title
15:30-15:50	99	DIEGO MOYA, SARA BUDINIS, SARA GIAROLA AND ADAM HAWKES	INVESTMENT BEHAVIOUR ASSESSMENT ON THE ENERGY AND EMISSION TRANSITIONS: A CASE STUDY OF INDIA'S INDUSTRY SECTOR
15:50-16:10	106	BOQIANG LIN AND TONG SU	THE LINKAGES BETWEEN OIL MARKET UNCERTAINTY AND ISLAMIC STOCK MARKETS: EVIDENCE FROM QUANTILE-ON-QUANTILE APPROACH
16:10-16:30	109	QI ZHANG, XINGHUA FAN AND JIULI YIN	EVOLUTION OF CO-MOVEMENT PATTERNS BETWEEN CARBON MARKETS: A CASE STUDY IN CHINA
16:30-16:50	121	ZAIJING GONG, XIANGNAN SONG, DAPENG LIANG AND LIXIA YAO	PROMOTING ECONOMIC RECOVERY FROM THE ANGLE OF ENERGY-ECONOMIC RESILIENCE: MODEL CONSTRUCTION AND CASE STUDY
16:50-17:10	164	ISAAC ADJEI MENSAH, MEI SUN, CUIXIA GAO, HUAPING SUN, AKOTO YAW OMARI-SASU, BENJAMIN CHRIS AMPIMAH AND ALFRED QUARCOO	ESTIMATING THE DETERMINANTS OF ENERGY CONSUMPTION IN MULTISECTORAL AFRICAN ECONOMIES: EVIDENCE FROM PANEL METHODS EFFICIENT TO HETEROGENEITY AND CROSS-SECTIONAL RELIANCE

**Room: Wuyuan Bay Room 7**

**Session Name: Building- Energy efficiency in buildings 1**

**Session Chair: Hang Yu (Tongji University) and Taehoon Hong (Yonsei University)**

Time	Paper ID	Author	Paper Title
15:30-15:50	26	HYUN MI CHO, JIWON YOO AND SUMIN KIM	ENERGY RETROFIT PLANNING OF EDUCATIONAL HISTORICAL BUILDING: A CULTURAL PROPERTIES BUILDING CASE
15:50-16:10	25	JIWON YOO, HYUN MI CHO AND SUMIN KIM	EVALUATION OF HYGROTHERMAL PROPERTY AND BEHAVIOR OF CLT (CROSS LAMINATED TIMBER) WALL USING DOMESTIC WOOD MATERIAL AND DERIVATION OF OPTIMAL WALL ASSEMBLY
16:10-16:30	37	JIAWEI YAO AND ZHI ZHUANG	STUDY ON BUILDING LAYOUT ON PEDESTRIAN WIND ENVIRONMENT
16:30-16:50	140	SUJIN LEE AND STEVEN JIGE QUAN	A PILOT STUDY ON RELATIONSHIPS BETWEEN DENSITY, AIR POLLUTION AND BUILDING ENERGY USE THROUGH THE LENS OF HUMAN BEHAVIOR – A CASE STUDY OF SEOUL
16:50-17:10	143	YAN LYU, YIQUN PAN AND ZHIZHONG HUANG	THE SIMPLIFICATION METHOD OF BUILDING GEOMETRIC MODEL FOR ENERGY SIMULATION

18:30-21:30

**Conference Banquet: Banquet Hall NO.1, Rongyu Guoyan Building**

Room: Wuyuan Bay Room 3

Session Name: Editor Forum

Time	Paper ID	Author	Paper Title
08:20-10:00	<b>Editor Forum</b>		

Room: Wuyuan Bay Room 5

Session Name: Industry- Distributed energy systems and blockchain

Session Chair: Qibin Liu (Institute of Engineering Thermophysics, Chinese Academy of Science) and Zhang Bai (China University of Petroleum (East China))

Time	Paper ID	Author	Paper Title
08:20-08:40	44	XIANGYU LIU, HUI HONG, HAO ZHANG AND HONGGUANG JIN	PERFORMANCE ANALYSIS OF CHEMICAL LOOPING HYDROGEN PRODUCTION SYSTEM DRIVEN BY SOLAR ENERGY
08:40-09:00	80	CHANGZHENG SHAO AND YI DING	BLOCKCHAIN BASED ENERGY TRADING BETWEEN DISTRICT ENERGY SYSTEMS CONSIDERING THE UNCERTAINTIES
09:00-09:20	145	BOSHENG SU, WEI HAN, HONGGUANG JIN AND HONGZHOU HE	AN EFFICIENT WAY TO PRODUCE SYNGAS BY SYNTHETIC USE OF BIOGAS AND SOLAR ENERGY
09:20-09:40	50	QIONGQIONG JIANG, YALI CAO, XIANGYU LIU, HAO ZHANG, HUI HONG AND HONGGUANG JIN	RECENT PROGRESS ON HYDROGEN PRODUCTION FROM SOLAR-THERMAL WATER SPLITTING
09:40-10:00	64	PENGFEI ZHU, JING YAO, ZAOXIAO ZHANG AND ZHEN WU	THERMO-ECONOMIC ANALYSIS OF A NG-FUELED SOFC-HCCI ENGINE HYBRID ENERGY CONVERSION SYSTEM AS DISTRIBUTED POWER PLANT WITH HIGH EFFICIENCY

Room: Wuyuan Bay Room 6

Session Name: Environment- Urban wastes to energy and resources

Session Chair: Weiqiang Chen (Institute of Urban Environment, Chinese Academy of Science) and Lei Wang (Westlake University)

Time	Paper ID	Author	Paper Title
08:20-08:40	15	JIE LI, XINZHE ZHU, YINAN LI, YEN WAH TONG AND XIAONAN WANG	MULTI-TASK PREDICTION OF FUEL PROPERTIES OF HYDROCHAR DERIVED FROM WET MUNICIPAL WASTES WITH RANDOM FOREST
08:40-09:00	96	LANYU LI, MARC BORDUI, CHI-HWA WANG AND XIAONAN WANG	TRANSITION TOWARDS LOW CARBON CITIES USING RENEWABLE AND WASTE-TO-ENERGY TECHNOLOGIES: A SINGAPORE CASE STUDY
09:00-09:20	105	SHANZHU JIANG, YUNQUAN LIU, SHUIRONG LI, YUEYUAN YE, ZHIFENG ZHENG, XINGYONG JIA AND DUO WANG	THE DESULFURIZATION STUDY ON THE PYROLYSIS OIL DERIVED FROM THE PYROLYSIS OF WASTE TIRES
09:20-09:40	91	YATING KANG, QING YANG, LIANG WANG, PIETRO BARTOCCID, FRANCESCO FANTOZZI, HEWEN ZHOU, YINGQUAN CHEN AND HANPING CHEN	GHG MITIGATION POTENTIALS FOR USING URBAN WASTES AS THE RESOURCE FOR BIOENERGY WITH CARBON CAPTURE AND STORAGE (BECCS) IN CHINA
09:40-10:00	38	CASPER AGATON, CHARMAINE GUNO, RESY VILLANUEVA AND RIZA VILLANUEVA	ECONOMIC FEASIBILITY OF WASTE-TO-ENERGY PROJECT IN THE PHILIPPINES USING REAL OPTION APPROACH

Room: Wuyuan Bay Room 7

Session Name: Building- Energy efficiency in buildings 2

Session Chair: Yang Zhao (Zhejiang University) and Vincenzo Liso (Aalborg University)

Time	Paper ID	Author	Paper Title
08:20-08:40	39	WEICHAO YAN, XIN CUI, LIWEN JIN AND XIANGZHAO MENG	NUMERICAL INVESTIGATION ON THE HOLLOW FIBER MEMBRANE-BASED EVAPORATIVE COOLING SYSTEM
08:40-09:00	41	HAI WANG, HUA MENG, GUANG YANG, FENGXIA WANG, FENG XUE AND TING LI	NEW METHOD TO CALIBRATE THE CHILLED WATER PIPE NETWORK IN A HIGH-RISE BUILDING
09:00-09:20	183	WEI ZHOU, EOGHAN O'NEILL, ALICE MONCASTER, DAVID REINER AND PETER GUTHRIE	APPLYING BAYESIAN MODEL AVERAGING TO CHARACTERISE URBAN RESIDENTIAL STOCK TURNOVER DYNAMICS
09:20-09:40	182	XIN CUI, XIAOHU YANG, LIWEN JIN AND XIANGZHAO MENG	STUDYING THE PERFORMANCE OF AN EVAPORATIVE PRE-COOLED AIR CONDITIONING SYSTEM IN HUMID TROPICAL CLIMATE
09:40-10:00	199	YUNRAN MIN, YI CHEN AND HONGXING YANG	ON-SITE TESTING OF EXHAUST AIR HEAT RECOVERY FOR AN ALL-FRESH-AIR A/C SYSTEM IN HONG KONG

10:00-10:30

TEA/COFFEE BREAK

<b>Room: Wuyuan Bay Room 3</b> <b>Session Name: Transport-EV and eco-traffic</b> <b>Session Chair: Koen van Dam (Imperial College London) and Yue Zhou (Cardiff University)</b>			
Time	Paper ID	Author	Paper Title
10:30-10:50	12	ZHENDONG SUN, YUJIE WANG AND ZONGHAI CHEN	ROBUST ENERGY MANAGEMENT STRATEGY OF FUEL CELL/ULTRACAPACITOR HYBRID-POWERED VEHICLE BASED ON MIN-MAX GAME THEORY
10:50-11:10	14	YIFAN WANG AND HUI HOU	RESEARCH ON CHARGING USER DISCOUNT REBATE AND RESERVATION PRIORITY STRATEGY FOR ELECTRIC VEHICLE ACCESS
11:10-11:30	168	SHUANGQI LI AND HONGWEN HE	DATA DRIVEN LITHIUM-ION BATTERY MONITORING: AN ARTIFICIAL INTELLIGENCE APPROACH
11:30-11:50	82	KAILE ZHOU, LEXIN CHENG AND XINHUI LU	A COORDINATED CHARGING SCHEDULING METHOD FOR ELECTRIC VEHICLES CONNECTING TO MICROGRID CONSIDERING EMERGENT CHARGING DEMAND
11:50-12:10	122	CHUJIE BO, XUEQIN CUI AND CAN WANG	SCENARIO ANALYSIS OF PROVINCIAL PASSENGER TRANSPORTATION ENERGY DEMAND AND CO2 EMISSIONS IN CHINA
<b>Room: Wuyuan Bay Room 5</b> <b>Session Name: Industry- Energy storage 1</b> <b>Session Chair: Gang Xiao (Xi'an Jiaotong University) and Juntao Li (Xiamen University)</b>			
Time	Paper ID	Author	Paper Title
10:30-10:50	146	LONG XIANG CHEN, MEI NA XIE AND FENG XIANG WANG	THERMODYNAMIC ANALYSIS OF AN ADIABATIC COMPRESSED AIR ENERGY STORAGE (A-CAES) SYSTEM FOR COGENERATION OF POWER AND COOLING ON THE BASE OF VOLATILE FLUID
10:50-11:10	207	BINGXIANG SUN, ZHENLIN ZHU, HAIJUN RUAN, TONG LI, XITIAN HE, XIAOJIA SU, JIAN WU AND WEIGE ZHANG	MODELING STUDY OF LITHIUM-ION BATTERY BELOW ROOM TEMPERATURE
11:10-11:30	81	MINGMIN KONG AND CHEN CHEN	GEOMETRICAL EFFECT ON PERFORMANCE AND CATALYST VOLUME OF METHANE REFORMING WITH CO2 REACTORS FOR SOLAR THERMOCHEMICAL ENERGY STORAGE
11:30-11:50	213	LI SUN, GUANRU LI AND FENGQI YOU	MODELLING AND PREDICTION OF LITHIUM-ION BATTERY INTERNAL TEMPERATURE IN THE PRESENCE OF SENSOR BIAS
11:50-12:10	171	XIAOHU YANG, ZHAOYANG NIU AND HAILONG LI	NUMERICAL STUDY ON THE MELTING PERFORMANCE OF A THERMAL ENERGY STORAGE TUBE FILLED WITH METAL FOAM
<b>Room: Wuyuan Bay Room 6</b> <b>Session Name: Environment- Climate change and carbon emissions 1</b> <b>Session Chair: Mei Sun (Jiangsu University) and Weiqiang Chen (Institute of Urban Environment, Chinese Academy of Science)</b>			
Time	Paper ID	Author	Paper Title
10:30-10:50	5	HUIXIAN GU, JUN YUAN, LEI ZHU AND VICTOR NIAN	ANALYSIS OF SHIP EMISSIONS FOR CO2 MARITIME TRANSPORTATION IN THE LIFE CYCLE PERSPECTIVE
10:50-11:10	190	YEHUI ZHANG AND FENGYING YAN	A RESIDENTS-AUTONOMOUS-CHOICE-BASED TRAVEL CO2 EMISSIONS EFFECT EVALUATION METHOD FOR PUBLIC SERVICE FACILITIES LAYOUT AT COUNTY LEVEL
11:10-11:30	218	CUNCUN DUAN AND BIN CHEN	STRUCTURAL DECOMPOSITION ANALYSIS OF CARBON EMISSIONS IN CHINA
11:30-11:50	9	WUXIA BI, BAISHA WENG, MENG LI, MENGKE WANG AND DEN1GHUA YAN	REGULATION OF CARBON SEQUESTRATION POTENTIAL IN THE LAKE-MARSH WETLAND SYSTEM FACING TO CLIMATE CHANGE
11:50-12:10	59	QIONG ZHANG	CARBON EMISSION ACCOUNTING BASED ON URBAN RESIDENT'S TRAVEL NEED-A STUDY ON NINE MUNICIPALITIES IN KANTO METROPOLITAN AREA, JAPAN
<b>Room: Wuyuan Bay Room 7</b> <b>Session Name: Building- Energy efficiency in buildings 3</b> <b>Session Chair: Hongxing Yang (Hong Kong Polytechnic University) and Yiqun Pan (Tongji University)</b>			
Time	Paper ID	Author	Paper Title
10:30-10:50	156	GUOQUAN LV, CHAO SHEN, CHUNXIAO ZHANG, CHANGYUN RUAN AND ZHIPENG ZHU	DESIGN AND EXPERIMENTAL STUDY OF SOLAR LIGHTING-HEATING SYSTEM BASED ON SPECTRAL SELECTIVITY OF NANOFLUIDS
10:50-11:10	19	SHENG ZHANG, YONG CHENG AND ZHANG LIN	ESTIMATIONS OF COOLING LOAD AND SUPPLY AIR PARAMETERS OF NON-UNIFORM AIR DISTRIBUTION USING RATIOS TO UNIFORM AIR DISTRIBUTION
11:10-11:30	21	FENG GAO, HONGTING MA AND NA DU	ENERGY AND EXERGY ANALYSES OF TWO TYPICAL CENTRAL HEATING SYSTEMS: AN APPLICATION IN TIANJIN ECO-TECH AREA, CHINA
11:30-11:50	35	YIBO CHEN, JIANZHONG YANG AND FENGYI ZHANG	FORCASTING HOURLY SUBENTRY ELECTRIC ENERGY CONSUMPTION IN AN OFFICE BUILDING USING A CLUSTERING-BASED MODEL
11:50-12:10	67	YIBO CHEN, JIANZHONG YANG AND UMBERTO BERARDI	FORCASTING ANNUAL ELECTRICITY CONSUMPTION OF OFFICE BUILDINGS USING A MODIFIED GREY INTERVAL MODEL
12:10-13:30	<b>Lunch</b>		

Room: Wuyuan Bay Room 3			
Session Name: Environment - Comprehensive			
Session Chair: Peng Wang (Institute of Urban Environment, Chinese Academy of Science) and Rui Jing (Xiamen University)			
Time	Paper ID	Author	Paper Title
13:30-13:50	108	BOQIANG LIN AND WEI WU	THE IMPACT OF ELECTRIC VEHICLE PERMEATION: A RECURSIVE DYNAMIC CGE ANALYSIS OF CHINA
13:50-14:10	167	JIAWEN MIAO, CHUANHUI HE, WENDONG WEI AND PENGFEI ZHANG	LIFE CYCLE POLLUTION AND CLIMATE IMPACT FROM URBAN POWER SYSTEMS: A CASE STUDY OF FOUR MUNICIPALITIES IN CHINA
14:10-14:30	223	ZHENZHEN TIAN, DELIN FANG AND BIN CHEN	THREE-SCALE INPUT-OUTPUT ANALYSIS FOR ENERGY CONSUMPTION IN TIANJIN CITY
14:30-14:50	219	DELIN FANG, CUNCUN DUAN AND BIN CHEN	AVERAGE PROPAGATION LINKAGE ANALYSIS FOR CARBON EMISSIONS IN CHINA
14:50-15:10	215	TONG GAO, DELIN FANG AND BIN CHEN	REGULATING THE WATER USE CONFLICT BETWEEN WETLAND AND AGRICULTURE VIA MULTI-OBJECTIVE PARTICLE SWARM OPTIMIZATION MODEL
Room: Wuyuan Bay Room 5			
Session Name: Industry- Energy storage 2			
Session Chair: Yao Zhou (Xiamen University) and Peng Zhang (Xiamen University)			
Time	Paper ID	Author	Paper Title
13:30-13:50	114	MIMI WEI, WENPING LI, YUNQUAN LIU, SHUIRONG LI, YUEYUAN YE, ZHIFENG ZHENG, XINGYONG JIA, WENQIAO YUAN AND DUO WANG	FACILE ONE-POT SYNTHESIS OF FE/FE3O4/PC@NF AS ELECTRODE FOR BINDER-FREE HIGH-PERFORMANCE SUPERCAPACITORS
13:50-14:10	186	DUO XIANG, JINSONG ZHOU, MINGJIANG NI, KEFA CEN AND GANG XIAO	REACTION CHARACTERISTICS OF IRON-DOPED MANGANESE OXIDES FOR SOLAR THERMOCHEMICAL ENERGY STORAGE
14:10-14:30	209	SHIYAO LI, YIQUN PAN, YUAN PAN, CONG YU AND ZHIZHONG HUANG	A NOVEL SINGLE-ION CONDUCTOR GEL POLYMER ELECTROLYTE FOR HIGH PERFORMANCE LITHIUM-ION BATTERIES
14:30-14:50	71	RUNFENG XIAO, YU HOU, SHUANGTAO CHEN AND LIANG CHEN	CRYO-COMPRESSED HYDROGEN STORAGE WITH COOLING RECOVERY VENTING SYSTEM FOR AUTOMOTIVE APPLICATIONS
Room: Wuyuan Bay Room 6			
Session Name: Environment- Climate change and carbon emissions 2			
Session Chair: Jianyi Lin (Institute of Urban Environment, Chinese Academy of Science) and Yue Zhou (Cardiff University)			
Time	Paper ID	Author	Paper Title
13:30-13:50	42	CUIXIA GAO, YANZI GUO, BIN SU, MEI SUN AND HUIZI HE	DOES INTERPROVINCIAL MIGRATION AFFECT CO2 EMISSION TRANSFER IN CHINA? BASED ON STIRPAT AND COMPLEX-NETWORK MODELS
13:50-14:10	157	DAN WANG, DEYI DAI, YULI SHAN, HERAN ZHENG, MINGWEI SONG AND FENQIN ZHANG	A HYBRID FRAMEWORK OF GREENHOUSE GAS EMISSIONS ACCOUNTING FOR CHINESE CITIES
14:10-14:30	175	PENGFEI ZHANG, JIAWEN MIAO AND WENDONG WEI	ACCOUNTING FOR BEIJING'S ELECTRICITY-RELATED CARBON EMISSIONS FROM MULTIPLE PERSPECTIVES AND COMPARING TEMPORAL TRENDS
14:30-14:50	176	WENHUAN WANG AND YUTAO WANG	IDENTIFYING SUPPLY CHAIN PATHS AND HOTSPOTS OF CO2 EMISSION IN CHINA FROM 2002 TO 2015
14:50-15:10	180	STEPHEN AGYEMAN AND BOQIANG LIN	ASSESSING SUB-SAHARAN AFRICA'S ENERGY-RELATED CO2 EMISSIONS TOWARDS LOWER CARBON DEVELOPMENT: INFLUENCING FACTORS, TREND AND IMPLICATIONS.
Room: Wuyuan Bay Room 7			
Session Name: Building- Energy efficiency in buildings 4			
Session Chair: Yang Zhao (Zhejiang University) and Wenjie Gang (Huazhong University of Science and Technology)			
Time	Paper ID	Author	Paper Title
13:30-13:50	43	ZHENDI MA, GUOSHENG JIA, YUPING ZHANG, YING CAO, XIAOHU YANG, ZHENHUA XIA AND LIWEN JIN	NUMERICAL STUDY ON THERMAL INFLUENCE RADIUS OF GROUND HEAT EXCHANGERS WITH AQUIFER EFFECT
13:50-14:10	155	ZHENDI MA, QIONGXIANG KONG, PEIFEN WANG, SIYAN LIU AND LIWEN JIN	NUMERICAL SIMULATION OF GROUND HEAT EXCHANGERS BASED ON MODEL ORDER REDUCTION METHOD
14:10-14:30	55	MINDA MA AND WEIGUANG CAI	CO2 MITIGATION MODEL FOR CHINA'S RESIDENTIAL BUILDING SECTOR
14:30-14:50	83	KAILE ZHOU, RONG WANG AND LULU WEN	EVALUATION OF CHINA'S GREEN COMMERCIAL BUILDING INDUSTRY BASED ON ANP-SWOT MODEL
14:50-15:10	92	YAOLI ZHANG, PENGFEI WANG AND GANG HONG	ANALYSIS OF EFFICIENCY AND EMISSION REDUCTION OF ONLINE WATER TREATMENT TECHNOLOGY
15:10-15:40	TEA/COFFEE BREAK		

**Room: Wuyuan Bay Room 3**

**Session Name: Integration- Energy management, policy and economics 3**

**Session Chair: Boqiang Lin (Xiamen University) and Delin Fang (Beijing Normal University)**

Time	Paper ID	Author	Paper Title
15:40-16:00	3	CASPER AGATON, CHARMAINE GUNO, RESY VILLANUEVA AND RIZA VILLANUEVA	OPTIMAL INVESTMENT SCHEMES FOR RESIDENTIAL SOLAR PHOTOVOLTAIC PROJECT IN THE PHILIPPINES
16:00-16:20	148	JIHONG ZHANG, CHUFAN LUO, RUOPING ZHI, LIHANG CUI AND QING ZHANG	MEASUREMENT OF THE INEQUALITY USING OF THE HOUSEHOLD ELECTRICITY METER READING DATA IN URBAN CHINA.
16:20-16:40	133	XU GONG, RONG SHI AND BOQIANG LIN	THE TIME-VARYING SPILLOVER EFFECTS BETWEEN THE CARBON MARKET AND FOSSIL ENERGY MARKETS: A NEW PERSPECTIVE
16:40-17:00	185	MAURIZIO CREMI, ANTONIO MARCO PANTALEO, KOEN VAN DAM, NILAY SHAH	MODEL-BASED DECISION SUPPORT FOR THE DESIGN AND OPERATION OF A NEW URBAN ENERGY SYSTEM IN "FIERA DEL LEVANTE" EXHIBITION COMPLEX
17:00-17:20	191	ZHANG SHUAISHUAI, WU LIBO AND ZHOU YANG	THE IMPACT OF NEGATIVE LIST ON SECTORAL STRUCTURE: BASED ON DYNAMICS OF SECTORAL ELECTRICITY CONSUMPTION COMPLEX NETWORK

**Room: Wuyuan Bay Room 5**

**Session Name: Industry- Comprehensive**

**Session Chair: Yaoli Zhang (Xiamen University) and Shuirong Li (Xiamen University)**

Time	Paper ID	Author	Paper Title
15:40-16:00	61	FENG LIU, JUN SUI, RUNHUA JIANG, HONGGUANG JIN AND ZEFENG WANG	A COMPARATIVE EXPERIMENTAL STUDY ON THE PERFORMANCE OF ABSORPTION HEAT TRANSFORMER FOR PRODUCTION OF WATER AND STEAM
16:00-16:20	103	CONG CHEN AND CHAOKUI QIN	THE EFFECT OF PRIMARY AIR COEFFICIENT ON POLLUTANT EMISSIONS IN RICH-LEAN COMBUSTION
16:20-16:40	132	ZHIQIANG WU, BO ZHANG, SONG WU, GUANGMING LI, BOLUN YANG	BIOMASS CHEMICAL LOOPING PROCESS: THERMODYNAMICS AND KINETIC ANALYSIS OF LIGNIN
16:40-17:00	147	ZHIMIN YANG, ZHICHAO XU, YAN LI AND GUOXING LIN	INVESTIGATION ON MAGNETOCALORIC CHARACTERISTICS OF ROOM TEMPERATURE MAGNETIC REFRIGERATION MATERIALS GD, GDER AND GDDY
17:00-17:20	136	AL-HASAN ABDULWAHID, ZHAO HONGXIA AND ESSAM KHALIL	AN OPTIMIZED SYSTEM OF A COMBINED TRANS-CRITICAL CO <sub>2</sub> REFRIGERATION AND MULTI EFFECT DESALINATION SYSTEM

**Room: Wuyuan Bay Room 6**

**Session Name: Environment- Nexus of energy-resources-environment in urban system**

**Session Chair: Jianyi Lin (Institute of Urban Environment, Chinese Academy of Science) and Cuncun Duan (Beijing Normal University)**

Time	Paper ID	Author	Paper Title
15:40-16:00	227	LING SHAO, ZI WU, BIN CHEN	A FRAMEWORK TO ANALYZE URBAN FOOD-ENERGY-WATER NEXUS BASED ON MULTI-SCALE INPUT-OUTPUT ANALYSIS
16:00-16:20	31	AMBROSE NJEPU, LIJUN ZHANG AND XIAOHUA XIA	THE EFFECTS OF TANK SIZING ON THE OPERATION OF RESIDENTIAL RAINWATER HARVESTING AND GREYWATER RECYCLING SYSTEM
16:20-16:40	221	TAO CAO, BIN CHEN	INEQUALITY IN VIRTUAL GREY WATER TRANSFER DRIVEN BY INTER-PROVINCIAL TRADE IN CHINA
16:40-17:00	137	PENG WANG, XUEQIN CUI, JIASHUO LI, WENJIA CAI, WEN LI AND WEIQIANG CHEN	EXPLORING METAL-ENERGY-ENVIRONMENT NEXUS IN GLOBAL CLIMATE SCENARIOS UNDER 1.5°C TARGET
17:00-17:20	230	SAIGE WANG AND BIN CHEN	THE SYNERGISTIC ROLE OF SOLAR PV INTEGRATED WITH VEGETATION, SOIL AND CARBON

**Room: Wuyuan Bay Room 7**

**Session Name: Building- Demand response management and Control**

**Session Chair: Yichun Wu (Xiamen University) and Hua Zhou (Xiamen University)**

Time	Paper ID	Author	Paper Title
15:40-16:00	100	JIANTONG XIE, YIQUN PAN AND ZHIZHONG HUANG	AN OCCUPANT PREFERENCE SELF-LEARNING AIR CONDITIONING SYSTEM CONTROL METHOD IN PERSONAL SPACE
16:00-16:20	34	DONG LIN, LIJUN ZHANG AND XIAOHUA XIA	GREENHOUSE CLIMATE MODEL PREDICTIVE CONTROL FOR ENERGY COST SAVING
16:20-16:40	138	YUE ZHOU, JIANZHONG WU, GUANYU SONG AND CHAO LONG	DEMAND RESPONSE FROM A PEER-TO-PEER ENERGY TRADING COMMUNITY
16:40-17:00	144	FENGMING RAN, DIAN-CE GAO, XU ZHANG AND SHUYUE CHEN	AN IMPROVED FAST DEMAND RESPONSE STRATEGY OF BUILDING HVAC SYSTEM WITH LOW COST MEASUREMENT SENSORS FOR SMART GRID APPLICATIONS
17:00-17:20	206	SHUNIAN QIU, JIAJIE LI, LINWEI CHEN, ZHENGWEI LI AND ZHENHAI LI	FEEDFORWARD-FEEDBACK CONTROL METHOD BASED ON SIMILARITY FOR CHILLED WATER PUMPS IN HVAC SYSTEMS



# Poster Presentations

Poster ID	Paper ID	Paper Title	Authors
P-1	1	ANALYZING THE INTERACTION BETWEEN ELECTRICITY CONSUMPTION AND ECONOMIC GROWTH BASED ON CO-INTERACTION-GRANGER TEST	JIANLIN YANG, JIABEI LV, MINGXING GUO, OKECH EMMANUEL, FEI FEI, DONG HAN
P-2	2	EXPERIMENTAL INVESTIGATION OF 10 KW ORGANIC RANKINE CYCLE (ORC) SYSTEM USING R245FA	LINGBAO WANG, XIANBIAO BU, HUASHAN LI AND ZAI FENG GONG
P-3	7	ENERGY EFFICIENCY COMPARISON OF AC AND DC MICROGRIDS	HUANG JINCHI, MENG CHAO AND LIU CHENGYUN
P-4	8	IMPACT OF EAVES' SIZE ON THE WIND ENVIRONMENT OF TRADITIONAL DWELLINGS IN THE FUZHOU DISTRICT — A CASE STUDY OF MULTI-PATIO TRADITIONAL DWELLINGS	HUANG JINCHI, MENG CHAO AND LIU CHENGYUN
P-5	10	A TWO-STAGE MULTI-OBJECTIVE STOCHASTIC PROGRAMMING MODEL FOR DESIGN OF BUILDING INTEGRATED ENERGY SYSTEM	MENG WANG, FANGJUN HE, HE LIU, YIN TANG, HANG YU AND PENGDA CHEN
P-6	13	RESEARCH ON ECONOMIC DISPATCHING STRATEGY OF UHV DC TRANSMISSION CHANNEL	LI YU, MEI SHUFAN, QIU GANG, LI GUOQING AND XIAO GUILIAN
P-7	16	THERMODYNAMIC AND MECHANISM ANALYSES OF COMBINED HEAT AND POWER PLANT WITH HIGH BACK-PRESSURE TURBINE INTEGRATED WITH THE STEAM JET PUMP	YOUJUN ZHANG, ZHIHUA GE, NIAN XIONG, SHIFEI ZHAO, FUXIANG ZHANG AND LEI XU
P-8	23	CAN MODELLING TOOLS HELP CHINA ACHIEVE CARBON TARGETS?	YUPEI LAI, JIAXIN ZHAO AND YUTONG LI
P-9	28	DAY-AHEAD INCENTIVE-BASED DEMAND RESPONSE BASED ON DEEP LEARNING AND REINFORCEMENT LEARNING	LULU WEN AND KAILE ZHOU
P-10	32	DEVELOPMENT OF A FRAMEWORK FOR DETERMINING THE OPTIMAL WINDOW SIZE FOR MAXIMIZING OCCUPANT PSYCHOLOGICAL SATISFACTION AND BUILDING ENERGY PERFORMANCE	SEUNGKEUN YEOM, TAEHOON HONG AND MINHYUN LEE
P-11	36	LOW-CARBON DISPATCHING OF REGIONAL POWER GRID CONSIDERING THE CONSTRAINTS OF CARBON QUOTA	WEI ZENG
P-12	47	AIR DISTRIBUTION OPTIMIZATION SIMULATION IN DATA CENTER ROOM	WEN GU AND ZHI ZHUANG
P-13	49	A CLOUD-BASED AGING CONSIDERED VEHICLE-MOUNTED LITHIUM-ION BATTERY MANAGEMENT METHOD: A BIG DATA PERSPECTIVE	SHUANGQI LI AND HONGWEN HE
P-14	56	A SYSTEM DYNAMICS MODEL FOR BEIJING'S PRIVATE NEW ENERGY VEHICLES OWNERSHIP FORECASTING	RUITING WANG
P-15	62	APPLICATION OF BLOCKCHAIN IN DATA ASSET MANAGEMENT	WENTAO YANG, PING HE, JUNJIE XIA, YE SUN, CHANG CHEN, XIAOCHUN YI AND ZHIHUI WANG
P-16	63	EFFECTS OF CEMENTS AND INSULATION TUBE ON THE PERFORMANCE OF GEOTHERMAL SINGLE WELL FOR BUILDING HEATING	XIANBIAO BU, YUNMIN RAN AND LINGBAO WANG
P-17	66	ALGAL CELL LYSIS BY BACTERIA SAGITTULA STELLATA FOR LIPID EXTRACTION	MENG WANG, WENQIAO YUAN, DUO WANG AND SHIBAO CHEN
P-18	68	IMPACT OF RENEWABLE ENERGY CONSUMPTION ON CARBON EMISSIONS: A CASE STUDY OF CHINA	MANLI CHENG, YANG NI, JING YANG AND XIAOAN TANG
P-19	69	KEY PERFORMANCE INDICATORS FOR MULTI-ENERGY ELECTRICITY SYSTEM	YING YANG
P-20	70	STUDY ON ENERGY-WATER NEXUS IN CHINA BASED ON MULTIREGIONAL INPUT-OUTPUT MODEL	HUI MEI LI AND JIANYI LIN
P-21	77	A HIERARCHICAL FRAMEWORK FOR ENERGY SCHEDULING AND TRADING OF A DISTRIBUTED ENERGY SYSTEM BASED ON BI-LEVEL OPTIMIZATION	XI LUO
P-22	102	COMPREHENSIVE EVALUATION OF SOLAR DOMESTIC HOT WATER SYSTEMS BASED ON ONLINE MONITORING: A CASE STUDY IN A UNIVERSITY, CHINA	HUI XIE, XIAOLIN LI AND BIN HAO
P-23	112	CO-PYROLYSIS BEHAVIOR OF CELLULOSE AND ACID WASHED LOW-RANK COAL	ZHIQIANG WU, BO ZHANG AND BOLUN YANG
P-24	116	DEVELOPMENT AND THERMODYNAMIC EVALUATION OF A CCHP SYSTEM WITH SOLAR-DRIVEN BIOMASS GASIFICATION	ZHANG BAI, QIBIN LIU AND HAIFENG WU
P-25	123	NUMERICAL SIMULATION OF GAS-SOLID HEAT TRANSFER IN A MOVING BED WITH SEMI-MELTING AND WIDE SCREENING PARTICLES	ZHAOYU XIAO, SHUZHONG WANG, MEIQUAN LI, ZHIQIANG WU, JUN ZHAO AND LIWEI MA
P-26	125	A NEW MODELING METHOD FOR PHOTOVOLTAIC MODULES BASED ON EXTREME	HUI YU, ZHICONG CHEN, LIJUN WU

# Poster Presentations

Poster ID	Paper ID	Paper Title	Authors
P-27	127	EXPERIMENTAL RESEARCH ON GAS-SOLID CONVECTION HEAT TRANSFER OF PARTICLE GROUPS	ZHAOYU XIAO, SHUZHONG WANG, MEIQUN LI, ZHIQIANG WU, JUN ZHAO AND LIWEI MA
P-28	134	A NOVEL FAULT DIAGNOSIS METHOD FOR PV ARRAYS USING EXTREME	YUTAO GAN, ZHICONG CHEN, LIJUN WU, CHAO LONG AND SHUYING CHENG,
P-29	139	EFFECTS OF THERMAL POWER EVOLUTION IN CHINA: A TYPE-COHORT-TIME ANALYSIS	FANGYI LI, ZHAOYANG YE AND XILIN XIAO
P-30	158	HFO1234ZE(E) SOLUBILITY IN PENTAERYTHRITOL TETRAALKYL ESTERS BY PREOS: COMPARISON WITH DIFFERENT MIXING RULES	YANJUN SUN, GAOLEI DI, JUAN XIA, LILI MA, XIAOPO WANG, MAOGANG HE AND YUSHENG HU
P-31	159	PERFORMANCE ANALYSIS OF AN ABSORPTION REFRIGERATION CYCLE WITH AMMONIA-IONIC LIQUIDS AS A WORKING FLUID	YANJUN SUN, JIAN WANG, JUAN XIA, LILI MA, XIAOPO WANG AND XIANGZHAO MENG
P-32	166	EXPERIMENTAL STUDY ON THE EFFECTS OF MODEL PARAMETERS ON STATE OF CHARGE ESTIMATION OF LITHIUM-ION BATTERIES	YONG TIAN, RUCONG LAI, ZHIBING ZENG, XIAOYU LI AND JINDONG TIAN
P-33	170	ANALYTICAL AND NUMERICAL STUDY ON SOLIDIFICATION OF COMPOSITE PHASE CHANGE MATERIAL IN A SPHERE	ZHAOYANG NIU, XIAOHU YANG AND HAILONG LI
P-34	172	COMPARATIVE ANALYSIS ON THE THERMODYNAMIC PERFORMANCE OF A NOVEL CARBON DIOXIDE ENERGY STORAGE SYSTEM WITH DIFFERENT OPERATION PARAMETERS	ZHAN LIU, XUQING YANG, ZIHUI LIU, ZHENYA DUAN AND XIAOHU YANG
P-35	181	UNIT COMMITMENT MODEL AND BENEFIT ANALYSIS OF IN DEPTH PEAK LOAD CYCLING OF THERMAL POWER UNIT UNDER WIND POWER INTEGRATION	CHUANG LIU, HAO LIU, WEICHUN GE, YIBO WANG AND YIQUN MENG
P-36	192	FLY ASH TO ROADBED CONSTRUCTION MATERIAL AND ITS ENVIRONMENTAL IMPACT	LEI WANG AND FANG LIU
P-37	197	A FAST ESTIMATE METHOD OF THE ENERGY SAVINGS OF ECMS AND THEIR COMBINATIONS FOR OFFICE BUILDINGS	LYU YAN, PAN YIQUN, QIN BINGYUE, YUAN XIAOLEI AND HUANG ZHIZHONG
P-38	208	OXYGEN-DEFICIENT CERAMIC FUNCTIONAL SEPARATOR CAPABLE OF INCREASING LI+ TRANSFERENCE NUMBER FOR LITHIUM ION BATTERY	XIN WANG, HAIMING HUA, LONGQING PENG, BOYANG HUANG, PENG ZHANG AND JINBAO ZHAO
P-39	210	METRICS OF URBAN MORPHOLOGY AND THEIR IMPACT ON BUILDING ENERGY CONSUMPTION: CASE STUDIES IN SHANGHAI	SHIYAO LI, YIQUN PAN, PENG XU AND NAN ZHANG.
P-40	212	PEER-TO-PEER COMPETITIVE ENERGY SYSTEM	SHIYAO LI, YIQUN PAN, PENG XU AND NAN ZHANG
P-41	214	THE ENERGY-WATER-PM2.5 NEXUS OF INDUSTRIAL SECTORS IN BEIJING AND IT'S DRIVING FORCES	YAJING LI, DELIN FANG AND BIN CHEN
P-42	216	ANALYSIS OF VIRTUAL WATER CONSUMPTION AND FLOW BASED ON INPUT-OUTPUT MODEL AND GIS	HUILIN WAN, DELIN FANG AND BIN CHEN
P-43	217	INTER-REGIONAL SPILLOVER EFFECT OF PM2.5 EMISSIONS TO NORTH-EAST CHINA THROUGH NATIONAL SUPPLY CHAIN	YATING LIU, DELIN FANG AND BIN CHEN
P-44	220	ANALYSIS OF URBAN WATER AND LAND RESOURCE CONSUMPTION	ZHENTIAN YU, DELIN FANG AND BIN CHEN
P-45	224	INDICATORS ON ENERGY CONSERVATION AND EMISSION MITIGATION FOR LIFE CYCLE OF CEMENT PRODUCTION PROCESS	DAN SONG AND HUITING GUO
P-46	225	SPILLOVER RISK ANALYSIS OF VIRTUAL WATER TRADE BASED ON MRIO-A CASE STUDY OF NORTHEAST CHINA	WEN ZHANG, XING FAN, YATING LIU, SAIGE WANG AND BIN CHEN
P-47	226	THE DISTURBANCE OF DIET AND MARKETING PATTERN ON RESOURCE REGULATING TAKING CHINA AND AUSTRALIA AS AN EXAMPLE	YANHONG WANG, DELIN FANG AND BIN CHEN
P-48	228	HOUSEHOLD CHARACTERISTICS ON WATER-ENERGY DEMAND IN CHINA VIA CLASSIFICATION	PENGFEI JIN, DELIN FANG AND BIN CHEN
P-49	229	WATER-LAND-ENERGY NEXUS IN CROPLAND MANAGEMENT FOR GREENHOUSE GAS MITIGATION	XING FAN AND BIN CHEN
P-50	152	ASSESSING THE ECONOMIC EFFECT OF ENVIRONMENTAL REGULATION IN CHINA: PROVINCE-LEVEL ANALYSIS BASED ON DYNAMIC SPATIAL PANEL MODEL	ZHAO LIU, HUAN ZHANG AND YUE-JUN ZHANG
P-51	178	APPLICATIONS AND CHALLENGES OF URBAN BIOMASS WASTES	GUIHUA YAN, BINGLIN CHEN, XIANHAI ZENG, YONG SUN, XING TANG AND LU LIN
P-52	40	MODELING AND SIMULATION ON ENERGY PERFORMANCE OF DISTRIBUTED SMALL-SCALE SOLAR HEAT PROSUMERS IN DISTRICT HEATING SYSTEM	HUA MENG AND HAI WANG





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