

# APPLIED ENERGY SYMPOSIUM AND FORUM 2016

---

**cue** 

Low-carbon Cities & Urban Energy



June 13-15, 2016  
Jinan | Shandong | CHINA



International Conference on Applied Energy



# OptiCE: OPTIMIZATION CLEAN ENERGY TOOL BOX

Applied Energy Innovation Institute (AEii), Ningbo, China, July 25-August 3, 2016

## 1. OBJECTIVES AND MISSIONS

Applied Energy Summer School (AEss), associated with UNiLAB, a specialized platform to facilitate networking and communications in energy areas and strengthen the multi-disciplinary collaborations, aims to build an academic, professional and persistent community for young scholars and experts by providing training courses, teamwork projects, plant tour opportunities and career development.

The missions of AEss are:

- Co-location fosters collaboration, innovation and multi-disciplinary comprehension through face-to-face communication and training courses
- Collaboration leads to creative integration and system solutions to complex problems by exploring linkages among different energy system components and developing a framework of system integration
- Career development shapes the future of youth with interactive exchange with editors, entrepreneurs, product producers, decision makers and investors

## 2. SCOPE AND TASKS

The scope for the AEss 2016 is to create a community that uses and develops Optimization Clean Energy Tool Box. OptiCE toolbox is an OPEN SOURCE model for optimization, simulation and design of clean energy systems for off-grid and on-grid applications.

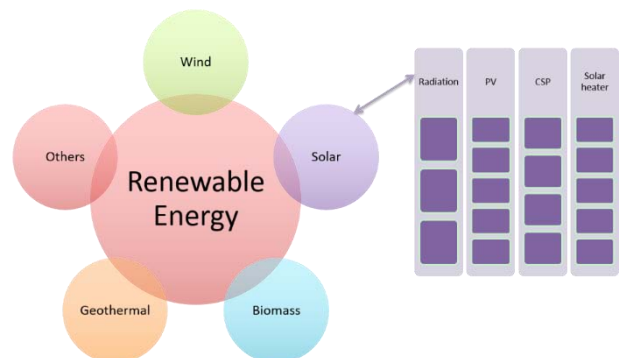
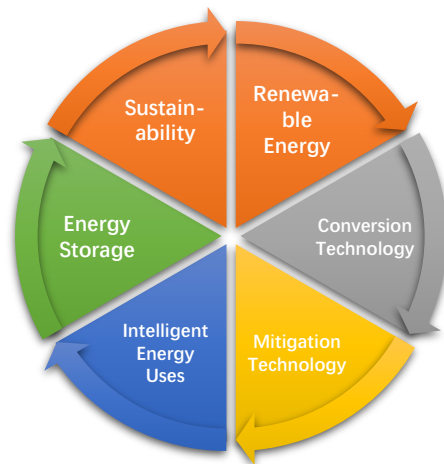
The main objective is to identify the main missing power sources and energy storage technologies to be integrated in OptiCE toolbox. The practical task is to develop 4-5 new sub-models to be integrated in the original model to create a more robust and useful tools that can be used in the research and consultancy communities. Particular tasks can be devoted to the development of the already existing sub-models, GIS applications, and interface.

## 3. PROGRAM DESIGN

Based on OptiCE toolbox, the courses are delivered through a combination of academic lectures, career development module, team-project-design and on-site tour of renewable pilot projects, and students have opportunity to see working systems that utilize clean energy.



The sessions are designed based on OptiCE toolbox with six modules of applied energy, namely Renewable Energy, Conversion Technologies, Mitigation Technologies, Intelligent Energy Uses, Energy Storage and Sustainability, and divided into four blocks on wind, solar, biomass, geothermal with specialized topics.



## 4. TARGET AUDIENCE

AEss invites highly motivated international students (undergraduate, postgraduate and doctoral students) and young scientists to join us.

Experts from KTH Royal Institute of Technology, well-known international research institutes and the prestigious press like Elsevier and/or Wiley will guide students the training courses, discussions, research and project-design.

## 5. CONTACT

Please, apply by e-mail sending your English CV and representing paper. The call for applicants will be closed when the maximum number of participants reached.

Deadline for application: June 20, 2016

Acceptance: June 25, 2016

E-mail: [summerschool2016@applied-energy.org](mailto:summerschool2016@applied-energy.org)

Tel: +86 1520 1261 495



# Acknowledgements

## SUPPORTING INSTITUTES & SPONSORS

China Energy Research Society  
European Commission PLEEC Program  
European Commission TILOS Program  
Future Energy Profile, Sweden  
Beijing Normal University  
Mälardalen University, Sweden  
Qilu University of Technology  
Shandong Normal University  
Shandong University  
Sichuan University  
Tianjin University  
Applied Energy Innovation Institute



Applied Energy  
Innovation Institute



海智计划  
H O M E



Technology Innovation for the Local Scale  
Optimum Integration of Battery Energy Storage



山东大学





8<sup>th</sup> International  
Conference on  
Applied Energy

**October 8-11, 2016**

# Call For Papers

*Deadline of draft paper: Jun. 30, 2016*

*Notification of acceptance: Aug. 1, 2016*

*Deadline for final paper: Sept. 1, 2016*

## **Topics (but not limited to)**

- Renewable Energy
- Clean Energy Conversion Technologies
- Mitigation Technologies
- Intelligent Energy Systems
- Energy Storage
- Energy Management, Policy, Economics and Sustainability
- Energy Sciences

**All papers presented at the ICAE2016 will be included in Energy Procedia. Special Issue of selected papers from ICAE2016 will be published in prestigious journals including Applied Energy.**



# Contents

- **Welcome to CUE2016**
- **Committees**
- **Program at a Glance**
- **Keynote Speakers**
- **Oral Presentation**
- **Poster Presentation**
- **Speaker's Guide**
- **Venue Map and Rooms**
- **Practical Guide**



[www.ae-innovation.org](http://www.ae-innovation.org)



The  
Applied  
Energy  
Innovation  
Institute

国际应用  
能源创新  
研究院

**AEii** = International + China &  
Applied Energy + Innovation Platform

The AEii, Applied Energy Innovation Institute, is an international, independent, and non-profit institute to incubate future clean energy technologies and solutions into sustainable market by engaging stakeholders including product producers, decision makers, investors, project developers and end-users.



AEii-Applied Energy Innovation Institute office of  
3000sq meters with facility for you to incubate your  
innovation

# Welcome to CUE2016



APPLIED ENERGY SYMPOSIUM AND FORUM 2016

June 13-15, 2016  
Jinan | Shandong | CHINA

Cities are responsible for approximately three-quarters of the world's energy consumption and they therefore play a major role in energy issues such as economic security and climate change. The CUE2016, with theme of “Cleaner Energy for Cleaner City”, is to provide a platform focused on urban energy systems, covering the topics of energy supply, distribution, and end use; smart eco-cities, urban transportation with efficient energy and low emissions; microgrid and smart home; BIPV and renewable applications; urban waste to energy; nexus of energy-water; policy options etc.

The event consists of two-day symposium for sharing the most recent progress of research in urban energy systems and one-day forum to engage all stakeholders for discussing how future urban energy systems can be implemented.

The CUE2016 is organized by the international journal, Applied Energy, Applied Energy Innovation Institute (AEii) and China Association for Science and Technology HOME Program (CAST/HOME) and hosted by Jinan Association for Science and Technology and co-organized by Future Energy Profile/Mälardalen University Sweden, together with universities in China including Beijing Normal University, Shandong University, Qilu University of Technology, Shandong Normal University and Tianjin University.

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

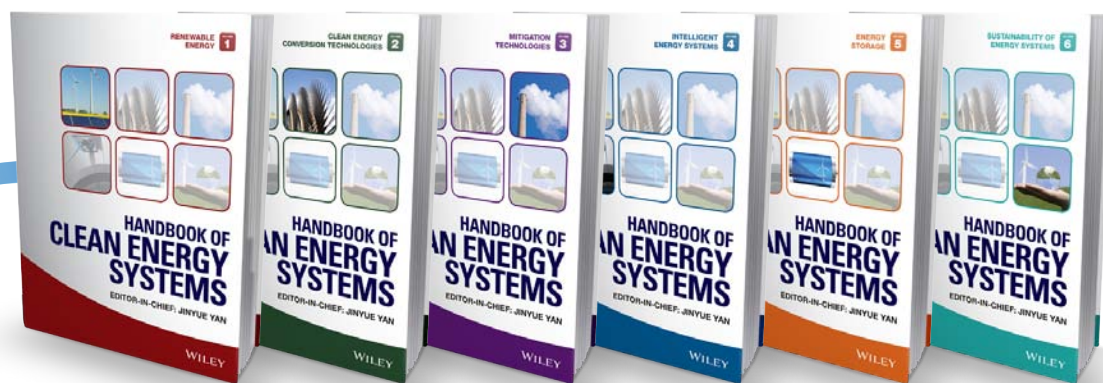
## Conference Chairs

**Prof. R. Wennersten**

**Prof. B. Chen**

**Prof. J. Yan**

# Are you working on the challenging issues associated with the development of our future energy systems?



ISBN: 978-1-118-38858-7

- How to provide clean, affordable, secure energy
- How energy can be effectively and efficiently utilized
- How to make conventional energy systems cleaner and operationally more flexible
- How to integrate different processes in the whole chain of energy systems, from energy resources, conversion and storage, to end uses
- How to balance the supply and demand of energy
- How to mitigate climate change through technology innovations
- How to determine the best pathways and policy options for investing in renewable energy in the future

*The Handbook of Clean Energy Systems* provides many answers and solutions around the world's energy challenges. Bringing together information on innovation, research, development, and practical applications throughout all areas of clean energy systems and technology this unique reference:

- Comprises over 4,000 pages in 6 themed volumes
- Includes 197 articles from a team of over 450 scientists, engineers, and executives from academia and industry
- Consolidates a wealth of information which is currently scattered across a wide variety of literature sources
- Available in Print or Online

## ORDER YOUR COPY TODAY!

North, Central & South America  
800 245 6217

[wileychem@wiley.com](mailto:wileychem@wiley.com)

Europe, Middle East, ASIA & Africa  
+44 (0)1243 843294

[cs-books@wiley.co.uk](mailto:cs-books@wiley.co.uk)

Germany, Switzerland & Austria  
+49 6201 606 400

[service@wiley-vch.de](mailto:service@wiley-vch.de)

Find news, sample content and more at:  
[wileyonlinelibrary.com/ref/hces](http://wileyonlinelibrary.com/ref/hces)

WILEY-VCH

WILEY



# Committees

## CONFERENCE CHAIRS

Prof. R. Wennersten (Co-Chair)

Prof. B. Chen (Co-Chair)

Prof. J. Yan (Co-Chair)

## ORGANIZING COMMITTEE

Mr. M. Liu (Co-Chair)

Prof. S.K. Chou (Co-Chair)

Prof. E. Dahlquist (Co-Chair)

Prof. F.C. Sun (Program Track Chair)

Dr. P. Yang (Program Track Chair)

Dr. J.S. Zhang

Ms. J. Fang

Dr. Y.X. Lv

Dr. H. Li

Dr. P. Campana

Dr. Q. Sun

Dr. J. Yang

## SECRETARIAT

Dr. Y.X. Lv

Dr. J. Yang

Dr. Q. Sun

Ms. W. Nookuea

Mr. Y.T. Tan

Ms. D.L. Fang

Ms. S.Y. Yang

Mr. M. Wakeel

Ms. D. Song

Ms. C.C. Duan

Ms. S. Wang

Ms. Z.Y. Chen

Ms. S.Y. Ji

Ms. B.Y. Zhang

Ms. X. Ding

## INTERNATIONAL SCIENTIFIC COMMITTEE

J. Yan (Chair)

S.K. Chou (Co-Chair)

U. Desideri (Co-Chair)

J. Acharya, Nepal

L. Kazmerski, USA

R. Span, Germany

S. Campanari, Italy

M. Kraft, UK

G. Strbac, UK

B. Chen, China

S. Kurimoto, Japan

F.C. Sun, China

W.H. Chen, Taiwan

D.J. Lee, Taiwan

T. Tezuka, Japan

A.J. Conejo, USA

M.K.H. Leung, Hong Kong

S.T. Tu, China

E. Dahlquist, Sweden

Y.C. Leung, Hong Kong

O. Veneri, Italy

S. Deng, Hong Kong

X.G. Li, Canada

C.S. Wang, China

N. Duic, Croatia

H. Lund, Denmark

J.H. Wang, USA

K. Enomoto, Japan

P. Lund, Finland

A. Wanniachchi, Sri Lanka

S.V. Garimella, USA

R. Madlener, Germany

Y.M. Wei, China

S. Guhathakurta, USA

A.F. Massardo, Italy

J. Wu, China

A.K. Gupta, USA

A.L. Neumann, Spain

J.Z. Wu, UK

G. Hammond, UK

M. Obersteiner, Austria

X.H. Xia, South Africa

N. Hedin, Sweden

A. Ramamurth, India

H.M. Xu, UK

J. Hetland, Norway

A.P. Roskilly, UK

Y. Yamagata, Japan

K. Hubacek, USA

J. Schoonman, Netherlands

H.X. Yang, Hong Kong

N. Jenkins, UK

B. Schwegler, USA

P. Yang, USA

H.G. Jin, China

T. Shamim, UAE



# 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 focuses on renewable energy, energy efficiency and emission mitigation, as well as smarter modelling, optimization and management.

The Future Energy Center is one of Sweden's strongest research environments in process optimization targeting the process industry and the energy sector. We develop innovative solutions and tools within the areas of energy, building and environmental engineering.

The Future Energy Center has good relationships with both companies and recognized national and international centers, including several

Chinese universities. The profile comprises nine professors, a further fifteen senior researchers and more than forty graduate students.

## 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

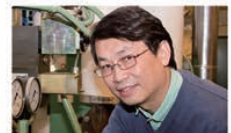
**TRACK 3** Smarter modelling/ optimisation and management

The Future Energy Center also offers studies at post-graduate level in Energy and Environmental engineering. We are also part of the research school Reesbe (Resource-Efficient Energy Systems in the Built Environment).

## CONTACT US

[www.mdh.se](http://www.mdh.se)

**JINYUE YAN**  
Professor of Energy Engineering.  
[jinyue.yan@mdh.se](mailto:jinyue.yan@mdh.se)



**ERIK DAHLQUIST**  
Professor of Energy Technology and Research Director.  
[erik.dahlquist@mdh.se](mailto:erik.dahlquist@mdh.se)



**FREDRIK WALLIN**  
Track leader in Energy efficiency and emission mitigation.  
[fredrik.wallin@mdh.se](mailto:fredrik.wallin@mdh.se)



**MÄLARDALEN UNIVERSITY**  
SWEDEN

# Program at a Glance

<b>Registration:</b> June 12: 15:00-17:00; June 13: 8:00-17:00; June 14: 9:00-12:00; June 15: 8:30-12:00			
<b>Day 1: June 13</b>			
9:00-9:10	OPENING		
9:10-9:50	Prof. Markus Kraft University of Cambridge (UK) J-Park Simulator: The road map to a smart industrial park		
9:50-10:30	Prof. Kunio Yoshikawa Tokyo Institute of Technology (Japan) High quality solid fuel production from biomass and wastes employing the hydrothermal treatment		
10:30-10:50	TEA/COFFEE BREAK		
10:50-11:30	POSTER SESSION		
11:30-13:00	LUNCH		
Sessions	1-A1	1-B1	1-C1
13:00-15:00	Renewable power generation	Fuel cells, battery and energy storage	Energy and environmental emissions
15:00-15:20	TEA/COFFEE BREAK		
Sessions	1-A2	1-B2	1-C2
15:20-17:20	Power grid and distributed generation	Battery for electric vehicle	Energy and water nexus
<b>Day 2: June 14</b>			
Sessions	2-A1	2-B1	2-C1
8:20-10:00	Energy planning and low carbon city practices	Strategic studies of national energy systems	Energy efficiency in buildings
10:00-10:20	TEA/COFFEE BREAK		
Sessions	2-A2	2-B2	2-C2
10:20-12:00	Urban energy management	Energy management in sectoral level	Energy management of building system
12:00-13:00	LUNCH		
Sessions	2-A3	2-B3	2-C3
13:00-15:00	Energy economics, finance and investment	Energy management of electric vehicle	Bioenergy and wastes to energy
15:00-15:20	TEA/COFFEE BREAK		
Sessions	2-A4	2-B4	2-C4
15:20-17:20	Energy pricing	Electric vehicle, hybrid vehicle and eco-traffic	Advanced energy systems
18:30	BANQUET		
<b>Day 3: June 15</b>			
8:30-8:50	OPENING		
8:50-9:30	Prof. Hongbin Sun; Tsinghua University Energy internet		
9:30-10:10	Prof. Jinyue Yan; Royal Institute of Technology Urban energy system, energy conservation and emission reduction		
10:10-12:00	Panel I: Advanced energy technologies		
12:00-13:00	LUNCH		
13:00 -16:30	Panel II: Air pollution control and low carbon industry development of Jinan city		

# Keynote Speakers



**Prof. Markus Kraft**  
University of  
Cambridge (UK)

***Keynote: J-Park Simulator: The road map to a smart industrial park***

Prof Markus Kraft is a Fellow of Churchill College Cambridge and Professor in the Department of Chemical Engineering and Biotechnology. He is the director of CARES Ltd., the Singapore-Cambridge CREATE Research Centre. He is also a principal investigator of “Cambridge Centre for Carbon Reduction in Chemical Technology (C4T)”. He obtained the academic degree 'Diplom Technomathematiker' at the University of Kaiserslautern in 1992 and completed his Doctor rerum naturalium in Technical Chemistry at the same University in 1997. Subsequently, he worked at the University of Karlsruhe and the Weierstrass Institute for Applied Analysis and Stochastics in Berlin. In 1999 he became a lecturer in the Department of Chemical Engineering, University of Cambridge. He has a strong interest in the area of computational modelling and optimisation targeted towards developing carbon abatement and emissions reduction technologies for the automotive, power and chemical industries. Together with his research students he has also contributed significantly towards the detailed modelling of combustion synthesis of organic and inorganic nanoparticles and worked on engine simulation, spray drying and the granulation of fine powders.



**Prof. Kunio Yoshikawa**  
Tokyo Institute of  
Technology (Japan)

***Keynote: High quality solid fuel production from biomass and wastes employing the hydrothermal treatment***

Dr. Kunio Yoshikawa is a professor of Department of Environmental Science and Technology, Tokyo Institute of Technology, Japan. He graduated from Tokyo Institute of Technology and obtained PhD in 1986. After graduation from Tokyo Institute of Technology, Prof. Yoshikawa worked for Mitsubishi Heavy Industries for one year, and then went back to his home university to become a research associate, associate professor and professor. His major research areas are energy conversion, thermal engineering, combustion, gasification, waste treatment technologies and atmospheric environmental engineering, and he wrote more than 200 papers. He is an associate editor of Applied Energy His main awards are AIAA (American Institute of Aeronautics and Astronautics) Best Paper Award in 1999, ASME (American Society of Mechanical Engineers) James Harry Potter Gold Medal in 2001, JSME (Japan Society of Mechanical Engineers) Environmental Technology Achievement Award in 2006, Fellow of JSME in 2008 and Best Educator Award of Tokyo Institute of Technology in 2014.



# Keynote Speakers



**Prof. Hongbin Sun**  
Tsinghua University  
(China PR)

***Keynote: Energy Internet***

Prof. Hongbin Sun is Changjiang Scholar Professor of Education Ministry of China, director of the Energy Management and Control Research Center and deputy director of the Academic Affair Office, Tsinghua University (THU). Prof. Sun received his PhD degree from Dept. of E.E., THU in 1997. His interests include smart grid and energy internet. Prof. Sun is the co-author of over 300 peer-reviewed papers and 4 books. He held over 80 patents in China, three patents in USA and one patent in Europe. He is an IET Fellow, editor of the IEEE Transactions on Smart Grid and associate editor of IET Renewable Power Generation. He is the founder Chairman of Energy Internet oriented Xiangshan Meeting (香山会议), which is the most top-level academic meeting series managed by Chinese Government.



**Prof. Jinyue Yan**  
Royal Institute of  
Technology  
(Sweden)

***Keynote: Urban energy system, energy conservation and emission reduction***

Prof. Yan is chair professor of Energy Engineering, Mälardalen University, and KTH-Royal Institute of Technology, Sweden. He is director of Future Energy Profile, the energy platform (funding of ca 10 million Euro from Swedish Knowledge Foundation and industrial partners including ABB, etc.). He obtained his PhD at KTH in 1991. During 2001 to 2005, Dr. Yan was chair professor and head of Energy Engineering at Luleå University of Technology, Sweden. Prof. Yan's research interests include simulation and optimization of advanced energy systems; renewable energy especially in bioenergy; advanced power generation; climate change mitigation technologies and environment and policy; clean development mechanism (CDM), and fundamental engineering thermodynamics. Prof. Yan published ca 300 papers including the paper in Science. Prof. Yan is editor-in-chief of Applied Energy, advisory editor of Energy Procedia (Elsevier); editor-in-chief of the Handbook of Clean Energy Systems (Wiley). He is the conference chairman/scientific chair of International Conference on Applied Energy ICAE, (Hong Kong, Singapore, Italy, China, South Africa, Taiwan, UAE, China), and chair of other international conferences. He is also editorial board member of several international journals. He serves as the advisory expert to the United Nation, European Union Commission, and Asian Development Bank, and other international organizations; Overseas Assessor of Chinese Academy of Sciences; National Committee member of China Association for Science and Technology (CAST), and academic advisor to Hong Kong Polytechnic University and Hong Kong City University. Dr. Yan is the member of European Academy of Sciences and Arts.





## Technology Innovation *for the* Local Scale Optimum Integration *of* Battery Energy Storage



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646529.

# Day 1, June 13<sup>rd</sup>

# Oral Presentations

## DAY 1: June 13

Room: The Shandong Energy Hall

9:00-9:10	<p>OPENING</p> <p>Welcome from the CUE2016 Conference Chairs</p> <p>Prof. Jinyue Yan</p>
9:10-9:50	<p>Keynote: J-Park Simulator: The Road Map to a Smart Industrial Park</p> <p>Prof. Markus Kraft</p> <p>University of Cambridge (UK)</p>
9:50-10:30	<p>Keynote: High Quality Solid Fuel Production from Biomass and Wastes Employing the Hydrothermal Treatment</p> <p>Prof. Kunio Yoshikawa</p> <p>Tokyo Institute of Technology (Japan)</p>
10:30-10:50	TEA/COFFEE BREAK
10:50-11:30	POSTER SESSION
11:30-13:00	LUNCH

Room: The Yantai Meeting Room

Session title: Renewable power generation

Session chair: Shuai Deng

Time	ID	Author	Paper title
13:00-13:20	4	Jingchun Shen, Xingxing Zhang, Tong Yang, Llewellyn C. M. Tang, Yupeng Wu, Song Pan, Jinshun Wu and Peng Xu	Experimental study of a Compact Unglazed Solar Thermal Facade (STF) for Energy-efficient Buildings
13:20-13:40	5	Jingchun Shen, Xingxing Zhang, Tong Yang, Llewellyn Tang, Yupeng Wu, Song Pan, Jinshun Wu and Peng Xu	Optimizing the Configuration of a Compact Thermal Facade Module for Solar Renovation Concept in Buildings
13:40-14:00	12	Xia Liang and Wenying Chen	How EV Help Incent Consumption of China's Wind Power
14:00-14:20	31	Qiong Wu, Jian Zhou, Shu Liu, Xiu Yang and Hongbo Ren	Multi-objective Optimization of Integrated Renewable Energy System Considering Economics and CO2 Emissions
14:20-14:40	41	Tao Ma, Hongxing Yang, Xiaodong Gao and Chengzhi Lou	Inline Hydro Power Generation from Water Pipelines in Urban Environment
14:40-15:00	69	Xiaoxia Gao, Dimitris Karamanis, Lin Lu and Hongxing Yang	Application and Validation of 2D Jensen-Gaussian Wake Model on Power Generation Prediction Based on Kentish Offshore Wind Farm Data
15:00-15:20			TEA/COFFEE BREAK

Room: The Yantai Meeting Room

Session title: Power grid and distributed generation

Session chair: Tao Ma

15:20-15:40	63	Pengwei Su, Shuai Deng, Ying Zhang, Dan Wang, Yunfei Mu, Li Zhao and Jun Zhao	Approaches to Sustainable Distributed Energy System: A Review on Emerging Research Topics
15:40-16:00	57	Guoqing Li, Xiaojuan Zhai, Yang Li and Bo Feng	Multi-objective Optimization Operation Considering Environment Benefits and Economy Based on Ant Colony Optimization for Isolated Micro-grids
16:00-16:20	73	Shifei Zhao, Xiaoze Du, Zhihua Ge and Yongping Yang	Cascade Utilization of Flue Gas Waste Heat in Combined Heat and Power System with High Back-pressure (CHP-HBP)
16:20-16:40	130	Hong Zhang, Lin Fu, Jiajian Song and Qiangqiang Yang	Power Energy Management and Control Strategy Study for Extended-Range Auxiliary Power Unit
16:40-17:00	159	Y. Y. Zhang, H. Wei, Y. D. Yang, H. B. Zheng, T. Zhou, J. Jiao	Forecasting of Dissolved Gases in Oil-immersed Transformers Based upon Wavelet LS-SVM Regression and PSO with Mutation

Room: The Zaozhuang Meeting Room  
 Session title: Fuel cells, battery and energy storage  
 Session chair: Bin Chen

Time	ID	Author	Paper title
13:00-13:20	98	Jinpeng Tian, Rui Xiong and Ruixin Yang	Degradation State Recognition and Health Monitoring of Lithium ion Batteries
13:20-13:40	109	Jiayi Cao and Rui Xiong	Battery Durability Conscious Power Management for a Hybrid Battery-ultracapacitor Energy Storage System
13:40-14:00	110	Liang Lv and Rui Xiong	Research on Modeling and Parallel Grouping Characteristic Analysis of Lithium-ion Batteries
14:00-14:20	121	Jichao Hong, Zhenpo Wang and Peng Liu	Voltage Fault Precaution and Safety Management of Lithium-ion Batteries Based on Entropy for Electric Vehicles
14:20-14:40	116	Hongxun Hui, Weidong Liu and Yi Ding	Quantitative Analysis of Air Conditioner Aggregation for Providing Operating Reserve
14:40-15:00	118	Wenwei Wang, Sheng Yang and Cheng Lin	Clay-like Mechanical Properties of Components for the Jellyroll of Cylindrical Lithium-ion cells
15:00-15:20	TEA/COFFEE BREAK		

Room: The Zaozhuang Meeting Room  
 Session title: Battery for electric vehicle  
 Session chair: Rui Xiong

15:20-15:40	119	Junqiu Li, Xin Jin, Chenning Zhang and Puen Wu	Researches on Modeling and Experiment of Li-ion battery PTC Self-heating in Electric Vehicles
15:40-16:00	129	Zeyu Chen, Rui Xiong, Jiahuan Lu and Xiong Shang	External Short Circuit Fault of Lithium-ion Batteries in High Temperature Condition
16:00-16:20	111	Chun Wang, Rui Xiong and Hongwen He	Modeling and Characterization of Ultracapacitors for Electric Vehicles Considering Temperature Uncertainty
16:20-16:40	137	Weiwei Huo, Hongwen He, Rui Xiong and Hui Jia	Simulation of Diffusion Polarization in Li-ion battery During Discharge Process
16:40-17:00	143	Cheng Lin and Aihua Tang	Simplification and Efficient Simulation of Electrochemical Model for Li-ion Battery in EVs
17:00-17:20	148	Zhifu Wang, Yupu Wang, Zhi Li, Qiang Song and Yinan Rong	The Optimal Charging Method Research for Lithium-ion Batteries Used in Electric Vehicles

Room: The Zibo Meeting Room  
 Session title: Energy and environmental emissions  
 Session chair: Jiashuo Li

Time	ID	Author	Paper title
13:00-13:20	10	Xudong Sun, Xue Qu and Bo Zhang	Embodied Energy Uses in the Three Developed Regions of China
13:20-13:40	36	Lei Liu, Ying Huang and Xiaofeng Pan	CO2 Emissions Structure of Local Economy: A Case of Shenzhen, China
13:40-14:00	162	Siyuan Yang and Bin Chen	Co-benefits of CO2 and PM2.5 Emission Reduction
14:00-14:20	153	Dan Song and Bin Chen	Sustainability Evaluation of a Typical Cement Production Chain in China - An Emergy Perspective
14:20-14:40	150	Shanshan Wang, Hui Yue, Sainan Liu, Shuxian Yang and Ruiqin Zhang	Regional Disaggregation of Energy Consumption Target: The Case of Henan Province
14:40-15:00	145	Jinkai Li, Liutang Gong, Zhenling Chen, Guoliang Yang and Jin Zhang	The Hierarchy and Transition of Urban Energy Efficiency: A Case Study of China's Environmental Protection Model Cities
15:00-15:20	TEA/COFFEE BREAK		

Room: The Zibo Meeting Room  
 Session title: Energy and water nexus  
 Session chair: Xudong Sun

15:20-15:40	80	Hui Li, Gengyuan Liu and Zhifeng Yang	Urban Gray Water Footprint Analysis Based on Input- Output Approach
15:40-16:00	141	Muhammad Wakeel and Bin Chen	Energy Consumption in Urban Water Cycle: A case Study of Lahore (Pakistan)
16:00-16:20	24	Mei Han and Haozhe Yu	Wetland Dynamic and Ecological Compensation of the Yellow River Delta Based on RS
16:20-16:40	75	Yan Gao and Gengyuan Liu	Ecological Network Based Urban Pollution Transfer Effect Analysis at A River Basin Scale
16:40-17:00	163	Le Feng and Bin Chen	Water-energy nexus of Water Treatment System

**DAY 2: June 14**

Room: The Yantai Meeting Room

Session title: Energy planning and low carbon city practices

Session chair: Hang Yu, Guochang Fang

Time	ID	Author	Paper title
8:20-8:40	14	Ali Cheshmehzangi	China's New-Type Urbanisation Plan (NUP) and the Foreseeing Challenges for Decarbonization of Cities: A Review
8:40-9:00	16	Ali Cheshmehzangi	City Enhancement beyond the Notion of "Sustainable City" : Introduction to Integrated Assessment for City Enhancement (iACE) Toolkit
9:00-9:20	18	Luxi Sun, Zhifeng Yin, Jian Ma, Wencui Du and Danhe Liu	Energy-related GHG Emissions for Inland and Municipal Economy in Chongqing: Factor Dynamics and Structure Decomposition
9:20-9:40	77	Jipeng Fei, Ying Wang, Yue Yang, Shiyuan Chen and Qiang Zhi	Towards Eco-city: The Role of Green Innovation.
9:40-10:00	94	Guoqin Zhang, Rubing Ge, Tao Lin, Hong Ye, Xinhui Li and Jinchao Song	Spatial Apportionment of Urban Greenhouse Gas Emission Inventory and Its Implication for Urban Planning
10:00-10:20	TEA/COFFEE BREAK		

Room: The Yantai Meeting Room

Session title: Urban energy management

Session chair: Ali Cheshmehzangi

10:20-10:40	37	Ling Shao, Bin Chen and Lu Gan	Production-based and Consumption-based Carbon Emissions of Beijing: Trend and Features
10:40-11:00	132	Qiang Huang, Xiangzhao Meng, Xiaohu Yang, Liwen Jin and Xing Liu	The ecological City: Considering Outdoor Thermal Environment
11:00-11:20	152	Cuncun Duan and Bin Chen	Energy-water-carbon Nexus of Beijing in China
11:20-11:40	86	Xuemei Wu, Yihui Dong and Qiang Zhi	Impact of Shared Economy on Urban Sustainability: from the Perspective of Social, Environmental, and Economic Sustainability
11:40-12:00	135	Zhao Liu and Fangjie Yu	Direct Energy Rebound Effect of Family Cars: An Analysis Based on a Survey in Chang-Zhu-Tan City Group

Room: The Zaozhuang Meeting Room

Session title: Strategic studies of national energy systems

Session chair: Mei Sun

Time	ID	Author	Paper title
8:20-8:40	1	Naiping Zhu, Qi Zhao, Lixin Tian and Qing Zhang	Cost Analysis and Development Strategies for China' Natural Gas Power Generation Industry Under the Situation of Energy Price's Reformation
8:40-9:00	40	Nairong Liu, Haizhong An, Xiangyun Gao, Xiaoqing Hao and Huajiao Li	The Stability of International Heat Pump Trade Pattern: The Complex Networks Analysis
9:00-9:20	155	Saige Wang and Bin Chen	International Oil Trade Analysis Based on Hybrid Ecological Network Analysis and Flow-distance Analysis
9:20-9:40	142	Jvanvier Munyaneza, Muhammad Wakeel and Bin Chen	Overview of Rwanda Energy Sector: From Energy Shortage to Sufficiency
9:40-10:00	54	Ruijin Du, Gaogao Dong, Lixin Tian, Yixiao Liu, Ya Wang, Minggang Wang and Guochang Fang	A Complex Network Perspective on Interrelation Feature and Structural Evolution of Global Oil Trade
10:00-10:20	TEA/COFFEE BREAK		

Room: The Zaozhuang Meeting Room			
Session title: Energy management in sectoral level			
Session chair: Luxi Sun, Xinhai Xu			
10:20-10:40	45	Rui Xie, Jiayu Fang and Cenjie Liu	Impact of Transport Infrastructure on Urban Environment and Its Spatial Spillover Effect
10:40-11:00	151	Dewei Yang, Bin Liu, Weijing Ma and Qinghai Guo	Sectoral Energy-related CO2 Emissions and Its Implications for Low-Carbon City
11:00-11:20	158	Chen Wang and Gengyuan Liu	Database The Evaluation of Sustainability in Chinese Provincial Level Based on the Emergy Accounting
11:20-11:40	27	Mei Sun, Cuixia Gao, Changsheng Jia, Faye D. F. Ni and Jijian Zhang	The Selection and Promotion of Core Technology to China's Energy Goals
11:40-12:00	22	Guochang Fang, Lixin Tian, Min Fu, Mei Sun and Ruijin Du	The Impacts of Energy Construction Adjustment on Energy Intensity and Economic Growth—A Case Study of China

Room: The Zibo Meeting Room			
Session title: Energy efficiency in buildings			
Session chair: Zitao Yu, Tao Lin			
Time	ID	Author	Paper title
8:20-8:40	8	Fan Feng, Zhengwei Li, Yingjun Ruan and Peng Xu	An Empirical Study of Influencing Factors on Residential Building Energy Consumption in Qingdao City, China
8:40-9:00	13	Qiong Wu, Hongbo Ren, Jian Zhou, Shu Liu and Xiu Yang	Feasibility and Potential Assessment of BCHP Systems for Commercial Buildings in Shanghai
9:00-9:20	56	Yinan Zhou, Xinyu Tao, Perry Pei-Ju Yang	A Simulation-based Research on Passive District
9:20-9:40	46	Li Yuan, Yingjun Ruan, Guang Yang, Fan Feng and Zhengwei Li	Analysis of Factors Influencing the Energy Consumption of Government Office Buildings in Qingdao
9:40-10:00	115	Kai Zhu, Xiaoqing Chen, Baomin Dai, Yabo Wang, Xueqiang Li and Liantao Li	Experimental Study on the Thermal Performance Improvement of a New Designed Condenser with Liquid Separator
10:00-10:20	TEA/COFFEE BREAK		

Room: The Zibo Meeting Room			
Session title: Energy management of building system			
Session chair: Qiong Wu, Hongxing Yang			
10:20-10:40	117	Hong Ye, Longyu Shi, Jinchao Song, Qun Ren, Xinyue Hu, Yu Zhao and Tao Lin	Carbon Emission from the Office Buildings in China: The Role of Climate, Quality, Urban Form and Social-economic Conditions
10:40-11:00	112	Steve-Wonder Amakpah and Gengyuan Liu	A Meta-analysis of China 2050 Pathways Energy Calculator with Special Emphasis on Transportation
11:00-11:20	38	Yifu Feng, Hang Yu and Yechen Yu	A Feasibility Study of Low Carbon Energy Systems for a Tower Block in London
11:20-11:40	83	Menglian Zheng, Ruyue Fang and Zitao Yu	Life Cycle Assessment of Residential Heating Systems: a Comparison of Distributed and Centralized Systems
11:40-12:00	85	Yue Ting, Long Ruyin, Chen Hong, Qi Hui	Households' Perception of Energy Conservation Results: Adjustment Effect of Energy-conservation Policy

Room: The Yantai Meeting Room			
Session title: Energy economics, finance and investment			
Session chair: Gengyuan Liu, Lei Liu			
Time	ID	Author	Paper title
13:00-13:20	2	Lixin Tian, Haifang Shan and Naiping Zhu	Analysis of the Real Options in Nuclear Investment Under the Dynamic Influence of Carbon Market
13:20-13:40	42	Guoxing Zhang, Zhenhua Zhang, Peng Liu, Xiulin Gao and Mingxing Liu	Will the Rising Oil Price Promote Heterogeneous Companies' Behavior of Carbon Emission Reduction?
13:40-14:00	44	Yi Hu, Xi Zhang, Yi Xiao and Feng Tao	Panel Granger Causality Investigation Between Energy Consumption and Economic Growth in China
14:00-14:20	62	Yue-Jun Zhang and Hua-Rong Peng	Direct Rebound Effect of China's Residential Electricity Consumption Based on the Panel Threshold Model
14:20-14:40	81	Yao Wang and Qiang Zhi	The Role of Green Finance in Environmental Protection: Two Aspects of Market Mechanism and Policies
14:40-15:00	35	Xiaotong Liu, Shuyang Zhang, Jun Dong and Xinhai Xu	A Short-term Analysis of Hydrogen Demand and Refueling Station Cost in Shenzhen China
15:00-15:20	TEA/COFFEE BREAK		



Room: The Yantai Meeting Room			
Session title: Energy pricing			
Session chair: Qie Sun, Qi Zhang			
15:20-15:40	99	Qie Sun, Hailong Li, Fredrik Wallin and Qi Zhang	Marginal Costs for District Heating
15:40-16:00	101	Qi Zhang, Siyuan Chen and Hailong Li	Study on the Impacts of Operation Mode on the Promotion of Gas Storage in China based on Game Theory Analysis
16:00-16:20	97	Bin Su, B.W. Ang and Yingzhu Li	Input-Output and Structural Decomposition Analysis of Singapore's Carbon Emissions in 2000-2010
16:20-16:40	108	Haiyang Lin, Qinxing Wang, Yu Wang, Ronald Wennersten and Qie Sun	Agent-based Modeling of Electricity Consumption in an Office Building under a Tiered Pricing Mechanism
16:40-17:00	100	Lijing Zhu, Huihui Lu, Qi Zhang, Hailong Li, Ge Wang and Xunzhangpan	Application of Crowdfunding on the Financing of EV's Charging Piles
17:00-17:20	66	Xiaojiao Chen and Rui Kong	Research on Energy Efficiency Based on DEA-Malmquist-- A Case Study of Construction Industry in China

Room: The Zaozhuang Meeting Room			
Session title: Energy management of electric vehicle			
Session chair: Zeyu Chen, Ruijin Du			

Time	ID	Author	Paper title
13:00-13:20	147	Zhifu Wang, Yang Zhou, Chaopeng Li and Jun Fang	Research on Straight Line Stability Control Strategy of Four Wheel Drive Vehicle Based on the Sliding Mode Variable Structure Control and Optimization Algorithm
13:20-13:40	72	Bin Wang, Jun Xu, Zhen Yan, Binggang Cao and Bo Ning	A Simple Power-split Strategy of a Hybrid Energy Storage System in Electric Vehicles
13:40-14:00	113	Cheng Lin, Shengxiong Sun and Wenfei Jiang	Active Anti-jerking Control of Shifting for Electric Vehicle Driveline
14:00-14:20	120	Jianfei Cao, Jiankun Peng and Hongwen He	Modeling and Simulation Research on Power-split Hybrid Electric Vehicle
14:20-14:40	133	Mei Yan, Hongwen He, Chao Sun, Hui Jia and Menglin Li	Stochastic Dynamic Programming of Air Conditioning System under Time-varying Passenger Condition for Electric Bus
14:40-15:00	136	Hui Jia, Hongwen He, Chao Sun and Mei Yan	Optimal Air-conditioning Control for Electric Vehicles via Dynamic Programming
15:00-15:20	TEA/COFFEE BREAK		

Room: The Zaozhuang Meeting Room			
Session title: Electric vehicle, hybrid vehicle and eco-traffic			
Session chair: Chun Wang			

15:20-15:40	93	Wei He, Shixue Wang and Yurong Yang	Maximum Net Power Analysis under Different Automobile Exhaust Temperatures for Thermoelectric Generator System
15:40-16:00	126	Li Zhai, Hong Huang, Tianmin Sun and Qiannan Wang	Investigation of Energy Efficient Power Coupling Steering System for Dual Motors Drive High Speed Tracked Vehicle
16:00-16:20	127	Shanshan Xie, Fengchun Sun, Hongwen He and Jiankun Peng	Plug-In Hybrid Electric Bus Energy Management Based on Dynamic Programming
16:20-16:40	128	Jingda Wu, Jiankun Peng, Hongwen He and Jiayi Luo	Comparative Analysis on the Rule-based Control Strategy of Two Typical Hybrid Electric Vehicle Powertrain
16:40-17:00	17	Deyang Kong, Dan Ma and Minmin Wang	A Simulation Study of Upgrading Urban Gasoline Taxis to Electric Taxis
17:00-17:20	134	Xiaofeng Ding, Guanliang Liu and Hong Guo	Overall Energy Efficiency Enhancement of Traction System Based on NSGA-II in Electric Vehicle

Room: The Zibo Meeting Room  
 Session title: Bioenergy and wastes to energy  
 Session chair: Yinguang Chen

Time	ID	Author	Paper title
13:00-13:20	154	Binyue Zhang and Bin Chen	Dynamic Hybrid Life Cycle Assessment of CO2 Emissions of a Typical Biogas project
13:20-13:40	61	Wenyong Shi, Hongbin Li, Rong Zhou and Qinyun Du	Biodiesel Production by Quaternized Polysulfone Multilayer Composite Membrane: Experimental and Kinetics Model
13:40-14:00	96	Qun Cao, Zheng Cui, Qie Sun and Lin Cheng	Numerical Simulation of an Improved Structure of High Resistance Grate Plate
14:00-14:20	60	Yinguang Chen, Xiong Zheng, Leiyu Feng and Jiang Wu	New Strategy for Efficient Bio-energy Recovery from Municipal Organic Wastes via the Regulation of Anaerobic Metabolism
15:00-15:20	TEA/COFFEE BREAK		

Room: The Zibo Meeting Room  
 Session title: Advanced energy systems  
 Session chair: Hailong Li

15:20-15:40	52	Yang Li, Junyao Wang, Jun Zhao	A Review on Heat Transfer Enhancement of Borehole Heat Exchanger
15:40-16:00	125	Shengchun Liu, Baomin Dai, Wenkai Zhang, Xueqiang Li	Experimental Study on R245fa Condensation Heat Transfer Properties in Horizontal Tube
16:00-16:20	144	Jie Ma, Hao Luo, Chenrui Li, Zhenpeng Ren, Yunpu Zhai, Changsen Zhang, Ruiqin Zhang and Yonggang Liu	Pd Promoted Ni2P for the Effective Catalytic Hydrodeoxygenation of Phenol
16:20-16:40	131	Xiaohu Yang, Yang Li, Zhao Lu, Lianying Zhang, Qunli Zhang and Liwen Jin	Thermal and Fluid Characteristics of a Latent Heat Thermal Energy Storage Unit

# Day 3, June 15<sup>th</sup>

# Panel Sessions

Room: The Shandong Energy Hall	
8:30-8:50	OPENING
8:50-9:30	Keynote: Energy Internet Prof. Hongbin Chen Tsinghua University
9:30-10:10	Keynote: Urban Energy System, Energy Conservation and Emission Reduction Prof. Jinyue Yan Royal Institute of Technology, Sweden
10:10-11:10	Panel I: Advanced energy technologies
	Ground Source Heat Pump Engineering Technology; Petri Miihkali Purmonen
	TiO2 Self-cleaning Coating for Application in Solar Photovoltaic Panels; Prof. Hongxing Yang; Hong Kong Polytechnic University
	Building Reconstruction in Sweden; Emma Karlsson; Project Manager of Sweden WSP Consulting & Design Corporation
	Israel Advanced Smart Agricultural Technology; Dr. David Cohen; Dagan Agricultural Automations
	SintEnergy Turbine Collecting Energy from the Tidal Power; Giacomo Lo Zupone; Chief Technology Officer-CTO, SintEnergy Srl
	Advanced Energy Utilization in Sweden; Prof. Jinyue Yan; Royal Institute of Technology, Sweden
11:10-12:00	Discussion
12:00-13:00	LUNCH
Room: The Linyi Meeting Room	
13:00 -16:30	Panel II: Round table meeting
	Air Pollution Control and Low Carbon Industry Development of Jinan City Prof. Ronald Wennersten; Prof. Jinyue Yan; Prof. Hongxing Yang; Prof. Bin Chen; Prof. Hongbin Sun
	Projects discussion



WORLD  
ENGINEERS  
SUMMIT  
APPLIED ENERGY  
SYMPOSIUM & FORUM

# World Engineers' Summit 2017- Applied Energy Symposium & Forum: Low Carbon Cities and Urban Energy (WES-CUE 2017)

Joint Conference  
19 - 21 July 2017  
Suntec Singapore



The Suntec Singapore  
Convention & Exhibition Centre  
THE PREFERRED PLACE TO MEET



# Day 1, June 13<sup>rd</sup>

# Poster Presentations

**Poster session  
June 13, 10:50-11:30**

ID	Author	Paper title
9	Xilian Luo, Penglong Song, Yike Wang and Zhaolin Gu	Design of an Energy-saving Environmental Control System for Relics Preservation in Archaeology Museum
15	Li Zhang and Yingqi Liu	Analysis of New Energy Vehicles Industry Policy in China's Cities from the Perspective of Policy Instruments
19	Yong Chang and Haiping Zhang	An Integrated Model of Outdoor and Indoor Representation of Geographical Environment for Emergency Rescue Routing
21	Hailin Mu, Linlin Li, Nan Li, Zhaoquan Xue and Longxi Li	Allocation of Carbon Emission Permits Among Industrial Sectors in Liaoning Province
25	Donghai Yuan, Benlin Dai, Xujing Guo and Jiming Xu	Comparative Study of Sodium Hydroxide, Hydrochloric Acid, Carbamide and Cellulase Pretreatment of Rice Straw Substrates to Improve Biodegradability and Biogas Production
26	Xiru Tang, Yueyan Zhu and Liping Xu	The Analysis of Space-time Characteristics of Bus Operation and Energy Consumption based on ArcGIS
32	Xu Gong, Fenghua Wen, Bin Pan and Xiaohua Xia	Analyzing the Risk-return Relationship in Crude Oil Futures Market Using High-frequency Data
33	Ye Duan, Hailin Mu, Nan Li, Linlin Li and Zhaoquan Xue	Research on Comprehensive Evaluation of Low Carbon Economy Development Level Based on AHP-Entropy Method: A Case Study of Dalian
39	Hua Zhong and Li Huang	The Empirical Research on the Consumers' Willingness to Participate in E-waste Recycling with a Points Reward System
58	Feng Tao, Huiqin Zhang and Xiaohua Xia	Decomposed Sources of Green Productivity Growth for Three Major Urban Agglomerations in China
59	Shibao Lu and Jianhua Wang	Scenario Analysis on Energy Demand and CO2 Emission of Low Carbon City
70	Fayi Yan, Wei Yi, Boyan Xu and Ying Luo	Study on the Characteristics of Heat Exchanger for Cold Energy Recovery in LNG Vehicles
71	Chunxia Jia, Zhong Li, Hao Zhang and Jimeng Guo	Study of Energy Planning in Green Ecological New District
76	Shuwen Zheng, Wanyu Liu and Qiang Zhi	Cleaner Waste Management: A Review Based on the Aspects of Technology, Market and Policy
78	Xinmei Li, Changming Zhang, Yize Li and Qiang Zhi	The Status of Municipal Solid Waste Incineration (MSWI) in China and Its Clean Development
79	Fanxin Meng, Gengyuan Liu, Zhifeng Yang, Yan Hao and Sergio Ulgiati	Life Cycle Perspective for Urban Energy Use and Carbon Emissions: A Case Study of Xiamen, China
82	Yuanyuan Liu, Bo Qiu, Xiaodong Fan, Haijing Zhu and Bochong Han	Review of Smart Home Energy Management Systems
87	Wenqiang Zhang, Fang Zhao and Yetang Wang	An Evaluation of the Comprehensive Development Capacity--Energy-based Cities in China
88	Fayi Yan, Minggang Zheng, Na Liu, Zhongcai Zheng	Study on the Construction of Urban Liquefied Natural Gas Bus and Its Cold Energy Recovery
89	Fang Zhao, Wenqiang Zhang and Yetang Wang	Empirical Evaluation of the Coordination Condition of China's Energy Development and Environmental Protection
92	Xiaotian Luan, Haijing Zhu, Bo Qiu and Bochong Han	EMC in Rail Transportation
103	Siheng Ren, Gengyuan Liu and Xinyu Liu	Embodied Energy Analysis of Coal Industry Chain in Jing-Jin-Ji Region



114	Xue Xue and Zhenpo Wang	Distributed Drive Electric Vehicle State Estimation Based on Extended Kalman Filter
124	Jichao Hong, Zhenpo Wang, Tiezhu Zhang, Huaixian Yin, Hongxin Zhang and Wei Huo	Research on Performance Simulation of Load Isolation Pure Electric Vehicles
146	Wang Zhifu, Yunzhao Wang, Zhiqiang Gao and Jian Guo	Torque Distribution Control Strategy Based on Dynamic Axle Load for 8 In-Wheel Motor Drive Vehicle
156	Victor Nian, Qie Sun and Zhanyu Ma	A Comparative Cost Assessment of Energy Production from Central Heating Plant or Power Plant Waste Heat Recovery
65	Matteo Vincenzo Rocco and Emanuela Colombo	Exergy Life Cycle Assessment of a Waste-to-Energy Plant
112	Steve-Wonder Amakpah and Gengyuan Liu	A Meta-analysis of China 2050 Pathways Energy Calculator with Special Emphasis on Transportation
149	Delin Fang and Bin Chen	Information-based Ecological Network Analysis for Embodied Carbon Network in China
95	Lu Ding, Yifei Wang, Fuchen Wang and Guangsuo Yu	Characterising the In-situ Morphological Changes and Interactions During Char-slag/ash Transition of Rice Straw
164	Shiyu Ji, Bin Chen	Teleconnecting the rare earth mining pollution and the development of wind farm in China
165	Saige Wang, Yating Liu, Tao Cao, Bin Chen	Inter-country Energy Trade Analysis Based on Ecological Network Analysis and Hypothetical Extraction Analysis

# 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 the 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 15 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

The opening ceremony and keynote speeches will be held at the The Shandong Energy Hall. The main conference venues are The Yantai Meeting Room, The Zaozhuang Meeting Room, and The Zibo Meeting Room. The following table lists all the presentation venues with abbreviations which are used in the detailed programs in the late part of this booklet.

SESSION	ROOM	TITLE
1-A1	The Yantai Meeting Room	Renewable power generation
1-A2	The Yantai Meeting Room	Power grid and distributed generation
1-B1	The Zaozhuang Meeting Room	Fuel cells, battery and energy storage
1-B2	The Zaozhuang Meeting Room	Battery for electric vehicle
1-C1	The Zibo Meeting Room	Energy and environmental emissions
1-C2	The Zibo Meeting Room	Energy and water nexus
2-A1	The Yantai Meeting Room	Energy planning and low carbon city practices
2-A2	The Yantai Meeting Room	Urban energy management
2-B1	The Zaozhuang Meeting Room	Strategic studies of national energy systems
2-B2	The Zaozhuang Meeting Room	Energy management in sectoral level
2-C1	The Zibo Meeting Room	Energy efficiency in buildings
2-C2	The Zibo Meeting Room	Energy management of building system
2-A3	The Yantai Meeting Room	Energy economics, finance and investment
2-A4	The Yantai Meeting Room	Energy pricing
2-B3	The Zaozhuang Meeting Room	Energy management of electric vehicle
2-B4	The Zaozhuang Meeting Room	Electric vehicle, hybrid vehicle and Eco-traffic
2-C3	The Zibo Meeting Room	Bioenergy and wastes to energy
2-C4	The Zibo Meeting Room	Advanced energy systems

# Venue Map and Rooms

## 会议中心一层



## 会议中心二层



## Venue and contact information

Shandong Hotel (山东大厦)

2-1 Ma'anshan Road, Shizhong District, Jinan, Shandong 250002, China

Website: <http://www.sdhotel.com.cn/en/>

Telephone: 0531-82958888-5105; 82958888-8199; 85198199

### How to get to Shandong Hotel

#### *From Jinan Yaoqiang International Airport*

The distance from the Jinan Yaoqiang International Airport to the Shandong Hotel is around 40 km.

**By taxi:** Take a taxi from the airport to the Shandong Hotel. The travel time is about 50 mins. The fare is around 100 RMB.

**By bus:** Take the Airport express line to the Jinan Train station (50 mins). Get off at the terminal stop of the Airport express (Jinan Train station (济南站)). The operation hour of the Airport express line to the Jinan Train station (Tel.: 0531-96888): The first bus: The time of the first flight landing; the last bus: 18:00; The fare is 20 RMB one way. The distance from the Jinan Train station to the Shandong Hotel is around 6 km. You can take a taxi (15 mins) to get to the hotel. The fare is around 14 RMB. Or you can take bus line 43 and get off at Provincial Sports Center East (省体育中心东). The hotel is at the east side (about 850 meter's walk). It might take 1 hour 10 mins.

#### *From Jinan West Train station (济南西站)*

The distance from the Jinan West Train station to the Shandong Hotel is around 16 km.

**By taxi:** You can take a taxi (30 mins) to get to the hotel. The fare is around 40 RMB.

**By bus:** Take bus line K157 from Jinan West Train station (济南西站交通枢纽) to Provincial Department of Finance (省财政厅), then transfer bus line 64 from Provincial Department of Finance (省财政厅) to Qianfoshan West Road (千佛山西路). The hotel is at the west side (about 300 meter's walk). It might take 2 hours 30 mins.

#### *From Jinan Train station (济南站)*

The distance from the Jinan Train station to the Shandong Hotel is around 6 km.

**By taxi:** You can take a taxi (15 mins) to get to the hotel. The fare is around 14 RMB.

**By bus:** Take bus line 43 from Train station and get off at Provincial Sports Center East (省体育中心东). The hotel is at the east side (about 850 meter's walk). It might take 1 hours 10 mins.

## About Jinan

Jinan, capital of Shandong Province on China's east coast, is the province's political, economic and cultural center. Nearby to the south is Mount Tai, officially recognized by the United Nations as part of the world's natural and cultural heritage. The area was first inhabited during the Neolithic Period. Some 3,600 years ago, walls were built to enclose the town, which was then called Lu. The name was changed to Jinan 3,100 years ago because it was located to the south of the ancient Jishui River. In 1116, Jinan was established as a prefecture, and in 1368 it became the provincial capital. It has been recognized by the State Council of China as a worthy cultural-historic city. For centuries, the city has been renowned for its lakes and springs, including Daming Lake, and "The First Spring under Heaven", the Baotu Springs. The most exciting sights on a trip to Jinan, however, are probably excursions to Qufu, the birthplace of the ancient philosopher, Confucius, and Mount Tai, the best of the country's "Five Sacred Mountains."

Note





Note



Note

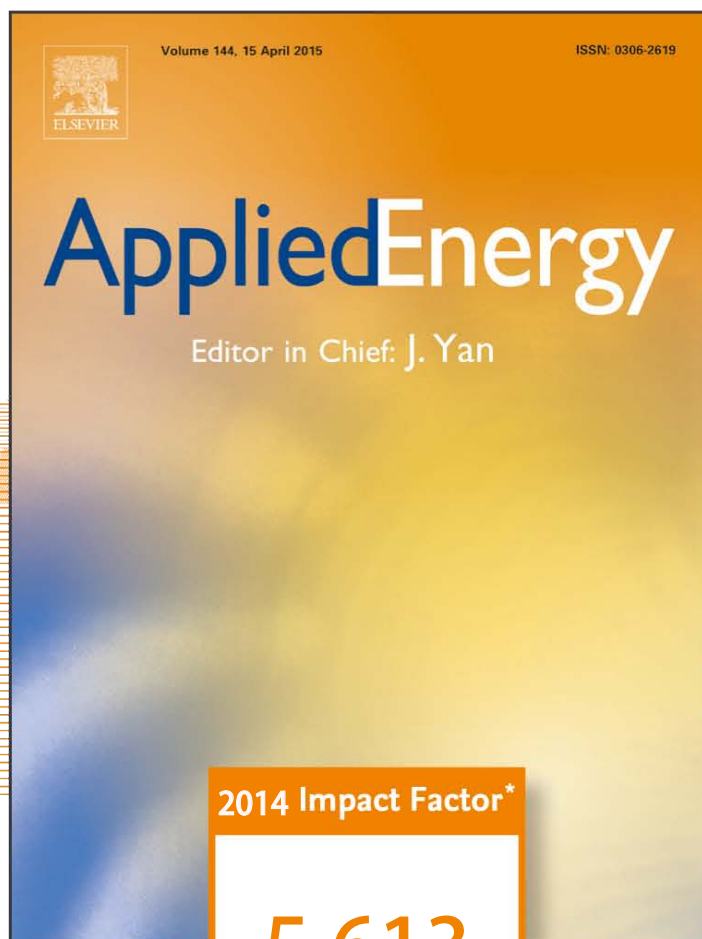




# Applied Energy

## Celebrating 40 years of innovation in energy research

Editor-in-Chief  
**Professor J. Yan**



 [twitter.com/energyjournals](https://twitter.com/energyjournals)

 [facebook.com/energyjournals](https://facebook.com/energyjournals)

[elsevier.com/locate/apenergy](http://elsevier.com/locate/apenergy)

