



# Energy Connect

*Building bridges, connections, and collaborations*

## Energy Transition

– exploring the Policy-Systems-Technology Nexus

October 11-13th, 2019

The *Elsevier Energy Connect Conference* is one of a series of ongoing activities in China started by Elsevier in 2017 to help build bridges, connections and collaborations with Chinese authors, reviewers and editors. The purpose of the *Energy Connect Conference* is to bring together the high impact authors, reviewers and editors of Elsevier's leading international journals in the field of energy and environmental science, and aim to offer novel, high-level insights as well as an opportunity to discuss the latest developments in energy and environmental research.

The **Elsevier Energy Connect Conference 2019: Energy Transition – exploring the Policy-Systems-Technology Nexus**, is co-hosted by Elsevier in collaboration with China University of Petroleum, Tsinghua University and also supported by Branch for Young Scientists of Chinese Society for Environmental Sciences and Energy Economics and Management Branch of Chinese Society of Optimization, Overall Planning and Economic Mathematics on October 11-13<sup>th</sup> at China University of Petroleum, Qingdao, China. The conference will highlight the intersection of on-going and future changes in the energy sector and global change.

## Conference Chairs

### Professor Peng Zhou

Chair Energy Connect Conference 2019,  
School of Economics and Management, China University of Petroleum



Dr. Peng Zhou is Professor and Dean of the School of Economics and Management, China University of Petroleum at Qingdao. Prof. Zhou works in the broad area of energy economics and policy, such as energy and environmental efficiency, emission reduction policies and renewable power system. His research articles have appeared in journals such as JEEM, The Energy Journal, Energy Economics, Energy Policy, Ecological Economics, Applied Energy and EJOR. Dr. Zhou was a winner of the China National Science Foundation for Outstanding Young Scientists (2016), listed in the 2018 Highly Cited Researchers and Elsevier Most Cited Chinese Researchers (2014-2018), was a recipient of the Second-Class prize of the MOE Natural Science Award and the ProSPER.Net-Scopus Young Researcher Award. He is an Editor of Energy Policy, an Associate Editor of Energy Economics and an editorial board member of several other journals such as Energy Efficiency.

### Professor Xi Lu

Co-Chair Energy Connect Conference 2019,  
School of Environment, Tsinghua University



Xi Lu, Tenured associate Professor in School of Environment, Tsinghua University. Dr. Lu received his PhD in John A. Paulson School of Engineering and Applied Sciences at Harvard University in 2010. After then, he continued in working at Harvard as a postdoctoral fellow, research associate and lecturer until joining Tsinghua in 2015. His research interests emphasize study of the technical, economic, and environmental dimensions of low or zero carbon energy sources as a means to reduce emissions of greenhouse gases (GHGs) and air pollutants. His primary research area concentrates on modeling complex systems of renewable energy, environment and climate including resource assessment for wind and solar power, complementary effects of wind, solar and hydro power and the benefits for grid integration, energy storage, emission inventory of GHGs and air pollutants, as well as urbanization and energy systems. He published papers in Science, PNAS, Nature Energy, Joule and Nature Communications on these topics. He won the Chinese Government Award for Outstanding Self-Financed Students Abroad in 2010, selected in the One Thousand Program for Young Professionals in 2015, and received the National Science Fund for Excellent Young Scholars in 2017.

## Yan Sun

Co-Chair Energy Connect Conference 2019,  
Executive Publisher Energy & Applied Energy, Elsevier



Yan Sun is an Executive Publisher at Elsevier. She graduated from School of Environment of Tsinghua University, China, and has also studied in UK, Sweden, The Netherlands and Poland supported by EU Erasmus scholarship. Having been working in STM publishing industry for more than 10 years, Yan has taken various positions including Publisher for Environmental Sciences journals, Health and Medical Sciences journals, Manager of Journal Collaboration programme in China, and Senior Manager of Elsevier's Publishing Content Department. Currently Yan is responsible for a portfolio of international energy journals with over 30,000 yearly submissions in total, including Applied Energy, Energy, Energy Conversion and Management, Journal of Energy Chemistry, eTransportation, etc.

## Henri van Dorssen

Co-Chair Energy Connect Conference 2019,  
Executive Publisher Energy & Policy, Elsevier



Mr Henri van Dorssen is an Executive Publisher at Elsevier, Oxford, UK. He is a graduate from the University of Amsterdam and the University of London. He has more than 20 years of international publishing experience, and presently leads a portfolio of prominent energy journals which includes high impact titles such as the Journal of Power Sources, and Energy Policy. He has worked on new journal launches and was the Publisher of the Encyclopedia of Energy, an award-winning 6-volume reference work, and of the Dictionary of Energy.

## Host



**China University of Petroleum**  
(East China)



**Tsinghua University**



**Elsevier**

# Programme

## Energy Transition– exploring the Policy-Systems-Technology Nexus, Qingdao, China

October 11-13th, 2019

### CONFERENCE TIMETABLE

Oct 11th (Friday)	16:00-18:00 Registration Location: Main Hall, Yifu Congress Centre (逸夫会议中心大厅)		
	18:00-20:00 Dinner Location: Xue Yuan cafeteria (学苑餐厅)		
Oct 12th (Saturday)	<b>Opening/Keynote Session (Chair: SUN Yan)</b> <b>Room: Lecture Hall, First Floor, Yifu Congress Centre (逸夫会议中心一楼报告厅)</b>		
	8:00-8:10	Opening	Prof. YAO Jun, Vice-President, China University of Petroleum (East China) Dr. Peter Harrison, Senior Vice President, Elsevier Prof. Peng Zhou, Dean, School of Economics and Management, China University of Petroleum (East China)
	8:10-8:50	Keynote	<b>Topic: New Energy Vehicle Development of China -- Research Progress of Tsinghua University</b> Speaker: Prof. OUYANG Minggao, Editor-in-Chief, <i>eTransportation</i> , Tsinghua University, China
	8:50-9:30	Keynote	<b>Topic: 100% Renewable Smart Energy Systems</b> Speaker: Prof. Henrik Lund, Editor-in-Chief, <i>Energy</i> , Aalborg University, Denmark
	9:30-10:10	Keynote	<b>Topic: Global Perspective on the Nexus for Mitigation of Climate Change and Air Pollution</b> Speaker: Prof. James J. Schauer, Co-Editor-in-Chief, <i>Atmospheric Environment</i> , University of Wisconsin-Madison, USA
	10:10-10:30 Tea break/Group Photo		

<b>Keynote Session (Chair: Henri van Dorsen)</b> <b>Room: Lecture Hall, First Floor, Yifu Congress Centre (逸夫会议中心一楼报告厅)</b>			
10:30-11:10	Keynote	<b>Topic: Visualization of Building Form Regulation and Optimal Solar Design of Smart House using Procedure Modeling for Energy Management</b> Speaker: Prof. SHEN Zhenjiang, Kanazawa University, Japan	
11:10-11:50	Keynote	<b>Topic: Highly efficient heat pump with desiccant coated evaporator and condenser: principle and application</b> Speaker: Prof. WANG Ruzhu, Deputy Editor-in-Chief, <i>Energy</i> , Shanghai Jiao Tong University, China	
11:50-12:30	Keynote	<b>Topic: Accelerating energy and low-carbon transitions</b> Speaker: Prof. Benjamin Sovacool, Editor in Chief, <i>Energy Research &amp; Social Science</i> , University of Sussex, UK	
12:30-14:00 Lunch Location: Xue Yuan Cafeteria (学苑餐厅)			
<b>Parallel Sessions</b>			
<b>Parallel Sessions</b>	<b>Session 1</b>	<b>Session 2</b>	<b>Session3</b>
<b>Theme</b>	<b>Energy Economics and Policy</b>	<b>Energy System Modelling, Low Carbon development, co-benefit to the atmospheric environment</b>	<b>Electrical transportation technologies and systems</b>

Chair		ZHOU Peng	LU Xi	DU Jiuyu
Room		Room 101, South Teaching Building (南教楼 101)	Room 102, South Teaching Building (南教楼 102)	Room 104, South Teaching Building (南教楼 104)
14:00-14:25	Invited	<p><b>Topic: Forecasting oil market volatility: Recent development and future work</b></p> <p>Speaker: WANG Yudong, School of Economics and Management, Nanjing University of Science and Technology</p>	<p><b>Topic: Air quality co-benefit of energy system: two case studies about mercury and particulate matters</b></p> <p>Speaker: ZHANG Yanxu, School of Atmospheric Sciences, Nanjing University</p>	<p><b>Topic: Infrastructure of electric vehicle and energy internet (电动汽车充电与能源互联)</b></p> <p>Speaker: LI Desheng, 万帮新能源 (星星充电研发总经理) 江苏省新能源汽车智慧能源创新中心总工程师</p>
14:25-14:50	Invited	<p><b>Topic: Temperature and Economic Performance of Chinese Manufacturing Firms</b></p> <p>Speaker: CHEN Xiaoguang, School of Economics and Management, Southwestern University of Finance and Economics</p>	<p><b>Topic: Modeling future energy and emission pathway of China's cement and steel industry and the related synergies</b></p> <p>Speaker: ZHANG Shaohui, School of Economics and Management, Beihang University</p>	<p><b>Topic: Perspective of applications of the lithium battery on electric boats (锂离子电池在电动船舶上的应用关键技术及应用前景)</b></p> <p>Speaker: HU Jianguo, 宁德时代新能源 商用车技术解决中心总裁</p>

	14:50-15:15	Invited	<p><b>Topic: Ultra-low emissions standards and Chinese power plants</b></p> <p>Speaker: TANG Ling, School of Economics and Management, Beihang University</p>	<p><b>Topic: Addressing water resources challenges in China's power sector</b></p> <p>Speaker: ZHANG Chao, School of Economics and Management and an adjunct professor at UN Environment-Tongji Institute of Environment for Sustainable Development, Tongji University</p>	<p><b>Topic: Progress of innovation on trancion motor and power electronics for electric vehicle</b> (汽车电动化的电机与功率电子技术沿革)</p> <p>Speaker: CAI Wei, 汽车电子驱动控制与系统集成工程研究中心教授</p>
	15:15-15:40	Invited	<p><b>Topic: Revisiting the rapid growth of coal consumption in China</b></p> <p>Speaker: LIU Lancui, Business School, Beijing Normal University</p>	<p><b>Topic: The health and economic impacts of air pollution: findings from the IMED model</b></p> <p>Speaker: DAI Hancheng, College of Environmental Sciences and Engineering, Peking University</p>	<p><b>Topic: Progress and developing trend of the electric train in China</b> (中国电动轨道交通关键技术进展与趋势)</p> <p>Speaker: PENG Yongdian, 株洲中车时代半导体有限公司 研发中心主任助理</p>
	<b>15:40-16:00 Tea break</b>				

	16:00-16:25	Invited	<p><b>Topic: Can value-added tax incentives of new energy industry increase firm's profitability? Evidence from financial data of China's listed companies</b></p> <p>Speaker: SUN Chuanwang, School of Economics, Xiamen University</p>	<p><b>Topic: Characteristics of carbon emissions from Chinese cities</b></p> <p>Speaker: WANG Haikun, School of Environment, Nanjing University</p>	<p><b>Topic: Conducted EMI Prediction for SiC motor Drive system</b></p> <p>Speaker: WEN Xuhui, Institute of Electrical Engineering, Chinese Academy of Sciences</p>
	16:25-16:50	Invited	<p><b>Topic: Does global value chain participation decouple Chinese development from CO2 emissions? A structural decomposition analysis</b></p> <p>Speaker: WANG Hui, School of Economics and Management, China University of Petroleum (East China)</p>	<p><b>Topic: Energy-economy decoupling: myth or reality?</b></p> <p>Speaker: WEI Chu, School of Applied Economics, Renmin University of China</p>	<p><b>Topic: Smart management system of battery system for electric vehicles (新能源汽车动力电池系统智慧管理)</b></p> <p>Speaker: XIONG Rui, School of Mechanical Engineering, Beijing Institute of Technology</p>



	16:50-17:15	Invited	<p><b>Topic: The environmental and economics benefits of demand response on Households electricity consumption and its optimization: Evidence from largescale behavioral experiment in China</b></p> <p>Speaker: WANG Bo, School of Management and Economics, Beijing Institute of Technology</p>	<p><b>Topic: China Energy Outlook</b></p> <p>Speaker: WANG Lining, Oil Market Research Department, CNPC Economics and Technology Research Institute</p>	<p><b>Topic: Research on Key Technologies in Aviation Hybrid Electric Propulsion System (航空混合电推进系统关键问题分析)</b></p> <p>Speaker: QIAN Yuping, School of Vehicle and Mobility, Tsinghua University</p>
	17:15-17:40	Invited			<p><b>Topic: The safety solution of the lithium battery for electric vehicles (电动汽车电池安全解决方案)</b></p> <p>Speaker: CHU Zhengyu, Department of Chemical Engineering, Tsinghua University</p>
	<p><b>18:00-20:00 Dinner</b></p> <p><b>Location: Xue Yuan Cafeteria (学苑餐厅)</b></p>				

<b>Early Career Researchers' Workshop</b>			
<b>Room: Lecture Hall, First Floor, Yifu Congress Centre (逸夫会议中心一楼报告厅)</b>			
Oct 13th (Sunday)	9:30-9:40	Introduction	Brief introduction (Henri van Dorssen & SUN Yan)
	9:40-10:40	Invited	<p><b>Topic: Research design and methodology for maximum impact</b>  Speaker: Prof. Benjamin Sovacool, Editor in Chief, <i>Energy Research &amp; Social Science</i>, University of Sussex, UK</p> <p><b>Topic: Publishing from the view and experiences of an Editor-in-Chief</b>  Speaker: Prof. Henrik Lund, Editor-in-Chief, Energy, Aalborg University, Denmark</p> <p><b>Topic: Experiences as an EIC of <i>Atmospheric Environment</i></b>  Speaker: Prof. James J. Schauer, Co-Editor-in-Chief, <i>Atmospheric Environment</i>, University of Wisconsin-Madison, USA</p>
	10:40-11:30	Panel	<p><b>Topic: Scientific Publishing: F2F with Chief Editors and Publishers</b>  Speaker: Chief Editors and Publishers</p>
	<b>11:30-13:30 Lunch &amp; Close</b>		

## Keynote Speakers

### Minggao Ouyang

Editor-in-Chief, *eTransportation*, Tsinghua University, China

Minggao OUYANG, Professor of Tsinghua University and the Member of Chinese Academy of Sciences. He received Ph.D in Energy Engineering from the Technical University of Denmark in 1993 and awarded as Distinguished professor of Yangtze River Scholar in 2004 by Ministry of Education of China, Currently he is the Director of the State Key Laboratory of Automotive Safety and Energy. From 2007 to now, Prof. Ouyang Minggao has been the Chief Scientist of Chinese Major National R&D Program of New Energy Vehicle. Since 2010, he has served as Chinese-side Chief Scientist of US-China Clean Vehicle Research Consortium (CERC-CVC). He has made systematic innovations in the R&D of electrified powertrain technologies for EV/HEV/FCV, including the engine and engine/motor hybrid control systems; the modeling and state estimation of PEM fuel cell systems as well as fuel cell/battery hybrid powertrain development; the thermal runaway mechanism and safety management of lithium-ion batteries. He won National Invention Award in 2007 and 2010(second class), Beijing Science and Technology Award in 2009(first class), Prize for Scientific and Technological Achievements from the Ho Leung Ho Lee Foundation in 2008 and International Technical Achievement Award from IPHE in 2010. He has long been dedicated to engineering education and academic research in Electrified Powertrain Systems for Transportation. He has published the academic monographs of Vehicle Powertrain Systems and more than 300 papers, including 200 indexed by SCI and listed in 2015、2016、2017、2018 Highly Cited Chinese Researcher by Elsevier and 2017 World Highly Cited Researcher by Clarivate Analytics.



### Henrik Lund

Editor-in-Chief, *Energy*, Aalborg University, Denmark

Henrik Lund (born 2 July 1960) is a Danish engineer (M.Sc.Eng.1985) and Professor in Energy Planning at Aalborg University in Denmark. He holds a Ph.D. in Implementaion of Sustainable Energy Systems (1990), and a Dr.Techn. in Choice Awareness and Renewable Energy Systems (2009).

Henrik Lund is a highly ranked world-leading researcher. He is listed among ISI Highly Cited researchers ranking him among the top 1% researchers in the world within engineering.

Henrik Lund has many years of management experience as head of department for approx. 200 staff persons (1996-2002), head of section for approx. 50 persons (2014-2016) and head of research group of 20-30 persons (2002-present). During his time the Sustainable Energy Planning research group at Aalborg University has now grown to approx. 30 staff members including 5 professors.



Henrik Lund is Editor-in-Chief of Elsevier's high-impact journal *Energy* with annual 8000+ submissions.

Henrik Lund is the author of more than 400 books and articles including the book "Renewable Energy Systems". He is the architect behind the advanced energy system analysis software *Energy PLAN*, which is a freeware used worldwide that have form the basis of more than 100 peer reviewed journal papers around the world.

### **James J. Schauer**

Co-Editor-in-Chief, *Atmospheric Environment*, Peterson-Rader-Hawnn Professor, Civil and Environmental Engineering Director, Wisconsin State Laboratory of Hygiene University of Wisconsin-Madison



Professor James Schauer, PhD, PE, MBA, is the Director of the Wisconsin State Laboratory of Hygiene, which is the Public Health and Environmental Laboratory for the State of Wisconsin and operates as part of the University of Wisconsin-Madison. He has been a professor at the University of Wisconsin-Madison in the College of Engineering since 1998 and holds the position as the Peterson-Radar-Hawnn Professor of Civil and Environmental Engineering. Dr. Schauer has co-authored over 400 peer-reviewed scientific publications and his research focusses on the development and application of measurement techniques to understand the sources and impacts of air pollution. His research group has implemented numerous air pollution monitoring and research studies in developing and highly polluted countries around the world. Prior to joining the University of Wisconsin-Madison, Dr. Schauer worked as a chemical process engineering and commissioned petroleum refineries and petrochemical facilities in Asia, Europe and Africa. He serves as Editor-in-Chief of the journal, *Atmospheric Environment*, the principal investigator (PI) for the National Atmospheric Deposition Program (NADP), and serves as a Science Envoy for Air Quality for the US State Department.

### **Zhenjiang Shen**

Kanazawa University, Japan

His research interesting includes smart city construction, policy-making support system for planning and design using GIS, VR & Information Communication Technology (ICT). He is commission member of Commission on Geospatial Analysis and Modeling of International Cartographic Association (ICA), Research Committee on Information Systems Technology, Architecture Institute of Japan (AIJ), City Planning Institute of Japan (CPIJ) and also work as a joint member of Fudan University and Phd Instructor in Tsinghua University, China. Dr. Shen is Editor-in-chief of IRSPSD International (Indexed in SCOPUS, ESCI), and organizing an International Community on Spatial Planning and Sustainable Development.



## **Ruzhu Wang**

Deputy Editor-in-Chief, Energy, Institute of refrigeration and cryogenics, Shanghai Jiao Tong University, China

Wang Ruzhu (R. Z. Wang), born in Dec.1964, graduated from Shanghai Jiao Tong University (SJTU) in 1984, 1987 and 1990 for his bachelor, master and PhD degrees. He was promoted as associate professor in 1992, full professor in 1994 in SJTU.

He has written 10 Books and about 500 co-authored international journal papers, his ISI h index is 62. His contributions include Sorption heat pumps, CCHPs, solar heating and cooling, and green building energy systems. He has won Chinese National Research Awards in 2010 and 2014 respectively. Prof. Wang received the J & E Hall International Gold Medal from the Institute of Refrigeration (UK) in 2013, Asia Refrigeration Academic Award in 2017, the Nukiyama Memorial Award from the Japanese Society of Heat Transfer in 2018, the Gustav Lorentzen Medal from the International Institute of Refrigeration in 2019. He was honored to be the Clarivate Highly Cited Researcher in 2017 and 2018 respectively.

He had been appointed as the director of Institute of Refrigeration and Cryogenics of SJTU since 1993. Currently he is also the Director-Engineering Research Center of Solar Energy, MOE China, Vice dean of SJTU Energy Institute. His research group has awarded as Excellent Innovative Team of Energy Research from MOST China in 2014 and NSFC in 2015.

Prof. Wang is currently the vice president of Chinese Association of Refrigeration, vice president of Chinese Society of Heat and Mass Transfer. Deputy editor-in-chief of Energy, Regional editor-International Journal of Refrigeration.



## **Benjamin Sovacool**

Editor in Chief, Energy Research and Social Science, University of Sussex, UK

Dr. Benjamin K. Sovacool is Professor of Energy Policy at the Science Policy Research Unit (SPRU) at the University of Sussex Business School in the United Kingdom. There he serves as Director of the Sussex Energy Group. Professor Sovacool works as a researcher and consultant on issues pertaining to energy policy, energy security, climate change mitigation, and climate change adaptation. More specifically, his research focuses on renewable energy and energy efficiency, the politics of large-scale energy infrastructure, designing public policy to improve energy security and access to electricity, and building adaptive capacity to the consequences of climate change. He is a Lead Author of the Intergovernmental Panel on Climate Change's Sixth Assessment Report (AR6), due to be published in 2022, and an Advisor on Energy to the European Commission's Directorate General for Research and Innovation in Brussels, Belgium. He has played a leadership role in winning and managing collaborative research grants worth more than \$19.6 million, including those



from the U.S. Department of Energy, U.S. National Science Foundation, MacArthur Foundation, Rockefeller Foundation, Energy Technology Development and Demonstration Program of Denmark, the Danish Council for Independent Research, and the European Commission. In the United Kingdom, he has served as a Principal Investigator on projects funded by the Economic and Social Research Council, Natural Environment Research Council, and the Engineering and Physical Sciences Research Council. He is the recipient of multiple national and international awards and honors, including the “Distinguished Graduate Alumni Achievement Award” from his Alma Mater Virginia Tech, the “Dedication to Justice Award” given by the American Bar Association, and a “Distinguished Visiting Energy Professorship” at the Environmental Law Center at Vermont Law School. With much coverage of his work in the international news media, he is one of the most highly cited global researchers on issues bearing on controversies in energy and climate policy.

# Invited Speakers

## Session 1

### **Chair. ZHOU Peng**

School of Economics and Management, China University of Petroleum (East China)



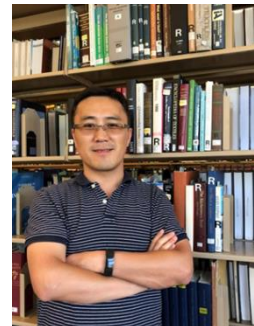
### **WANG Yudong**

School of Economics and Management, Nanjing University of Science and Technology



### **CHEN Xiaoguang**

School of Economics and Management, Southwestern University of Finance and Economics



### **TANG Ling**

School of Economics and Management, Beihang University





**LIU Lancui**

Business School, Beijing Normal University



**SUN Chuanwang**

School of Economics, Xiamen University



**WANG Hui**

School of Economics and Management, China University of  
Petroleum (East China)



**WANG Bo**

School of Management and Economics, Beijing Institute of  
Technology





## **Session 2**

**Chair. LU Xi**

School of Environment, Tsinghua University



**ZHANG Yanxu**

School of Atmospheric Sciences, Nanjing University



**ZHANG Shaohui**

School of Economics and Management, Beihang University



**ZHANG Chao**

School of Economics and Management and an adjunct professor at UN Environment-Tongji Institute of Environment for Sustainable Development, Tongji University



**DAI Hancheng**

College of Environmental Sciences and Engineering, Peking University



**WANG Haikun**

School of Environment, Nanjing University



**WEI Chu**

School of Applied Economics, Renmin University of China



**WANG Lining**

Oil Market Research Department, CNPC Economics and Technology Research Institute



## Session 3

### Chair. DU Jiuyu

State Key Laboratory of Automotive Safety and Energy,  
Tsinghua University



### LI Desheng

WANBANG NE (General Manager of Star Charge R&D  
Department), Chief engineer of Jiangsu Innovation Center for  
NEV Smart Energy



### HU Jianguo

Commercial Vehicle Technology Solution Center,  
Contemporary Amperex Technology Ltd



### CAI Wei

Research Center of Automotive Electronic Drive Control and  
System Integration Engineering



**PENG Yongdian**

Director Assistant of R&D Center, Zhuzhou CRRC Times Semiconductor CO., LTD



**WEN Xuhui**

Institute of Electrical Engineering, Chinese Academy of Sciences



**XIONG Rui**

School of Mechanical Engineering, Beijing Institute of Technology



**QIAN Yuping**

School of Vehicle and Mobility, Tsinghua University



**CHU Zhengyu**

Department of Chemical Engineering, Tsinghua University



# Location

Yifu Congress Centre, China University of Petroleum (East China), No.66 Changjiang Road, Qingdao, China

