

## Greetings from the President



Dear CAPEES members,

I hope your summer is going great! I would like to take this opportunity to thank our long time members for their continuous

support to our association, and to welcome those who recently joined us.

I feel very fortunate to serve as the President of CAPEES at this very exciting point of its history. I am proud to tell you that we have reached 60 in total members, and are still growing. Earlier this year, Drs. Xu Li (University of Lincoln-Nebraska) and Zhen He (Virginia Tech) became our newest officers. We thank Drs. Kung-Hui (Bella) Chu and Pei Chui for their years of service as CAPEES officers. In particular, Pei had been an officer since the conception of CAPEES. We have benefited tremendously from both their hard work and excellent ideas.

In July, CAPEES organized and sponsored the largest event in our history: the Workshop on Environmental Education and Research in China, at the AEESP biannual conference held in Golden, CO. It was a great success by any standards. Our distinguished speakers/panelists include Profs. John Crittenden (Georgia Tech), Ching-Hua Huang (Georgia Tech), Jiu-hui Qu (Research Center for Eco-Environmental Sciences), Debra Reinhart (NSF, University of Central Florida), Xiaochang Wang (Xi'an University of Architecture and Technology), Yuefeng Xie (Penn state University, Tsinghua University), and Gang Yu (Tsinghua University). They laid out detailed information on the various opportunities and mechanisms for academic collaboration between China and the US in the field of Environmental Engineering and Science. The workshop attracted a wide range of audience beyond our members, who engaged our panelist in long, thought-provoking

discussions, touching topics ranging from China's Talents programs, recruitment of graduate students, to tips for productive collaboration. The huge investment from the Chinese government in environmental research is encouraging to all of us that are deeply concerned of the environmental quality in China. However, what impressed me the most was the level of excitement and enthusiasm from the audience, especially the students and post-doc participants, to take advantage of the various opportunities that the rapidly developing Chinese economy has to offer, and the amount of thought and preparation they have put into it. In my mind, this younger generation will no doubt be the ones that will take China to its position as a leading nation not just in economic growth, but also in science and technology, education and sustainability. I feel deeply humbled and extremely fortunate to be part of CAPEES, which draws these young and brilliant minds together and provides a platform of communication.

In the two weeks following the workshop, I took a trip to China and visited a number of research institutions including Tsinghua University, Beijing University, Institute of Process Engineering of the Chinese Academy of Sciences, CNPC Research Institute of Safety and Environmental Protection and SINOPEC Beijing Research Institute of Chemical Industry. The visits gave me first-hand experience of many issues discussed at the workshop. The unique environmental challenges in China, the vast and urgent needs for both mature and new environmental technologies, and the different roles academic institutions play in the two countries present great opportunities as well as challenges in research collaboration between the two countries. This forces me to think deeper on how CAPEES can better facilitate such collaboration in addition to help identify opportunities for our members. This will be a major focus for the rest of my term and beyond. I welcome your ideas and suggestions.

All the best!

A handwritten signature in black ink, appearing to read 'Qilin Li'.

**Editors: Xingmao (Samuel) Ma/马兴茂, Zhen (Jason) He/贺震**

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## Member and Society News

### CAPEES Successfully Organized Workshop Environmental Research and Education in China at AEESP Conference

CAPEES organized a successful workshop focusing on the environmental research and education challenges and opportunities in China at the AEESP conference in Colorado. The workshop was the largest event that CAPEES has ever organized and attracted tremendous interests in the conference. The presentations of the invited speakers are accessible through the CAPEES website.

[www.capees.org](http://www.capees.org)



Attendees of the CAPEES Workshop, provided by Xiaoyuan Zhang.

### Former CAPEES President Elected to the Board of Directors of AEESP

Dr. Ching-Hua Huang, a founding member and former president of CAPEES, was elected to the Board of Directors of AEESP, the flagship organization of environmental engineering and science professors. Before she serves on her new role in AEESP, Dr. Huang has served as the liaison between the two organizations and played a critical role in the successful realization of the joint AEESP-CAPEES workshop in Colorado.

### Dr. Yuefeng Xie Elected as International Water Association Fellow

Dr. Xie, an internationally renowned expert in water treatment and the founding chair of CAPEES Board, was elected to the Fellow status of International Water Association (IWA).

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### Dr. Xu Min Speaks at Google Summit

Dr. Xu Min, an assistant professor at the University of Michigan was one of the seven invited speakers at Google's "How Green is the Internet Summit" held at Google headquarters in Mountain View, CA on June 6, 2013. Among those seven speakers are the former U.S. vice president Al Gore and Google's executive chairman Eric Schmidt.

### CAPEES member reached out to high school students in China's Sichuan Provinces

Dr. Xu Min, an assistant professor at the University of Michigan reached out to 20 high school students from China's Sichuan provinces while teaching at China on sustainability. The students learned basic concepts of sustainability and skills of life cycle analysis through the summer program.

### Graduate student received research award under Dr. Deng's supervision

Nanzhu Li, A graduate student at Montclair State University received a \$5,000 Student Research Award from New Jersey Water Resources Research Institute (NJWRRI). Her project "Developing an environment-friendly water reuse technology using Ferrate (VI)" was developed under the guidance of CAPEES member Dr. Yang Deng, an assistant professor in the Department of Earth and Environmental Studies at Montclair State University.

### Dr. Jason He moved to Virginia Tech and received new grants

Dr. Zhen (Jason) He has joined the Via Department of Civil and Environmental Engineering at Virginia Tech as an Associate Professor. Prior to Virginia Tech, he was an assistant professor at the University of Wisconsin - Milwaukee for four years. His research focuses on bioelectrochemical systems for water and wastewater treatment, environmental bioenergy, and sustainable desalination. More information can be found here: <http://www.ebbl.cee.vt.edu/>.

Dr. He recently received two research grants: his NSF PFI project will scale up microbial fuel cells to a transitional stage as a new research platform for studying bioelectrochemical wastewater treatment; in addition, he is the leading PI of a project funded by QNRF (Qatar National Research) to develop a cooperative bioelectrochemical system for desalination through collaboration with Qatar University.

### Dr. Jason Ren moved to UC Boulder

Dr. Zhiyong (Jason) Ren has joined the Department of Civil and Environmental Engineering at University of Colorado Boulder as an Associate Professor. Before this position, he was an assistant professor and directed the Environmental Biotechnology Lab at the University of Colorado Denver from 2008 to 2013. His research focuses on bioenergy and biochemical production during waste treatment processes, with the goal of expanding environmental engineering from pollution clean-up to sustainable development of energy and environmental systems

### Meeting New Members

**Dr. Danmeng Shuai** graduated from Tsinghua University, China with a Bachelor of Engineering in 2005 and a Master of Engineering in 2007, both in Environmental Sciences and Engineering. He received a Ph.D. in Environmental Engineering from the University of Illinois at Urbana-Champaign in 2012, and then worked as a postdoctoral research associate in the University of Iowa from 2012 to 2013. He started to work as an assistant professor in the Department of Civil and Environmental Engineering at George Washington University from Aug. 2013. His research interests are in the development of innovative materials-based technologies to address sustainability of water-energy nexus, including water treatment (e.g., advanced oxidation, reduction, membrane processes), renewable energy production, and resource recovery. He has published 9 peer-review journal articles in *Environ. Sci. Technol.*, *J. Phys. Chem. Lett.*, *ChemCatChem*, *ACS Catal.*, etc. He was awarded the NANO 2010

student platform presentation award, the NSF-AEESP Grand Challenge Student Paper Award, and a Certificate in Foundations of Teaching by the University of Illinois at Urbana-Champaign. He is a member of Association of Environmental Engineering and Science Professors (AEESP) and American Chemical Society (ACS)."

**Dr. Wen Zhang** is an Assistant Professor in the Department of Civil Engineering at the University of Arkansas. She received her bachelor's degree in Environmental Engineering from Tongji University in 2006, and Master's degree in Environmental Engineering from the University of Kansas in 2008. She joined the University of Arkansas in 2011 after she finished her Ph.D degree in Environmental Engineering at Purdue University. Her research focuses on the bioprocesses in water and wastewater treatment. Her expertise includes fixed film characterization and emerging contaminants degradation in natural and municipal water systems.

### Upcoming Conferences

#### 2013 ACS National Fall Meetings

The 2013 national American Chemical Society (ACS) fall meeting will be held in Indianapolis, September 8-12, 2013. The conference theme centers energy and food and environment. In addition to the national meetings, ACS holds many regional meetings and technical divisional meetings which could be interesting to CAEESP members. Detailed information on the upcoming conferences organized by ACS can be found through the following link:

<http://portal.acs.org/portal/acs/corg/content>

#### 2013 WEFTEC National Conferences

Water Environment Federation (WEF) will sponsor several national and international conferences year around. Interesting topics include residues and biosolids, odor control *et al.* Detailed information can be found on WEF website.

<http://www.wef.org/conferences>

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## **International Conference on Environment, Chemistry and Biology**

The second international conference on environment, chemistry and biology will be held in Stockholm, Sweden during Dec 13-14, 2013. The conference covers many interesting topics to environmental engineers such as solid waste management, water treatment and reclamation. Detailed information can be found from the following link:

<http://www.wikicfp.com/>

## **Funding Opportunities**

### **Water Environment Research Foundation Released Calls for Proposals**

Water Environment Research Foundation (WERF) released a call for proposal to review technologies which recover carbon-based and other resources from wastewater. Macronutrients recovery such as nitrogen and phosphorus recovery are not targeted for this call. Detailed information can be found from the following link:

<http://www.werf.org/a/o/rfp.aspx>

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## Featured Member of the Issue

### Dr. Qiong (Jane) Zhang/张琼

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#### 1. My career path

I received my Bachelor degree in Environmental Engineering from Northwest Institute of Architecture Engineering in 1992 and my MS degree in Environmental Engineering from Tsinghua University in 1995. After that I worked in Hangzhou University as an Assistant Professor for two years. Following my search for the meaning of life, I came to the U.S. in 1997 and started my adventure as a PhD student at Michigan Tech. I joined Professor John Crittenden's research group working on the multimedia fate and transport modeling and sustainability assessment of chemical industry. After receiving my PhD in 2001, I continued working at Michigan Tech first as a Postdoc and then as the operations manager of the Sustainable Futures Institute. In 2009, I joined the Department of Civil and Environmental Engineering at the University of South Florida as an Assistant Professor.

#### 2. My current interests and projects

My research interests lie at the water-energy nexus, process and system modeling, green engineering, and sustainability education. My research group tries to explore and simulate the dynamic interactions between water and energy systems, quantify the environmental implications of energy systems and energy implications of water systems (including wastewater), and seek technical and nontechnical solutions for integrated water-energy management. I am also trying to integrate the concept of sustainability into the Civil and Environmental Engineering curriculum. The projects conducted in my research group are funded through various sources including embodied energy modeling (NSF MUSES), life cycle assessment of bioenergy systems

(two projects funded through Florida Energy System Consortium), life cycle environmental and economic assessment of innovative ion exchange processes (EPA STAR), carbon footprint of water reuse and desalination options (WateReuse Foundation), sustainability engineering education (NSF TUES), and system analysis of resource recovery from wastewater (NSF PIRE).

#### 3. Courses I normally teach

I have been teaching a graduate course "Physical Chemical Principles of Environmental Engineering" for past four years. I started a new course "Green Engineering for Sustainability" in spring 2010. It is offered at both undergraduate and graduate levels initially within the Civil and Environmental Engineering. The course has been evolved in past three years and is now co-listed across four engineering disciplines including CEE, Chemical Engineering, Mechanical Engineering, and Electrical Engineering. I have been teaching an undergraduate course "Environmental Engineering Lab" since fall 2012.

#### 4. My professional activities

I am a member of Association of Environmental Engineering and Science Professors (AEESP), American Water Works Association (AWWA), International Society of Industrial Ecology (ISIE), Water Environment Federation (WEF), American Society for Engineering Education (ASEE), and System Dynamics Society (SDS). In past several years, I co-hosted five workshops on Sustainability Education in various conferences and served on the organizing committee and technical committee of the 2011 AEESP conference.

#### 5. My hobbies and the major attractions and cultural environment of my area and/or community

Tampa is one of principle cities in the Tampa Bay Region. It is noted by its tourism attractions, such as Bush Garden, the Florida Aquarium, Lowry Park Zoo, the Museum of Science & Industry and LEGOLAND Florida. The beaches in the area attract tourists from all over the world. Three of the beaches in this area, Fort De Soto's North Beach (2005), Caladesi Island (2008), and Sarasota's Siesta Key (2011) have been

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named by Dr. Beach as America's Top Beach. The area is also home to many quality art museums. As an urban coastal city, Tampa is committed to programs and initiatives for sustainable development, such as Treasure Tampa Clean City program, water conservation and reclaimed water program, Green Business Designation program, and Hillsborough County Green program.

*6. My thoughts on key factors that lead to my career today*

Christian faith, strong interests in learning, genuine caring for people, and family support are key factors that lead to my career today.



My daughter is exploring shells at Fort De Soto's North Beach

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