

Association of Overseas Chinese Agricultural, Biological, and Food Engineers (AOCABFE)

海外华人农业、生物与食品工程师协会

# IMPACT

**OCT 2012** VOLUME 12 ISSUE 1



#### **Highlights**:

- \* Message from President
- \* New AOC Board
- \* Update from the AOC Activities and Awardees
- ✤ Interview with VP, Dr. Changying Li

More ...

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association (or, other subscribers applied). We invite	Associate Editors:
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## Message from President



Dr. Zhuping Sheng

#### DEAR AOC MEMBERS AND FRIENDS,

It is a great honor for me to serve you as President for the upcoming year. Thank you for your trust in new AOC Board and myself. I'd like to thank the Board members for working together to serve our AOC members in the coming year.

I'd also like to take this opportunity to thank past presidents and AOC Board members for their strong leadership, great contributions and dedications to AOC. With all AOC members' support AOC has been growing fast and strong since its establishment. As a growing professional society, we are also facing challenges. Let's work together to turn

challenges into opportunities, serve members' needs, and continue to grow AOC.

I'd like to highlight a few activities and focusing areas that the Board will work on in the upcoming year.

#### **CATCHING OPPORTUNITIES**

AOC has provided a great platform for scientific exchange among oversea Chinese scientists, researchers, and engineers in agricultural, biological and food engineering fields. We will continue to enhance venues for scientific exchange among AOC members and beyond: China Exchange Forum, IMPACT-Newsletter, International Journal of Agricultural and Biological Engineering, and YIAMA.

**China Exchange Forum** Through past forums, AOC have invited experts to share their experiences and perspective on future international cooperation, especially those with Chinese universities, research institutes, agricultural industry, and professional organizations. To further enhance such exchange, AOC will continue to strengthen the program at ASABE Annual Conference. At the same time, AOC will work with sister organizations, such as CSAE and CSAM, to initiate a parallel international exchange session at their conferences and invite AOC members to share their experiences and views with colleagues in China.

**IMPACT Newsletter:** AOC Newsletter has provided a good communication channel for AOC members to share information, provide updates on AOC activities, and highlight achievements of AOC members. New Editorial Team is ready to take the challenge to enrich the context of Newsletter and enhance this venue to serve all AOC members.

**International Journal of Agricultural and Biological Engineering (IJABE):** Though it is a new journal, IJABE has grown very fast. I'd like to encourage AOC members to serve either on the IJABE editorial board or reviewers to publish high quality papers in a timely manner. AOC Board will continue to support the IJABE Editorial Board in pursuing the indexing by EI and SCI. AOC members are encouraged to submit their research findings for publication in IJABE.

**Yangling International Academy of Modern Agriculture (YIAMA):** Over the last two years in its establishment, YIAMA provided a new platform for AOC members to work with scientists in China. AOC members have developed twelve cooperative projects, and made good progress. AOC board will continue to work with YIAMA-AOC scientist team to turn challenges in funding the projects and management of the Academy into opportunity for further cooperation among AOC scientists and colleagues in NWAFU. AOC will continue to explore opportunities to foster cooperation with other universities and organizations in China.

#### SERVICE

By enhancing venues mentioned above, we will continue to serve AOC members. We will provide

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information to AOC members through Newsletter and updates on the AOC website in a timely manner. Through China Exchange Forums, I expect that AOC members will catch more cooperative opportunities with other colleagues. AOC also provides good opportunity for student members to interact with both faculty members and peer students. The most important for all AOC members is that AOC provides a great opportunity to help and support each other. AOC will continue to recognize and appreciates achievements of its members through various awards.

#### GROWTH

In the coming year we will continue to grow AOC by increasing its membership and diversifying its membership. The membership division will work with the Board to promote AOC. Several actions will be taken to achieve this goal: (a) reaching out more colleagues in universities, research institutes, government agencies, and agricultural industry in the United States, China and around the world; (b) easing process for new membership application and renewal by incorporating AOC membership application form into ASABE website; and (c) recruiting student members and encouraging students to participate in AOC activities through SAC.

To sustain its growth we need your continued support. We have also received and appreciated great support provided by other organizations, such as Chinese Academy of Agricultural Mechanization Sciences (CAAMS), Chinese Academy of Agricultural Engineering (CAAE), China Agricultural University, Zhejiang University and others. We will continue to strengthen such cooperation with those organizations and extend partnership with sister societies, such as ASABE, CSAE, CSAM, CSBE and others. AOC Foundation Division will launch a fundraising program and solicit financial sponsorship from institutions, organizations, and industrial partners to support AOC activities, sponsor the graduate student scholarship, and foster scientific exchanges.

I am confident that we are capable of capturing opportunities and overcoming challenges. We can grow AOC into a stronger and more influential professional society.

Looking forward to working with you all.

Zhuping Sheng

### **List of New AOC Board Members**

#### **AOC Executive Board 2012-13**

Position	Name	Term
President	Zhuping Sheng	2012-13
Past President	Ning Wang	2012-13
President-Elect	Lingying Zhao	2012-13
Vice President	Changying Li	2012-13
Secretary, Member-at-large	Jiantao Wei	2012-14 (New)
Treasurer, Member-at-large	Yufeng Ge	2011-13
Student Advisor	Naiqian Zhang	2012-13
Newsletter Editor	Runbin Duan	2012-13
Member-at-large, Membership Development Chair	Yebo Li	2011-13
Member-at-large, Tech-Cooperation Director	Liping Chen	2012-14 (New)
Member-at-large, Website Chair	Lie Tang	2012-14 (New)
Director (North & South America)	Jun Zhu	
Director (China) & Publication Director (IJABE)	Yingkuan Wang	
Director (Europe-Africa)	Da-wen Sun	
Director (Asian-Pacific)	Xiwen Luo	
Foundation Director	Zhongli Pan	
YIAMA Overseas Dean	Xiusheng Yang	
SAC Chair	Weilin Wang	2012-13

AOC is a non-profit organization with its members all over the world. AOC website: www.aoc-web.org

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Zhuping Sheng President Texas A & M University USA



Yufeng Ge Member-at-large Treasurer Texas A & M University at College Station USA



Vice President University of Georgia USA



Student Advisor Kansas State University USA



Ning Wang **Past-President** Oklahoma State University USA



Runbin Duan **Newsletter Editor** University of Florida **Ú**SA



Lingying Zhao **President-Elect** Ohio State University USA



Yebo Li Member-at-Large **Chair of Membership** Committee The Ohio State University USA



Jiantao Wei Member-at-Large Secretary AGCO Corporation USÅ



Liping Chen Member-at-Large **Tech-Cooperation Director** National Engineerig Research Center for Imformation Technology in Agriculture China



Xiwen Luo Asia and Pacific Regional Director South China Agricultural University China



Lie Tang Member-at-Large **Chair of Website Committee** Iowa State University USA



North/South America **Regional Director** Univ. of Minnesota USA



Yingkuan Wang **China Regional Director** Editor-in-chief of IJABE Chinese Academy of Agricultural Engineering China



Zhongli Pan Foundation Director University of California Davis USA



**Overseas Dean, Yangling** International Academy of Modern Agriculture University of Connecticut USA



SAC Chair University of Georgia USA



Weilin Wang





Da-Wen Sun Europe and Africa Regional Director National University of Ireland

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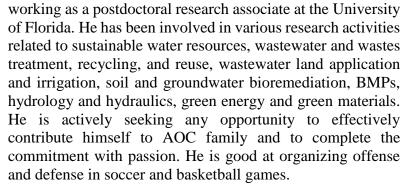
### Newsletter Editorial Board 2012-2013

#### Editor-in-chief: Dr. Runbin Duan

Dr. Duan was awarded his Ph.D. in Civil Engineering at Texas Tech University in 2009. Currently, he is



Associate editor: Mr. Weiming Cai



Mr. Cai is a Ph.D Student at Zhejiang University, China. Presently he is undertaking research studies focused on plant sound frequency control, sensor systems development and sound effects on plant growth in the sensor lab at Oklahoma State University under the joint-trained doctoral student program of China Scholarship Council. He has been an ASABE and AOC student member since July, 2012. He likes playing table tennis, cycling, and listening music.

Associate editor: Ms. Jin Gu



Ms. Gu got her BS degree in Biotechnology from Peking University. She already passed her PhD thesis defense at Penn State University and will stay at the University for a while. Her PhD research focuses on lignocellulose assembly, cell wall polysaccharide interactions and cellulose-based nanocomposites. She has attended the ASABE annual meeting several times and enjoys making friends in AOC. Jin sincerely hopes to contribute to the growth of this Chinese community. Anyone works in the similar research topics is more than welcome to share the knowledge with her. BTW, she loves traveling and sports (badminton & table tennis).

#### Associate editor: Mr. Yongbo Wan



Mr. Wan got his bachelor and master's degree in Electrical Engineering at Shaanxi University of Science and Technology (SUST) in the year 2001 and 2006. He also worked as a lector for six years in SUST after he got his bachelor's degree. He first came to the US as a visiting research scholar in the Department Engineering at East Carolina University for two years since 2007. He is now study for his PhD degree in the Department of Biosystems and Agricultural Engineering at Oklahoma State University from 2009. His research interest is Mid-IR spectroscopy for liquid and gas sensing and RFID/Wi-Fi tracking and gestural recognition to motivate and monitor hand hygiene compliance for growers and packers of fresh and fresh-cut product produce. He joined AOC and served as one of the Student Activity

Committee (SAC) members since 2011. He is very excited to be a member of AOC and willing to make efforts to make AOC a better platform for oversea Chinese engineers.

## Update from the AOC Activities and Awardees

#### Formal President Dr. Yubin Lan received 2012 Texas ASABE Engineer of the Year



Congratulations to Dr. Yubin Lan.

Dr. Lan was the recipient of 2012 Texas ASABE Agricultural Engineer of the Year for Exceptional Achievement in Agricultural Engineering. A 23-year member of ASABE and past President of AOC, Dr. Lan is an Agricultural Engineer at Aerial Application Technology, Areawide Pest Management Research Unit, USDA ARS, and an Adjunct Professor at Department of Biological and Agricultural Engineering, Texas A&M University, College

Station. Dr. Lan was also the first recipient of Texas ASAE Young Agricultural Engineer of the Year in 1994 when it was established. Dr. Lan is conducting research on precision aerial application and agricultural intelligent equipment.

## AOC FACULTY and STUDENTS' AWARDS for 2012 presented at our annual Awards Banquet on July 30, 2012





Second place: Weilin Wang et al. "Design and Calibration of Liquid Crystal Tunable Filter

Weilin is a PhD student in the University of Georgia. He graduated from China Agricultural

University in 2002 with Bachelor degree in Electrical Engineering, and received his Master of

Science degree from the University of Georgia in 2010. Weilin joined the AOC in the ASABE

2009 annual meeting in Reno, Nevada. Since that, he has been actively involved in the student

affairs of AOC. Now, Weilin is serving as the chair of the student activity committee of AOC for



#### **AOC Student Paper Award**

**First place: Weiming Cai** et al. "The Effect of Audible Sound on the Germination and Growth of Mung Bean"

Weiming is a Ph.D Student at Zhejiang University, China. Presently he is a visiting scholar at Oklahoma State University. His research focuses on plant sound frequency control, sensor systems development and sound effects on plant growth. He is also an Associate Editor for IMPACT.

Based Spectral Imaging System"





the 2012-2013 term.

Tied at the third place:

**Di Hu** et al. "Temporal and Spatial Variations of Bioaerosols Emitted from an Egg Production Facility in Southeast U.S.: Part III – Particle Size Distributions"

Di has her B.S. degree in Chemical Engineering at Sichuan University and her M.S. degree in Biological and Agricultural Engineering at North Carolina State University. Her M.S. thesis research focused on Bioaerosol concentrations emitted from animal feeding operations. Di is now working as a student service contractor at EPA in RTP, NC. She has a strong desire to devote into air quality consulting business in the future.



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**Shoujie Ren** et al. "Optimum Conditions and Characteristics of Products from Microwave Torrefaction of Douglas Fir Sawdust Pellet"

Shoujie is a PhD student at Washington State University. His current research focuses on the catalytic torrefaction and pyrolysis to efficiently convert biomass to hydrocarbons and chemicals. Shoujie has been AOC member since 2010.

**Fifth place: Xuan Li** et al. "Predictive Modeling of Radiative Heating Process for Tomato Infrared Dry-Peeling"

Xuan is a Ph.D. candidate from the University of California at Davis. He joined the food processing laboratory at UC Davis in 2007. His research focuses on the development of a novel and sustainable infrared radiation heating technology for tomato peeling process. His research won the AOC student paper competition award twice in the past (2010 and 2012).



#### Graduate Leadership and Service Award: Xuan Li

Xuan Li served as the chair of AOC Student Activity Committee (SAC) for 2011-2012. During this period, SAC developed a new AOC student website, started a functional email-list for SAC student members, launched a new SAC Facebook page, and created a new advertisement brochure of SAC. All these efforts are engaged to promote student connection and communication through the AOC platform. Leading a SAC team, Xuan organized the 2012 annual student gathering banquet and assisted in the preparation of 2012 AOC annual business meeting and banquet. Before chairing the SAC, Xuan also served as the Technical Director of SAC 2010-2011. He actively joined multiple AOC events and activities in the past, including the preparation of the 10<sup>th</sup> AOC anniversary celebration CD.

#### **Graduate Scholarly Achievement Award: Weilin Wang**

Weilin Wang is a PhD student in the University of Georgia. He won the AOC student paper competition award several times in the past.



#### **AOC Faculty Awards**

#### Outstanding career award winner: Dr. Zhongli Pan



Dr. Zhongli Pan is a Research Engineer at the Western Regional Research Center, Agricultural Research Service, United States Department of Agriculture, and Adjunct Professor in the Department of Biological and Agricultural Engineering, University of California, Davis. He received his Ph.D. degree in Food Engineering from the Department of Biological and Agricultural Engineering, University of California, Davis, in 1998. He had outstanding work experience in academia, research institutions and industry. His current research focuses on the

development of new and improved processing technologies for food and agricultural products. He authored more than 200 scientific publications, patents, books and book chapters. Dr. Pan received several prestigious awards, including 2007 the Presidential Early Career Award for Scientists and Engineers, 2007 Herbert L. Rothbart Outstanding Early Career Research Scientist Award of the USDA-ARS, and 2008 Bring Charm to the World Award in China. He was an invited speaker at various international conferences. He has served in various leadership positions at several professional societies, including Member of Trustee of American Society of Biological and Agricultural Engineers (ASABE) Foundation Board, Vice President of Asian Association for Agricultural Engineering, President of Association of Overseas Chinese Agricultural, Biological and Food Engineers, Executive Board Member of International Commission of Agricultural Engineers (CIGR) Section IV, Vice Chairman of Editorial Board of International Journal of Agricultural and Biological Engineering, Member of Editorial Committee of the Transactions of the CSAE and Member of Editorial Board of Scientiffica.

Early Career Winner: Dr. Yebo Li



Dr. Yebo Li is an associate professor in the Department of Food, Agricultural, and Biological Engineering, Ohio State University. His research area is bioproducts and bioenergy. Since 2007, Dr. Li has received more than \$10 million in research and training grants including a recent \$6.5 million grant as PI from USDA-DOE Biomass Research and Development Program. He has published 4 book chapters, 67 peer reviewed journal articles, and has five patents (four approved, three pending). One of his patented

technologies has been licensed to Bio100 Technologies LLC in Mansfield, OH for commercial production. Among other awards, Dr. Li has been awarded the 2012 ASABE Rain Bird Engineering Concept of the Year Award.

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#### Outstanding service award winner: Dr. Naiqian Zhang

Dr. Naiqian Zhang is a professor of Kansas State University conducting research in the areas of sensors and controls. From 2000 to 2001, he was the Chair of the Preparatory Committee of AOC and, from 2001 to 2003, he served as the first President of AOC. He was the director of the film "Overseas Chinese Agricultural, Biological, and Food Engineers" which was deputed at the AOC inauguration ceremony in 2001. Last year, he served as the Chair of the AOC 10th anniversary activities and was the director of the film "Ten Years of AOC" which was debuted at the AOC 10th anniversary ceremony. Since 2003, he has been serving on the



AOC Executive Board as the Student Advisor. For the past five years, he has served as the ASABE IET Division Editor. In 2011, he was elected to be an ASABE Fellow.

Congratualtions on AOC members who have receveid ASABE awards at ASABE 2012 Annual Conference as listed below. More details can be found on ASABE website.

http://www.asabe.org/news-public-affairs/august-2012/asabe-names-winners-of-2012-major-awards.aspx

Di Hu, North Carolina State University, Manqing Ying, North Carolina State University, and Ziyu Wang, North Carolina State University won Boyd-Scott Graduate Research Award.

Dr. Wenqiao Yuan, North Carolina State University, Received New Holland Young Research Award.

Dr. Yebo Li, Current AOC Board member, received Rain Bird Engineering Concept of the Year Award.

Dr. Juming Tang, AOC Past President, received International Food Engineering Award.

Dr. Yingkuan Wang, Current AOC Board member, ASABE Presidential Citations.





The editorial broad thanks Xuan Li for pictures of the AOC banquet.

## Interview with VP, Dr. Changying Li

采访佐治亚大学李长缨老师

采访人 施叶茵, Oklahoma State University



李长缨, Associate Professor, College of Engineering, University of Georgia, 主要从事传感器及计算机技术在农业中的应用研究。他于2003年硕士毕业于中国农业大学,2006年博士毕业于Pennsylvania State University,随后一年在University of Illinois at Urbana-Champaign做博士后.他于2007年取得University of Georgia的Assistant Professor职位, 2012年获得Tenure。截止到目前为止,发表学术期刊论文三十余篇,申请课题项目逾百万美元,2011年获得AOC颁发的青年科学家奖(Early Career Award),是海外华人农业工程师中年轻有为的代表。

记者: 李老师您好,非常感谢您在百忙之中接受我们AOC杂志IMPACT编辑组的采访!首先请您谈谈您和您的团队 目前的研究课题吧。

李长缨老师:好的。我的实验室叫做Food and fiber sensing lab,目前主要从事传感器与自动化技术及其在食品与纤维质量无损检测方面的研究,具体来讲目前主要有两个研究方向:第一:高光谱图像及其它光学技术在specialty crops (主要指蔬菜水果)及棉花纤维质量方面的无损检测研究;第二,研究开发基于嵌入式系统的新型农业用传感器。在第一个方面,我的研究组得到美国农业部NIFA Specialty Crop Research Initiative (SCRI)项目的资助,正在研究 用高光谱图像,X-ray 图像,以及3-D图像技术对洋葱的内部和外部品质进行无损检测。我们同时也在研究开发低成本的气体传感器阵列对在仓库中存储的洋葱状态进行检测,并定位有问题的洋葱。另外,佐治亚州是美国第二大产 棉州。我们实验室利用激光衍射技术来测量棉花纤维的粗细,从而估计纤维的成熟度。我们也在研究用高光谱图像 技术来检测棉花纤维中混杂着的异性纤维,从而保证棉制品在加工生产中的强度和质量。在第二个方面,我的研究 组得到了美国农业部SCRI项目的资金支持,研究开发了"电子蓝莓"传感器,用来改进蓝莓的机械收获技术。

记者:您刚刚介绍了您目前的研究。其实您不但是一名研究者,也是一位导师。请您谈一下教书育人的体会。

李长缨老师:是的,除了研究,我目前正在指导两名博士研究生和一名硕士研究生,另外还要给本科生研究生上课。 我很热爱自己的职业。伊利诺伊大学的K.C. Ting教授说过一句话, "We are in the business of empowering people with knowledge and wisdom",每次想到这句话,我就觉得我从事的工作非常有意义。我很享受和我的学生们一起肩并 肩的在实验室进行研究工作,把他们引领进科学研究的殿堂,同时每天也向他们学习。看到学生们成功,得奖,是 我最开心的时候。

#### 记者:李老师,您认为应当具备哪些方面的能力才能算得上是一个优秀的博士生?

李长缨老师:我认为应当从硬实力和软实力两方面来说。硬实力主要是指一些基础知识和行业内的知识,包括比如数学、物理,计算机编程,工程基础知识、以及研究方向所涉及到的各种知识;软实力包括与研究相关的各种能力,英文论文写作、演讲和口头表达能力和社交能力。另外懂得如何高效利用时间也是一项重要的技能。我也建议博士生们除了专于一项外还要对其它的研究领域有所了解。要多听学术讲座。我当时读博士时,数学,物理,天文,生物,化学系的高水平讲座都去听,这些讲座对激发我对科学的兴趣很有益。

记者:这些肯定都是您成功的秘籍,会让我们广大学生受益匪浅。下面我们来简单谈谈找工作吧。您对学术界肯定 十分了解;对于工业界,您虽然没有过相关经历,不过您也和他们有着诸多合作。您能谈谈对这两种工作的看法吗? 李长缨老师:我觉得学术界和工业界的工作各有千秋。我没有在工业界工作过,没有多少发言权。但是据我观察, 我认为主要有这么三点不同:第一,工业界关注的是短期效益,研究工作要尽快见效;而学术界的研究往往要花好 几年的时间,见效可能要等到未来几年或十几年后,。第二,学术界的工作模式相对更加自由,极少上级干预,但 工作时间可能长于一天8小时。第三,工业界不看重发表文章,可能更重视专利;而学术界很看重发表研究论文, "publish or perish"是大学信奉的准则。

记者:您说的很中肯,对我们是很好的参考,具体怎么选择可能还应当根据个人的特点和理想。李老师,下面我们 来说说您和AOC的故事吧。您好像很早就开始参与AOC的活动了。

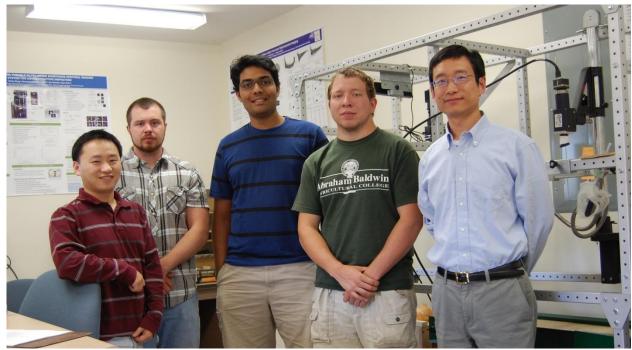
李长缨老师:是的,我和AOC的故事说来话长了。在来美国学习的第二年我就响应了当时负责AOC工作的张乃迁 老师的号召,加入了AOC,并担当了AOC学生会SAC的主席。我在这项工作中体会到了很大的乐趣,认识了许多 朋友(石坚,项海涛,李香莲,吴春霞),在和他们的工作和互动中建立起了难忘的友谊。我们这一届的学生会组 织了两年的学生聚会,建立起了SAC的第一个网站,让世界各地的从事农业工程的学生们可以在互联网上检索到属 于自己的组织。这一届的学生会被张乃迁老师评价为当时的AOC里最为活跃的一个分支("SAC is the most vibrant section of AOC")。

2008年我取得佐治亚大学的faculty职位之后,又担任了一届AOC杂志IMPACT的主编工作。大家都知道刚刚开始 faculty工作的压力不小,但是我还是很享受这一年的编辑工作,并且和几位副主编(胡敏,徐介乐,陈雨)一起认 真地完成了这项工作,建立了很好的情谊。之后,我担任了三年的Member at Large以及Technology Database Director。 今年,感谢AOC主席Dr. Sheng的邀请,我很荣幸成为他的搭档担任AOC副主席。我十分乐意为AOC做贡献作为对 它的回报,因为AOC给予了我很多——我做学生时AOC给了我Student Paper Award,去年AOC 授予我Early Career Award; AOC也为我的学生们提供了很多获奖的机会,比如我的学生获得过三次Student Paper Award,我的博士研 究生王伟琳今年还获得了研究生学术成就奖(Academic Achievement Award)。

#### 记者: 李老师能谈谈您的家庭和平时的生活吗? 能给在读的留学生们谈谈如何平衡工作和业余生活吗?

李长缨老师:我有一个幸福的三口之家,太太也在我们学校工作,儿子正在上幼儿园。我非常感激我的太太一直以 来对我的支持和为家里做出的贡献。至于工作和业余生活的关系,我主张"一张一弛,文武之道",Play Hard, Work Hard。留学生们读书期间一定要努力,不能分心,珍惜难得的学习机会和最佳的学习年龄;当然生活中还要有其它, 比如体育运动,比如交朋友(向同辈学习是最好的学习方式)。研究工作很辛苦,坚持体育锻炼保证身体健康很重 要。等结束了采访,我还和朋友约好了去打羽毛球。

记者:非常感谢李老师今天接受我们的采访,给了我们这么多有益的经验和总结!希望这些能帮助广大的学生朋友 们,像您一样,走出属于自己的成功之路!



Lab members of the Food and Fiber Sensing Laboratory as of April 2012

## **Conferences Information**



2013 ASABE Annual Meeting Call for Papers

## **Call for Papers**

### 2013 ASABE Annual International Meeting

July 21-24, 2013 - Kansas City, Missouri

#### www.asabemeetings.org

The 2013 ASABE Annual International Meeting Call for Papers is now open to accept abstracts for the meeting. Those interested in submitting an abstract for a technical or poster presentation can submit at

http://asabe2013.abstractcentral.com

#### Abstract Submission Deadline

#### November 30, 2012

Make plans to attend!



#### "国际食品科技创新大会 - 2012"将于杭州召开

"国际食品科技创新-2012"暨"第六届果蔬加工产业学科发展研讨会"计划于2012年12 月12-14日在杭州举行。本次会议是第二届会议,是食品科技创新领域一次重要的国际学术交流 会。

会议的宗旨是为进一步加强各国在该领域的学术交流与合作,促进食品科学技术的快速发展,有效提升我国在食品科学技术领域中的学术地位及国际影响力,为缩短国内相关学科与世界一流学科的差距发挥积极作用。

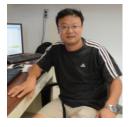
我国的果蔬加工产业发展很快,在食品工业中占主要地位,本次食品创新大会期间将同时 召开"2012 第六届果蔬加工产业与学科发展研讨会"。

本次大会的宣传网址为: <u>http://www.2012foodinnova.com/index.php?lang=zh</u>

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第三届精准农业航空应用和农业自动化国际研讨会成功举办



供稿:郑永军博士,中国农业大学副教授,美国农业部(USDA-ARS) & Texas A&M大学访问学者

8月1至3日,2012年第三届农业航空精准应用和农业自动化国际研讨会在美国Texas州College Station的 USDA-ARS召开。会议由USDA-ARS、Texas A&M University、中国国家农业信息化工程技术研究中心和国家农业 智能装备工程技术研究中心共同主办,由AOC、中国农业大学、国际农业工程学会精准农业航空应用委员会和中国 农业工程学会协办,大会主席由兰玉彬博士担任。

本次大会吸引了美国、中国、德国等国家的90多人参加,与会人员全部是农业教育研究机构和企业的专业技术、 研究人员。国内农业技术领域对此非常重视,中国农业工程学会、中国农业大学、西北农林科技大学等多个单位特 意组团参加了本次会议。中国国家农业信息化工程技术研究中心主任赵春江博士,中国农业部规划设计研究院副院 长总工程师、中国农业工程学会常务理事崔明研究员,国家农业智能装备工程技术研究中心主任陈立平博士,《农 业工程学报》副主编王应宽博士,中国农业大学李民赞教授、杨敏丽教授、刘刚教授,西北农林科技大学机电学院 原院长杨清教授、副院长杨福增教授,华南农业大学周志艳副教授等参会并做了主题报告。



USDA-ARS大面积病虫害管理研究部门主任Dr. John Westbrook和组长Dr. Clint Hoffmann分别做开幕致辞, Dr. John Westbrook首先代表南方平原区主任Dr. Dan Upchurch和中心主任Dr. Wayne Ivie欢迎大家的到来,希望本 会议能够搭建一个精准农业航空领域的学术研究交流平台。赵春江博士、崔明研究员在开幕致辞中代表国内的主办 与协办单位感谢USDA-ARS, Texas A&M和AOC对大会的支持,希望会议为中国刚起步的农业航空发展提供进一步 的技术支持。



会议分为精准航空应用、遥感技术和农业自动化等3个主题,Clint博士、兰玉彬博士分别就UADA-ARS中精准 农业航空及进展做了主题报告,赵春江博士、李民赞博士分别对中国及所在单位的精准农业、遥感和自动化领域的 研究做主题报告,Thomasson教授,Popescu教授、Rajan教授分别对德州A&M大学在精准农业方面的研究做了主题 报告,Herbst博士介绍了德国的精准喷雾技术研究。Thomson博士、杨成海博士、隋瑞秀博士、汪宁博士、黄岩波 博士、盛祝平博士、薛青武博士、Pointon 经理等21位研究人员和分别在作物信息地面监测、航空遥感信息、GPS、 农业自动化、无线传感器网络和UAV等方面做了精彩的技术报告。

会议期间,会议主席兰玉彬博士所带领的研究团队汇报了近期研究工作,演示了无人作物信息地面采集系统 (UGV),USDA-ARS开放农业航空实验室,向全体与会人员展示了农用飞机、风洞、喷雾检测等实验设施和试验 方法,激起了大家对精准农业航空应用的极大兴趣。会议充分展现了国际对精准农业航空应用和农业自动化领域的 最新研究方向和研究进展,为与会人员提供了很好的交流与互动平台。

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在答谢晚宴中,大会主席兰玉彬博士对支持单位和与会人员表示感谢,AOC现任主席盛祝平博士、上任主席汪宁 博士,以及众多AOC成员分享了各自的参会心得,表达了AOC对精准农业航空应用和农业自动化国际研讨会的支持, 并对会议的顺利召开致以热烈祝贺。



## China Exchange Session

#### Another Successful China Exchange Session with a theme topic on Sustainable Agriculture

2012 China Exchange Forum was successfully held on July 30. Eight keynote speakers were invited to share their experience and perspective on international exchange. Over100 people attended the session.

- ASABE President, Mrs. Sonia Maassel Jacobsen opened the China Exchange session with a presentation titled "Look into the Future and Work Together". She highlighted ASABE's efforts in international cooperation by thinking globally sustainability, and vision of agricultural engineers in the 21<sup>st</sup> century.
- Dr. Yingkuan Wang, Executive Deputy Chief, Chinese Academy of Agricultural Engineering, on behalf of Mr. Cui Ming, Vice President, Chinese Society of Agricultural Engineering (CSAE), shared with the audience about the CSAE's Role and Practice in Promoting International Exchange and Cooperation in Agricultural Engineering. They include its cooperation with CIGR, ASABE, and other sister professional societies. He also highlighted successful story about cooperation of CSAE and AOC, including cohosting symposia and workshops, and cosponsoring the International Journal of Agricultural and Biological Engineering.
- Dr. Steven E Naranjo, Director, USDA Arid-Land Agricultural Research Center focused on sustaining agriculture in water-limited environments. The Center's international cooperation reaches around the world. It covers fields of entomology, plant sciences, and water management.
- Dr. Chunjiang Zhao, Director, China National Engineering Research Center for Information Technology in Agriculture, shared an overview of Research and Application of Precision Agriculture (PA). He highlighted great potentials of PA technologies for sustainable agricultural practices. He also pointed challenges in adoption of PA technologies, complex agricultural system, increased costs, and data management.
- Dr. Hongwei Xin, Director, Iowa State University, the first Chair of AOC China Exchange Session, shared with audience about a big vision of China-US Collaborations in Sustainable Agriculture. Cooperation between China and US will not only benefit both countries, but also the world. Development of sustainable agriculture is of strategic importance to both countries, thus a common priority. He also pointed out that new and exciting opportunities increasingly emerge for academic/industrial/commodity exchanges to tackle issues of common interest/concern.
- Dr. Hong Li, Associate Director, Jiangsu University, highlighted Research on Agricultural Engineering in Jiangsu University with an emphasis on international cooperation. Institute of Agricultural Engineering School of Food Science & Engineering, and Research Center of Fluid Machinery & Engineering within the University are working together to develop research programs and design new technologies for sustainable agriculture.
- > Dr. Ning Wang, President, AOCABFE and her student Meghan Sheehan, Department of Biosystems

#### IMPACT

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and Agricultural Engineering, Oklahoma State University, shared experience in "A Short Summer Course - Study Abroad in China". Exchange went beyond classroom activities and technical tours, which benefits both students and hosting institutes. Cultural exchange will have much deeper influences in their professional development.

Dr. Minzan Li, Director, China Agricultural University, presented current status of studies of Wireless Sensor Network in Precision Agriculture. Development of soil, crop sensors and wireless sensor network is of critical importance in future development of PA. He also highlighted opportunities for future technology development.

This year China Exchange Session started with a theme topic on sustainable agriculture. Sustainable agriculture is defined as "an integrated system of plant and animal production practices having a site-specific application that will, over the long term, satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole." (The US government Public Law 101-624, Title XVI, Subtitle A, Section 1683). Sustainable agriculture integrates three main goals - environmental health, economic profitability, and social and economic equity. Sustainability requires that we meet our present needs without compromising the ability of future generations to meet their own needs.

The international forum is to promote and facilitate scientific exchanges among scholars from China and other countries on the theme of sustainable agriculture and perspective on international cooperation/collaboration. Topics of interest are associated with, but not limited to the following:

- Conservation and preservation of land and natural resources, such as water, soil and air;
- Biodiversity, including plants and animals as well as minimizing chemicals; and
- Changes in public policies, economic institutions, and social values in sustainable farming and food systems.



China Exchange Session on July 30, 2012



Report for September 21 AOC Board meeting Bank balance right before ASABE 2012 meeting: \$24,953.20

#### ASABE 2012 spending:

\$7,182 (some of the checks still not cleared)

#### ASABE 2012 collecting

- 1. \$2,435 (on site ticketing)
- 2. ASABE ticketing \$1,755 (we should receive a check from ASABE soon)

#### Current bank balance should be:

\$20,206.20 (before the \$1,755 check in), including \$20,206.20 foundation, and -\$3,593.8 activity fund

Prepared by Yanbo Huang, Past AOC Treasurer, & Yufeng Ge, AOC Treasurer



# Job Opportunities



College of Engineering

#### Postdoctoral Research Associate in College of Engineering

The Food and Fiber Sensing Laboratory in the College of Engineering at the University of Georgia seeks a highly motivated Postdoctoral Research Associate in developing advanced sensing technology for specialty crops and cotton fiber. The position is expected to begin in November, 2012. The exact starting date will be arranged with the successful candidate.

The ideal candidate should have a Ph.D. in Electrical Engineering, Computer Science, Mechanical Engineering, Agricultural Engineering, or a closely related area. The candidate is expected to have strong background in machine vision, machine learning, instrumentation, and embedded system, with strong programming skills in one or more of the following languages (C/C++, MATLAB, LabVIEW, Python, and IDL/ENVI). In addition, the candidate should have the proven ability to publish research in peer-reviewed journals, and to learn new technologies. The willingness to collaborate with scientists in other areas is required.

Interested applicants should send an updated Curriculum Vita including: a) publication record, b) names of three or more references (include affiliation, address, phone, and E-mail), and a "Statement of Research Interest and Career Goals" (one page) to Dr. Changying Li at cyli@uga.edu.

Contact:

Changying "Charlie" Li, Ph.D. Associate Professor College of Engineering 712F Boyd Graduate Studies University of Georgia Athens, Georgia 30602 Phone: (706) 542-4696 Fax: (706) 542-2475 http://www.engr.uga.edu/ce-faculty/cyli

#### Postdoctoral Research Assistant Position at the University of Idaho

A Post Doctoral research assistant position is available immediately in the Department of Biological and Agricultural Engineering at University of Idaho (research will be conducted at UI-Twin Falls Research and Extension Center, Twin Falls, Idaho). The initial period for this position is one year with possibility of extension depending on future funds. This position will support research projects related to waste management and environmental quality control. Primary research will focus on mitigating odors using biofilters and/or anaerobic digestion of dairy manure and other organic wastes for biogas. In this position you will design and conduct experiments, operate laboratory equipment, analyze samples, interpret data, and will be expected to develop journal manuscripts, presentations, reports, and proposals.

Individuals experienced with environmental, agricultural and biological, and civil engineering or closely related fields are encouraged to apply. If interested, please email a cover letter with statement of research interests, curriculum vitae, and representative publications to Dr. Lide Chen at: <u>lchen@uidaho.edu</u>. Also, feel free to email Dr. Lide Chen with any questions.

#### Graduate Assistantships in Watershed Sciences at Louisiana State University

I am seeking to recruit two students to pursue a PhD degree in Renewable Natural Resources with an area of concentration in Watershed Sciences. The students will conduct soil and water sample collections in Southwest Louisiana over a period of two years, and will analyze petroleum pollution of hydrogen sulfide and BTEX (benzene, toluene, ethylbenzene, and xylenes) in various water bodies. The goal of the research is to assess transfer and environmental fate of the toxic chemical compounds in the coastal rivers and estuaries.

Minimal qualifications include a background in water quality or a similar discipline (e.g. soil chemistry, environmental toxicology, hydrology etc.). A strong work ethic, strong academic record, evidence of excellent written and quantitative skills, and the ability to work both as part of a team and independently are critical, in addition to possessing a valid U.S. driver's license.

То apply: Submit the following materials via email to Jun Xu (vixu@lsu.edu; http://www.rnr.lsu.edu/people/xu/default.htm): resume, unofficial transcripts & GRE scores, a letter describing relevant research experience, and names and contact information for three references. Review of applications will begin immediately and continue until the positions are filled. Start date is expected to be in the spring semester of 2013.

Y. Jun Xu <u>yjxu@lsu.edu</u>

### **IMPACT Notes**

- IJABE call for papers: AOC members are encouraged to submit their research findings to International Journal of Agricultural and Biological Engineering. Please refer to the following website or contact Dr. Yingkuan Wang, Executive Editor-in-Chief of IJABE for details. <u>http://www.ijabe.org/index.php/ijabe/about</u>
- Call for newsletter information: AOC members are encouraged to share their successful stories, employment information, conference information, .... with other AOC members through IMPACT Newsletter ...
- AOC Membership is now available on ASABE. <u>http://www.asabe.org/media/125440/aoc\_membership\_application\_form-2012.pdf</u>
- AOC Website has been upgraded. Please review the contents and share your suggestions and comments with Dr. Lie Tang, Chair of the AOC Website Committee so that we can continue to improve our website.