

IMPACT

PRESIDENT'S REMARK



Dear AOC Members, and friends,

It was a great pleasure to see many of you at the annual AOC meeting and banquet in Detroit, MI in July last year. I am honored and excited about the opportunity to serve as President of the AOC for 2018-19. Over the last fourteen years, I have been so fortunate, as a student member and on the Executive, to come to know many of you. I would like to thank you for your strong support and active involvement in AOC activities and initiatives. The success of all AOC activities and initiatives is attributed to voluntary work by AOC members and friends, as well as support from our colleagues and organizational partners in China and worldwide. I would like to take this opportunity to express our sincere appreciation to all of you, individual and institutional members, our collaborating colleagues and friends. Moreover, I am deeply obliged to express my sincere appreciation and congratulations to the work well done by the executive board under the leadership of our two immediate past presidents, Dr. Zhiping Qi, and Dr. Yanbo Huang. The great leadership provided by all the previous board members and my 16 predecessors of the AOC should be also recognized for their hard work and stewardship. They have created very impactful momentums that require the new board to carry on and extend further.

The number 1 mission of AOC is to serve our members. As we move forward, I will work with the President-elect Dr. Yufeng Ge, Vice President Dr. Yang Zhao, newly elected executive board members, SAC Chair Mr. Congyu Hou, the new SAC committee, and all members towards the following goals:

- 1.To develop a five-year strategic plan that will define goals representing outcome-oriented statements intended to guide the direction of AOC growth and development. A Strategic Planning Committee will be formed and issue a report to the executive board at the board meetings on goals and objectives for 2019-2024. We are at a significant time of transition and transformation in the Agricultural, Biological and Food Engineering context, it is important that our AOC clearly defines and hones the future direction.
- 2.To establish an AOC Government and Industry Advisory Committee that works with the AOC to expand the reach of AOC to non-academic professionals;
- 3.To increase the engagement between Oversea members and the members in China, especially for the students and nonacademic members; and
- 4.To improve the functionality of the AOC website and Wechat platform. Establish an expert database and matrix for our members to exchange and share information.

It is truly a privilege for me to work with you. Please provide me with your suggestions and critiques of the leadership team.

Together, anything is possible. Let's work together to continue our legacy and pride. I

The holiday season is around the corner, we wish you and your family Happy Chinese New Year!

Warm regards,

Hong Li

AOC President (2018-19)

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AOC 2018-2019 Executive Board



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PAST PRESIDENT



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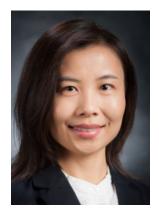
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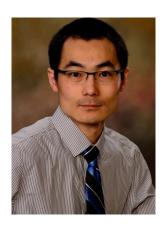
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University of Kentucky,
WEB MANAGER



SHI, YEYINUniversity of Nebraska-Lincoln,
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ZHENG, YI

Kansas State University

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MBERSHIP DEVELOPMENT

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Zhejiang University

MEMBER-AT-LARGE,

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LIU, ENSHIUniversity of Nebraska
-Lincoln



Washington State University



TONG, XINJIE
Ohio State University
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AQC Institutional Membership

中国科学院农业水资源重点实验室	Key Laboratory of Agricultural Water Resources, the Chinese Academy of Sciences
浙江大学	Zhejiang University
新疆兵团农业装备产业联盟	Xinjiang Production and Construction Corps
华南农业大学国家精准农业航空中心	International Precision Agricultural Aviation Center, South China Agricultural University
浙江理工大学机械与自动控制学院	College of Mechanical Engineering and Automation of Zhejiang Sci-Tech University
西北农林科技大学机械与电子工程学院	College of Mechanical and Electronic Engineering, Northwest A&F University
华中农业大学理学院物理系	Department of Physics in College of Science, Huazhong Agri- cultural University
中国农业大学中欧农业信息技术研究中心	China-EU Agriculture Information Technology Research Center, China Agricultural University
中国农业大学信息与电子工程学院	College of Information and Electrical Engineering, China Agricultural University
沈阳农业大学信息与电子工程学院	College of Information and Electrical Engineering, Shenyang Agricultural University

AOC AWARD BANQUET

Distinguished Career Award



Dr. Yanbin Li

Early Career Award



Dr. Jian Shi

Recognition of the 2017-2018 AOC president

Outstanding Service Award



Dr. Zhiming Qi



Dr. Lilong Chai



Graduate Leadership and Service Award





Graduate Scholarly Achievement Award





AOC Student Research Presentation Competition
Award





AOC Student Paper Competition Award



Recognition of IMPACT Editors

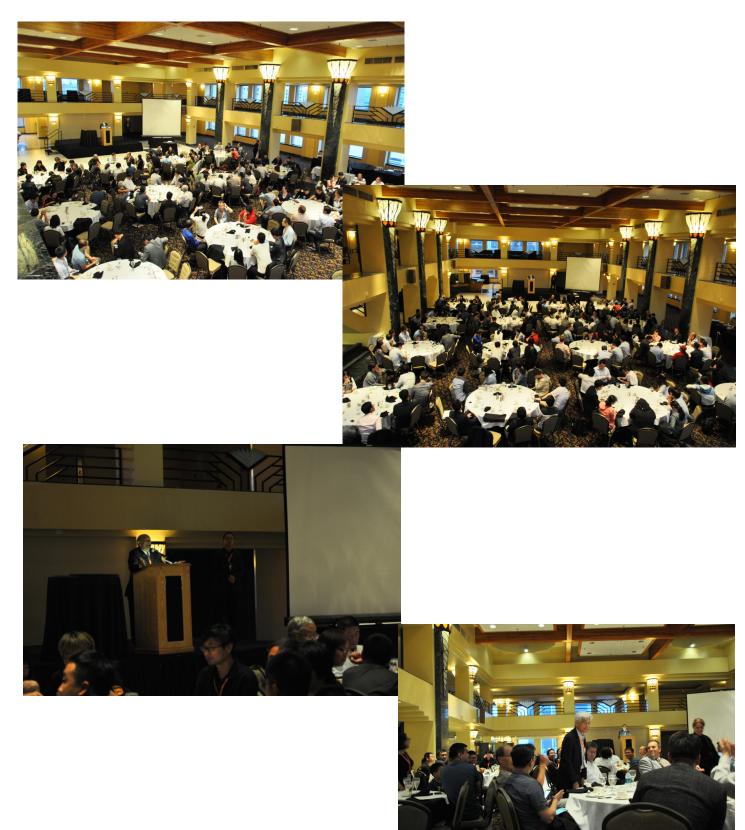


Recognition of retired AOC board members



Recognition of retired SAC board members

AOC Award Banquet Dinner

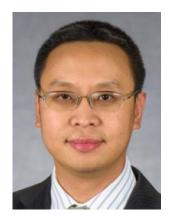


AOC Awards



2018 Distinguished Career Award Dr. Yanbin Li

Distinguished Professor, Tyson Endowed Chair in Biosensing Engineering at University of Arkansas



2018 Early Career AwardDr. Jian \$hi,Assistant Professor at University of Kentucky



2018 Outstanding Service Award

Dr. Lilong Chai

Assistant Professor at University of Georgia

Distinguished Career Award	Yanbin Li, University of Arkansas
Early Career Award	Jian Shi, University of Kentucky
Outstanding Service Award	Lilong Chai, University of Georgia
Graduate Leadership and Service Award	Jiangong Li, University of Illinois Urbana–Champaign Minliang Yang, Iowa State University
Graduate Scholarly Achievement Award	Rui Li, Northwest A&F University Yuzhen Lu, Michigan State University
AOC Student Paper Competition Award	Yuzhen Lu, Michigan State University (1st place) Yafang Shen, Zhejiang University (2nd place) Mengyun Zhang, University of Georgia (3rd place) Xiang Li, Clemson University (4th place) Chunfang Wang, Zhejiang University (5th place)
AOC Student Research Presentation Competition Award	Peng Peng, University of Minnesota-Twin Cities (1st Place) Bin Cheng, North Carolina State University (2nd Place)
Recognition of IMPACT editors	Editor: Lilong Chai, University of Georgia Associate Editors: Yin Bao, Iowa State University Minliang Yang, Iowa State University Shuangye Qiao, McGill University Yanxi Lu, University of Illinois Urbana-Champaign Xinjie Tong, Ohio State University Jie Xu, Washington State University Zongmei Gao, Washington State University
Recognition of retired AOC board members	Lilong Chai, University of Georgia Yanbo Huang, USDA-ARS Liangcheng Yang, Illinois State University
Recognition of retired SAC board members	Jingyao Gai, Iowa State University Mengyun Zhang, University of Georgia Yuzhen Lu, Michigan State University Jie Xu, Washington State University Jiangong Li, University of Illinois Urbana-Champaign Yue Rong, University of Florida
Recognition of the 2017-2018 AOC president	Dr. Zhiming Qi, McGill University

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2018 AOC Business Meeting Minutes

Time: 5:15-6:30 pm, July 31st, 2018.

Location: Detroit, MI

Venue: Cobo Center Room 356

No. of Participants: ~50

- ♦ Meeting started at 5:15 pm.
- ♦ Jian Shi called to order.
- ♦ Jian Shi gave a general introduction of AOC.
- ♦ Zhiming Qi moved the approval of agenda of 2018 business meeting, seconded by Qin Zhang.
- ♦ Zhiming Qi moved the approval of 2017 meeting minutes. Seconded by Yanbo Huang.
- ♦ Zhiming Qi presented the president report of 2017-2018.
- ♦ Yanbo Huang moved the AOC election for president and member-at-large. Member-at-large candidates: Haiyan Cen, Yi Wang, and Yi Zheng. Each candidate gave an election talk.
- ♦ Yufeng Ge moved the treasury report. Attendees reviewed the budget. Lingying Zhao asked about the \$3,000 banquet deposit. Yufeng Ge explained it was requested as the pre-deposit by the restaurant.
- ♦ Jian reported the membership committee's reports on behalf of Liangcheng Yang. Qin Zhang asked if the 62 members were the full members and the number of student numbers. Jian Shi explained 62 was the number of the full member, and about 150 student members in AOC.
- ♦ Lilong Chai reported the IMPACT newsletter. Three issues were published in 2017-18.
- ♦ Zhongli Pan questioned about the WeChat group. Yanbo Huang explained there are two WeChat groups, one for AOC, and the other for SAC. Zhongli Pan reviewed the public WeChat account, but found out tardy updates. Zhongli Pan recommended increasing publicity and updates.
- ♦ Jian Shi showed updates on AOC websites.
- ♦ Yingkuan Wang gave IJABE editorial updates.
- ♦ Jiangong Li gave updates about SAC. Jiangong further explained about the SAC WeChat public platform.
- Yang Zhao gave updates about the AOC sponsored session. AOC will sponsor FAO-ITU E-Agriculture Forum held in November in Nanjing, China. At the same event, he will promote AOC through banner and presentations.
- ♦ Yanbo Huang announced the election results. Haiyan Cen, Yi Wang, and Yi Zheng were elected as members-at-large. Yufeng Ge was elected as president-elect.
- ♦ Yufeng Ge gave the president-elect remarks.
- ♦ Zhiming Qi changed the gavel to 2018-2019 AOC president Hong Li.
- ♦ Hong Li gave the president remarks.
- ♦ Jian Shi called to adjourn.

China Exchange Forum during 2018 ASABE Meeting



Dr. Haiyan Cen



Dr. Yanbo Huang (presented on Dr. Xiongkui He's behalf)



Dr. Hanping Mao



Dr. Xinlei Wang



Dr. Hong Li



Dr. Yanbin Li

China Exchange Forum during 2018 ASABE Meeting

In total, six guest speakers were invited for the presentation this year. The following are information about the presentations and presenters.

1) Title: Smart Agriculture Research Programs and Current Status at Zhejiang University Presenter: Haiyan Cen, Professor, Vice-Chair of Biosystems Engineering Department, Zhejiang University, China

2) Title: Precision profile spraying technique based on variable air volume and chemical flow rate for orchard in CCAT

Presenter: Xiongkui He, Professor, Vice-dean of College of Science, Centre for Spray Application Technology (CSAT), China Agricultural University, China

- (Dr. Xiongkui He was unable to attend the conference; Dr. Yanbo Huang delivered the presentation on Dr. He's behalf)
- 3) Title: Progress in discipline construction and research of agricultural engineering at Jiangsu University

Presenter: Hanping Mao, Professor, Dean of School of Agricultural Equipment Engineering, Jiangsu University, China

4) Title: Education Collaboration between University of Illinois and Universities in China

Presenter: Xinlei Wang, Professor, Agricultural & Biological Engineering Department, University of Illinois at Urbana-Champaign

5) Title: Agricultural Engineering Research at Jiangsu Academy of Agricultural Sciences and Collaboration Opportunities

Presenter: Hong Li, Associate Professor, Department of Animal & Natural Resources, University of Delaware

6) Title: An International Collaboration for Improving Food Safety of Poultry Supply Chain in China

Presenter: Yanbin Li, Distinguished Professor, Tyson Endowed Chair in Biosensing Engineering, University of Arkansas



Events and News from AOC Members

1) Dr. Hongwei Xin named as the new Dean for AgResearch at the University of Tennessee Institute of Agriculture (UTIA).



Hongwei Xin, currently Assistant Dean for research in the College of Agriculture and Life Sciences at Iowa State University, has been named as the Dean for AgResearch for the University of Tennessee Institute of Agriculture. Xin will begin his new role in May 2019. Image courtesy Iowa State University.

2) 2018 ASABE Fellow

Congratulations to the 2018 class of ASABE Fellow Chenghai Yang!

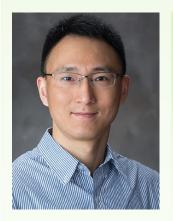
ASABE defines a Fellow as a member of unusual professional distinction, with outstanding and extraordinary qualifications and experience in, or related to, the field of agricultural, food, or biological systems engineering. ASABE Fellows possess a minimum of 20 years of active practice in, or related to, the profession of engineering; the teaching of engineering; or the teaching of an engineering-related curriculum and a minimum of 20 years as an active Member-Engineer or Member in ASABE.

This is ASABE's highest honor.



Chenghai Yang, USDA Agricultural Research Service, College Station, Texas

3) 2018 New Holland Young Researcher Award—ASABE



Dr. Yufeng Ge

Yufeng Ge, is the 2018 recipient of the New Holland Young Researcher award in recognition of his work in developing sensing technologies to monitor plant stress. Ge is an assistant professor and advanced sensing systems engineer at the Institute of Agriculture and Natural Resources and College of Engineering at the University of Nebraska Lincoln. He conducts research on sensing principles and develops advanced sensing systems for rapid and nondestructive evaluation of plants and soil resources. Ge teaches courses in instrumentation and controls and advanced sensing in agricultural and environmental applications.

Interview with Dr. Lilong Chai

Assistant Professor and Engineering Specialist at the University of Georgia, USA

His research interests include but are not limited to animal environmental engineering, air emissions measurement and mitigation, and poultry health and welfare. Dr. Chai joined AOC in 2006 as a student member when he was a graduate student. From July 2016 to July 2018, he served as the AOC board member and the Editor of IMPACT newsletter. Dr. Chai received the AOC - Outstanding Service Award in 2018.

Please find more details about Dr. Chai's research by visiting http://poultry.caes.uga.edu/people/faculty/lilong-chai.html



Could you introduce your educational or training background briefly?

I received Ph.D. from China Agricultural University with a two-year joint training Ph.D. program in the department of Agricultural and Biological Engineering at Purdue University. Prior joining the University of Georgia, I did two postdoc trainings in the Department of Agricultural and Biosystems engineering at Iowa State University (2015-2018) and Agriculture and Agri-Food Canada (2012-2015), respectively. My B.S degree of Agricultural Structure, Environment, & Energy Engineering was obtained from Anhui Agricultural University from 2001 to 2005 in Hefei, Anhui Province.

What brought you to North America?

When I was a Ph.D. student at China Agricultural University, I heard the news that registered Ph.D. student in China could apply for the scholarship from China Scholarship Council to study abroad as a Joint-Ph.D. student for up to two years. I applied for and received the scholarship to study at Purdue University for 24 months from 2008 to 2010. After finishing my study, I moved back China for two years, then I came back for the postdoc trainings in Canada first, then in the USA.

What is the favorite part of your current job?

The extension work is my favorite part so far. By working with poultry farmers, I could learn the issues in the real world. Seeking and providing answers for the poultry production on questions such as dust and ammonia control are challenging but exciting and rewarding.

What is the biggest challenge you have faced in your profession?

The biggest challenge so far is how to influence the industry people to care about environmental impact of poultry industry. For example, Georgia is the US#1 poultry production state. Everybody here talks about the economic impact of poultry industry. Most producers say they'd like sustainable development, but not a lot of them really understand how to do that or are willing to pay for that unless there are federal or state laws requiring them to make a change.

What is your advice to AOC students for career?

In terms of career, there are generally two primary ways: academia and industry. I don't have any industry experience to share. For applying to the job in the academia (e.g., in the North America), I would suggest two things. Firstly, build up your CV. Besides educational background, we need a good record of publication, grant writing, student co-supervising, and professional society activities, etc. and to think about how to improve your CV every day. Secondly, improve the communication skills. Chinese students or postdocs tend to have better writing skills than communication skills because we usually think publication is the number one important thing for applying the faculty job in the academia. It is true in most universities of China but not in the North American according to my observation. Besides learning from your supervisor during weekly meeting, the communication stills could also be improved by attending on-campus presentation training organization such as Toastmasters. In addition, chatting with your office mates or neighbors (if there are native speakers) often about popular topics such as NCAA football definitely will surprise you.

There are Ph.D. or M.S. opportunities in Dr. Chai's lab, please feel free to contact him if you have interests or questions.





Ph.D. or M.S. opportunity at the University of Georgia

The Department of Poultry Science at the University of Georgia is seeking 1-2 highly self-motivated graduate student assistants in poultry environmental engineering, precision animal farming, and animal behavior and welfare. Students with M.S. or B.S degree from Agricultural Engineering, Biosystems Engineering, Animal or Poultry Science are encouraged to apply. Starting time is Fall of 2019 or Spring of 2020. Preference will be given to candidates with publications and commercial farm experience.

The University of Georgia, founded in 1785, is a flagship university in the USA. It is ranked 13th overall among all public national universities and 46th among all national universities in the 2019 U.S. News & World Report rankings. The Poultry Science Department at UGA was ranked US#1 in 2017 by Universities.com.

Requirements:

*TOEFL - At least 80 for overall score, 20 pts each on speaking and writing.

*IELTS - Min. bandwidth of 6.5 overall with no section below 6.0.

*GRE > 297; GPA > 3.0

Contact:

Dr. Lilong Chai

Department of Poultry Science

College of Agricultural and Environmental Sciences, University of Georgia

Athens, Georgia 30602, USA

Email: lchai@uga.edu

Phone: +1 706-542-8137



Ph.D. Graduate Research Associate positions at Virginia Tech University

The Department of Civil & Environmental Engineering at Virginia Polytechnic Institute and State University, also known as Virginia Tech, invites applications for two Ph.D. Graduate Research Associate positions in Environmental Engineering to pursue research in two research directions described below. These graduate students will conduct research in the Sustainable Environment Research Laboratory (SERL) of Dr. Zhiwu (Drew) Wang stationed at the Northern Virginia Campus within the Washington metropolitan area. Both positions can be available as early as summer 2019.

Both positions involve extensive fieldwork in local utilities, thus requires the graduate student to be able to <u>drive</u> vehicles between multiple experimental sites and work closely with industrial partners. The candidates with good hands-on ability and aspiration to finding solution to real-world engineering problems are preferred.

The ideal candidates should possess Master or Bachelor degrees in civil engineering, environmental engineering, chemical engineering, biological system engineering, or a related field. Preference will be given to candidates with mathematical modeling skills. The selected candidates will be supported with monthly stipend around \$2,200 besides benefits and full tuition.

Interested students are encouraged to contact Dr. Wang directly at wzw@vt.edu with email subject as "2019 SERL GRA application". A curriculum vitae should be provided in your email showing GPA, GRE and TOFEL scores, the contact information of three references, and a full list of publications if applicable. Interested candidates can find more information about Dr. Wang's research at https://www.water.cee.vt.edu. The review process will begin immediately and continue until all positions are filled.

1. Continuous-flow biogranulation technique:

A Ph.D. student will be supported by this project with the aim of enabling microbial granulation in continuous-flow bioreactors for multiple pollutants removal or value-added product generation. Candidates with previous experience in the design and operation of bioreactors and mathematical modeling are especially welcomed. Both fundamental and applied research opportunities can be found in this project.

2. Advanced anaerobic digestion system:

Modern anaerobic digestion systems come with pretreatment for digestibility enhancement and post-treatment for nutrient removal, odor control, dewater ability improvement, and pathogen reduction. Development of methods to coordinate and consolidate these affiliated processes with the design and operation of anaerobic digesters is the focus of this study. Candidates with experience in using gas chromatography are especially welcomed.





Graduate Research Assistant Position (Ph.D.) in Biosystems Engineering

Position: The Department of Biosystems Engineering and Soil Sciences (BESS)

at the University of Tennessee (UT) seeks one Ph.D. student (0.5 FTE) to conduct research on smart agriculture, remote sensing, robotics,

machine vision, or sensors for biological systems.

Responsibilities: Fulfill the degree requirements for the Biosystems Engineer-

ing Ph.D. program, and conduct research in a timely manner.

Requirements: The candidate must have a master's or bachelor's degree in biosys-

tems engineering, agricultural and biological engineering, electrical engineering, mechanical engineering, computer science or a closely related field with demonstrated research experience, and strong written and oral communication skills. For other requirements, please refer to the website: https://gradschool.utk.edu/admissions/

applying-to-graduate-school/

Preferred Skills: (1) Programming skills (Python, C/C++, Java, Matlab, etc);

(2) Experience in microcontrollers and circuit design;

(3) 3D drawing software (SolidWorks, AutoCAD, etc.);

(4) Experience in computer vision or image processing; and

(5) Experience in remote sensing using UAVs.

Salary: The successful applicant will receive a tuition waiver, an annual sti-

pend, and health insurance.

Location: University of Tennessee, Knoxville

Start Semester: Fall 2019, Spring 2020 or Fall 2020.

Please refer to the following website for the application deadlines.

https://ag.tennessee.edu/BESS/Pages/GradApplyDeadline.aspx

To Apply: Please email a CV, a 1-page personal statement, test scores and un-

official transcripts to Dr. Hao Gan at ganhao89@ufl.edu





GRADUATE RESEARCH ASSISTANT IN BIOPROCESS ENGINEERING

TITLE: Graduate Research Assistant

LOCATION: University of Kentucky, Lexington, KY

JOB DESCRIPTION AND RESPONSIBILITIES:

Graduate assistantships (M.S. or Ph.D.) are available for outstanding candidates who are interested in the following research areas:

Lignin valorization for fuels, chemicals and advanced materials Catalysis and biocatalysis for lignocellulosic biomass Fermentation process development and modeling Bioproducts separation and recovery Municipal, food and agricultural waste treatment and conversion

You will work together with a cluster of university wide researchers to explore lignin based chemicals and advanced materials for applications in advanced-membrane technologies, water purification, and electrochemical energy storage (through recent NSF EPSCoR RII Track 1 & 2 and USDA-NIFA awards, read more at: https://www.uky.edu/bae/shi-lab).

QUALIFICATIONS: The candidates should have:

- An earned B.S. or M.S. in Biological/Agricultural Engineering, Chemical Engineering, Environmental Engineering, or Material Science and Engineering
- Good knowledge of one or more of the aforementioned research areas
- With credentials sufficient for admission into the UK graduate school (GPA>3.0; TOEFL>93 or IELTS>6.5 for international students; GRE Test Scores)
- Applications must be received by March 15th/Fall or by August 15th/Spring Admission
- Ability to formulate and conduct experiments including data collection and analysis Strong oral and written communication skills

APPLICATION: Applicants may contact:

Prof. Jian Shi Biosystems and Agricultural Engineering Department 115 Charles E. Barnhart Building University of Kentucky, Lexington, KY 40546-0276 Phone: 549-218-4321

Phone: 549-218-4321 Email: j.shi@uky.edu

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The 2018-2019 AOC IMPACT Editorial Board

Call for News & Activity Reports

The 2018-2019 IMPACT editorial Board earnestly invites you to submit news and activity reports related to ASABE and AOC. Please send your write-up and/ or picture news to the Editorial Board at aoc.impact@gmail.com. The IMPACT Board will work with you to put your news into the publication.

It is our publication and it is your publication. We sincerely thank each and every AOC members for their support!

征稿启事

