



IMPACT

A Quarterly Newsletter of AOC
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Association of Overseas
Chinese
Agricultural, Biological, and
Food Engineers

海外华人农业, 生物技术和食品工程师协会

President's Report on AOC Activities



Junming Tang

AOC has been very active over the past four months since our last Annual Meeting on August 3, 2004. I now report some of the major activities below:

1. An Ad-Hoc Committee developed a document entitled: “关于加强海外农工学会在中国农业与生物工程领域现代化发展

中作用的建议”, which outlines possible roles that the AOC can assist China in Agricultural, Biological and Food Engineering research and education. This document is included in this issue of IMPACT.

The document was developed under the assumption that funds could be obtained from selected Chinese government agencies to support AOC activities in China. We hope to use it as a starting point to develop a framework for sustainable AOC activities in China. This document was discussed during the AOC general meeting on Oct 14, 2004 in Beijing.

2. Close to 50 AOC members attended the 2004 Beijing CIGR Conference, about 20 from overseas and 30 from China. AOC members participated in various activities, including help with organizing and chairing the sessions, reviewing paper proposals, and making presentations. Several technical staff members of Beijing CIGR Conference told me in person that they were very thankful for the tremendous amount of time and efforts that some of our members contributed in reviewing paper abstracts.

AOC members who attended the conference considered it to be highly successful. Our colleagues in China demonstrated excellent leadership and organization skills in bringing such a large international conference to China and in the professional management of the conference. Shaojin Wang provides more details about this conference in a separate report included in December 2004 IMPACT.

Prior to Beijing CIGR meeting, Zhongli Pan and Naiqian Zhang developed electronic files for a bound issue of AOC IMPACT newsletters published in 2003/2004. AOC China Regional Director, Baoji Wang of China

Agricultural University, printed 500 copies for distribution at the conference. All 450 copies placed at the reception desks were taken by conference attendees, especially graduate students and young scientists.

3. An AOC general meeting was held in Beijing on October 14, 2004. The main purpose was to discuss AOC activities in China. Close to 40 people attended the meeting, including two members of the Chinese Academy of Engineering, Professors Maohua Wang and Dechao Zheng, several deans of Chinese universities, and Melissa Moore, Executive Vice President of ASAE. A question was raised to AOC members in China about the benefits they saw AOC had brought to them. It was clear from the discussion that increased networking opportunities, a better understanding among AOC members through IMPACT newsletters and mutual professional visits, and newly initiated joint projects were on the top of the list. Meeting minutes were developed by Ning Wang and are included in this issue of IMPACT.
4. At the invitation of Yibin Ying, AOC member and Dean of the College of Biological Systems Engineering and Food Science of Zhejiang University, a group of AOC overseas members traveled to Hangzhou and participated in an International Forum on Biological Systems Engineering at Zhejiang University. They made presentations on various aspects of research and education in Biological Systems Engineering. At the start of the forum, I made a presentation about AOC, its overseas faculty members, and their research and education activities, based on the wonderful CD file developed by Naiqian Zhang and his group for the AOC inauguration in Sacramento, CA.

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The AOC Board of Directors decided during a board meeting to have an independent website to ensure better communication and timely updates of AOC activities. Qiang Zhang led an email discussion among board members to decide on a final domain name for AOC website. Jiannong Xin and Shaojin Wang registered the domain name: www.AOC-web.org. Jiannong has already started working on the new site.

5. In October, 2004, an Ad-Hoc Committee chaired by Ning Wang nominated Naiqian Zhang for the 2005 ASAE Kishida International Award to recognize his contribution as a founding member, acting as the first the two-term president of AOC, and his role in facilitating exchange between US and China counterparts in Agricultural Engineering. This was the first time that AOC nominated our members for major awards, and we hope that this is only a start.

News in Brief

Dr. Yubin Lan, Associate Professor at Fort Valley State University, has been appointed as a guest professor with CAAMS (China Academy of Agricultural Mechanization Science) and CAAE (China Academy of Agricultural Engineering) during the CIGR Conference. After the conference, he went to Jilin University on October 16 and 17 to present his research at the International Workshop on R&D of Agricultural Engineering.

Dr. Zhongli Pan met Mr. Sun Yao, Director of Science and Technology Committee of Heilongjiang Province, and Professor Shi Bohong, Vice President of Heilongjiang Overseas Returned Scholars Association (HORSAs) after CIGR Conference in October. They discussed the possibility of establishing technology cooperation between AOC and Heilongjiang Province. A detailed plan will be developed under mutual interests. Zhongli (zspan@ucdavis.edu) likes to hear any of your comments and suggestions for promoting such cooperation.

It is impossible to capture in this report all the activities and achievements that AOC and its members have had over the past four months towards fulfilling AOC missions. I am sure that other articles in this issue of IMPACT will complement what I have listed above. In closing, I want to thank all AOC members and supporters for your dedication and commitments to the continued success of AOC. I wish you and your families a very happy holiday season and successful New Year.

Juming Tang, Ph.D

Professor of Food Engineering

Washington State University

December 9, 2004

Dr. Juming Tang, AOC President, met with Chinese Vice Premier Hui Liangyu at the CIGR meeting in Beijing. Mr. Hui expressed his appreciation to the AOC's contributions to the CIGR meeting and development of Chinese Agricultural Engineering.

AOC New Website (www.AOC-web.org) has been launched. AOC website has a new home now! **Dr. Jiannong Xin** has put tremendous effort in developing the new AOC website. Recently AOC Board passed a motion to host AOC website using a commercial service by Yahoo. The new server provides much faster and reliable service. Please take a look at the new website at <http://www.AOC-web.org> and send [Jiannong \(xin@ifas.ufl.edu\)](mailto:xin@ifas.ufl.edu) suggestions/contents to improve the website. Volunteers are needed for on-going development of the website. Thank Jiannong for superb work.

AOC Activities at 2004 Beijing CIGR Conference

By Shaojin Wang

The 2004 CIGR International Conference was successfully held at Beijing International Conference Center on October 11-16, 2004. CIGR stands for the International Commission of Agricultural Engineering (Commission International du Genie Rural, CIGR) which was founded in Liege, Belgium 74 years ago. This was the first CIGR meeting held in China. Chinese Society for Agricultural Machinery, Chinese Society of Agricultural

Engineering and China Agricultural University (CAU) organized and hosted this conference. The conference was organized into six sections: Soil, Water and Environment (Session I); Bioproducts Processing and Food Safety (Session II), Information Technology for Agriculture (Session III), Conservation Tillage and Sustainable Small Farming (IV), and Modern Agricultural Equipment and Facilities (Session V), and Agricultural and Biosystems Engineering Discipline and Education Development Strategy (Forum). Over 1,000 agricultural engineering scientists, engineers, managers, and other professionals attended this conference from over 50

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countries.

Table 1 AOC contributions into 2004 CIGR International Conference in Beijing

Contributions	AOC members in China	AOC members outside China	Total No.
Organization Committees	2	1	3
Academic Committees	3	7	10
Session Organization Committees	6	6	12
Session Academic Committees	6	14	20
Modulators	7	13	20
Keynote Speeches	4	4	8
Presentations	15	26	41

The Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOC) was one of the eleven co-sponsors for Beijing CIGR conference. Many AOC members actively participated in various phases of preparation before and during the CIGR conference, e.g., as members of the organization and

scientific committees, reviewers for presentation proposals, and chairs of the technical sessions. Close to 50 AOC members from outside of China and many AOC members from China attended this conference and most of them made at least one presentation (Table 1).

AOC held a general meeting on the evening of October 12, 2004, at Beijing International Conference Center. Thirty-four individuals attended this meeting, including 14 AOC members from outside of China, 8 AOC members from China and 12 non-AOC members. The AOC vice president, Dr. Qin Zhang welcomed the participants and brought the AOC meeting to order at approximately 5:30 pm. The AOC president, Dr. Juming Tang, introduced the AOC activities during the 2004 ASAE/CSAE meeting in Ottawa, Canada. The meeting agenda was focused on the AOC activities in China, including joint publication and sustained platform for AOC activities in China. Detailed information can be found in the meeting minutes

reported by Dr. Ning Wang. The meeting was adjourned at approximately 7:15 pm, and then the participants had an informal dinner at a close-by 'Jiang-Sheng-Ji' restaurant to continue the interactions. This function was sponsored by China Agricultural University and Zhejiang University.

After the CIGR conference, AOC members visited several universities in China. One group led by Dr. Naiqian Zhang from Kansas State University visited Henan Agricultural University (Zhengzhou). Another group, including the AOC President and Vice president, Drs. Juming Tang and Qin Zhang, together with AOC members, AOC Board members Drs. Yanbin Li and Shaojin Wang, and AOC member Dr. Renfu Lu visited Zhejiang University (Hangzhou) at the invitation of Dr. Yibin Ying, AOC member and the Dean of College of Biosystem Engineering and Food Science. They made presentations and shared their experiences and visions at the International Forum of Biosystems Engineering.

Photo Gallery of AOC Activities in China

By Shaojin Wang



Drs. Yibin Ying (L1), Tao Yang (L2), Maohua Wang (R3), Yanbin Li (R2) and Qin Zhang (R1) in the CIGR conference in Beijing, China



AOC members at CIGR Conference



AOC members at CIGR Conference



Drs. Juming Tang and Zhongli Pan at Chinese Ag. Products Expo



Delegates at Jilin University



Drs. Zhi Chen, Yubin Lan and Shujun Li at CAAMS



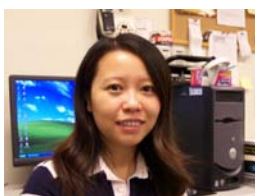
Drs. Shaojin Wang (L3), Juming Tang (L4), Yibin Ying (L5) and his colleagues after presentations at Zhejiang University



Drs. Juming Tang (L) and Yibin Ying (R) congratulated Dr. Yanbin Li's birthday in Hangzhou, China

Dr. Jaw-Kai Wang: I enjoy what I do, I enjoy new challenges!

Interviewed By Yi Zhu



Yi Zhu

During my interview with Dr. Jaw-Kai Wang, what impressed me most was his powerful energy. I've asked him: "Prof. Wang, You are very busy in research, teaching, business and administration. How do you balance your time? You are still active in research and looking for new research areas while many people may give up at your age. What makes you so energetic?" His simple answer touched me: "I enjoy what I do. I enjoy new challenges!"

Dr. Jaw-Kai Wang is professor Emeritus of Biosystems Engineering, in the Department of Molecular Biosciences and Bioengineering, University of Hawaii at Manoa. He obtained his bachelor's degree from the National Taiwan University in 1953 and his doctorate from the Michigan State University, East Lansing in 1958. He was elected to the National Academy of Engineering in 1995. He is a registered professional engineer

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in the State of Hawaii. Dr. Jaw-Kai Wang has made significant contributions to the design of integrated marine aquacultural production systems and to the basic science in aquaculture effluent management. His current interest is in the development of novel antibiotics from marine microalgae.

Dr. Wang is one of the founders and the first president of the Aquacultural Engineering Society (1993-95). He is the founder and President of Aquaculture Technology Incorporated (established 1990), a company devoted to the development of biotechnology for marine aquaculture production and large scale marine microalgae production and the extraction of antibiotics from marine microalgae. Dr. Wang received the Governor's Distinguished Service Award in the State of Hawaii in 1990. He was elected a Fellow of the American Society of Agricultural Engineers in 1980 and a Fellow of the American Institute for Medical and Biological Engineering in 1994. He also received the Kishida Award from the American Society of Agricultural Engineers in 1991. The Hawaii State Senate passed a resolution in 1986 and the Hawaii State House of

Representatives passed a resolution in 1996 to recognize his contribution to the state of Hawaii.

Dr. Wang was appointed to the Expert Panel on Agricultural Mechanization by the Director-General of the Food and Agriculture Organization, United Nations, 1984-1990. The primary function of the Panel is to advise the United Nations on agriculture mechanization policies. He served as a member of the editorial board of the International Journal of Aquacultural Engineering until 1998. Dr. Wang has served as a paid consultant to many organizations, such as the Department of State, Agency for International Development, the United States Department of Agriculture, the Rockefeller Foundation, and the World Bank. He has received numerous grants from sources such as the Rockefeller Foundation, the Asia Foundation, the John Deere Foundation, the National Science Foundation, the U.S. Department of Agriculture, the U.S. Department of Commerce, the U.S. Department of Defense, the Counties of Hawaii and Maui, the State of Hawaii, and private companies. He contributed over 160 technical articles to professional journals, served as editors to a number of conference proceedings and authored and edited two books. He is the holder of three patents; two of these patents deal with the production of novel antibiotics from marine diatoms.

Dr. Wang pioneered the application of Fluidized Bed Technology to the production of bivalves, such as oyster and clam. His research has led to the use of fluidized packed oyster columns, where oyster is suspended individually in a stream of high velocity water pumped from a shrimp pond. The process is capable of producing market-size oysters in less than 6 months, compared with 2.5 to 3 years in nature. The fluidized bed oyster production process is combined with shrimp production to form an integrated shrimp/oyster process that uses shrimp pond water to feed the oysters; thereby, eliminating food cost for oysters while helping to reduce the shrimp pond water effluent management problem. He served as the President of Kona Bay Oyster and Shrimp Company in 1996, a company devoted to the application of modern technology to the production of premium quality half-shell oyster and shrimp.

Dr. Wang's work on the production of marine diatom and the extraction of antibacterial substances from marine diatom pioneered a field that is destined to have great application in the world of human medicine. From the 1960's the extraordinary ability of microbes to adapt themselves against antibiotics has become a fact of life. New bacteria and newly resistant strains of existing ones are placing heightened demand on the discovery of new antibacterial and antifungal substances. Dr. Wang has shown that compounds extracted from the marine algae *Chaetoceros*, *Thalassiosira*, *Phaedactylum* and *Navicula* species are effective against a number of highly significant bacteria, including *methicillin* resistant *Staphylococcus aureus* (*mrsa*), *vancomycin* resistant *enterococcus*, *Listeria monocytogenes*, *Vibrio cholerae*, and *Vibrio vulnificus*, among others.

Interview

Yi: You got your master's and Ph.D degree in agriculture engineering at Michigan State University. What made you feel that agriculture engineering is a promising area which is worth

your entire life working on that?

Wang: There is a long story. But to make the story short: Professor Jin Cheng 金城, the Head of the Agricultural Engineering Department at the National Taiwan University, got hold of me when I was on my way to the Mechanical Engineering Department. He asked me to come in to his office, sat me down, made me a cup of tea, gave me several cookies, and for the next two hours, impressed upon me that to save China we must have a strong agriculture and that the way to feed a large nation such as China and to liberate the farmers from drudgery is to mechanize its agriculture. He persuaded me to enroll in Agricultural Engineering. To modernize Chinese agriculture and to save China!

By the time I was a senior, I am not sure what I can do to save China and mechanize its agriculture. But the idea of contributing to the modernization of China persisted in my mind. Before I left Taiwan in 1955 Professor Jin expressed his sadness in seeing his students leaving China (Taiwan) before we were able to contribute to the building of Chinese agriculture and I promised him that I would return some day to do that.

I was back to the National Taiwan University in 1964 for a six month sabbatical leave and I worked on the modernization of Banana processing in Taiwan. I returned to China in 1979 as a member of the US team working on the normalization of US-China relationship and I remained to work on the first World Bank agriculture Loan to China, a US\$60 million loan. With that loan, Professor Tao Ding Lai, a member of AOC, and team of agricultural engineers from the Chinese Ministry of Agriculture developed the plan for the 黄淮海盐碱地 recovery project. Professor Tao has already told AOC members about that project, I believe. I am now in China again to work with the Chinese Institution of Aquacultural Science to develop a microalgae based recirculating production system.

Yi: You changed your interests from land to water in the late 1970 after teaching agriculture machine design for several years. What caused the change?

Wang: One of my undergraduate students developed an interest in fresh water shrimp. To accommodate him, I applied for a small grant to pay for his salary. That beginning started my interest in aquaculture.

Yi: You predict that within the next 10 years, jobs in aquaculture will be plentiful as fish production becomes important as a food source. What makes you think so?

Wang: Well, the world catch of wild aquatic animals is decreasing. On the other hand aquaculture production is increasing. The 60% of seafood consumed in China is now farm-produced, and about 30% of shrimp consumed in the world is farm-produced. As production goes up, environmental and system design problems will multiply and engineers will be needed.

Yi: You are visiting professor of National Taiwan University in which you got your bachelor's degree. What do you think is

beneficial in teaching at your mother university?

Wang: I have taught twice in my alma mater. They are both enjoyable experiences. I taught different courses at the National

Taiwan University and developing new courses helped me to broaden my vision and makes me a better teacher, I hope, when I return to the University of Hawaii.

Call for Papers China Exchange Session, July 20, 9-12 am, 2005 Tampa, Florida, USA

Dear AOC Members and Friends,

There will be another China Exchange Session next year in conjunction with the ASAE International Annual Meeting on July 20, 2005. I am now in the process of inviting speakers for this session. Here, I would like to ask you to consider making a presentation at this session. The following is a list of topics that could be addressed.

- Concepts and models for developing innovative, joint graduate and undergraduate teaching and research programs.
- Experiences for organizing workshop and training programs on special topics.

- How to develop collaborative agreement between institutions, organizations, and industrial partners and their implementation.
- Innovative outreach and technology transfer programs and activities

If you are interested in making a presentation or suggesting a speaker for me to contact for invitation, please email me at rhzhang@ucdavis.edu, as soon as possible, preferably before January 15, 2005. I look forward to hearing from you.

Happy Holidays!

Ruihong Zhang
Chair of China Exchange Session

关于加强海外华人农业、生物和食品工程师协会 在建设中国现代农业和推进农业工程科技创新的建议

二零零四年九月

科技部、教育部、农业部、人事部、国务院外国专家局有关领导：

海外华人农业、生物和食品工程师协会(简称“海外农工协会”，英文简称“AOC”)是一个由在北美和欧亚从事科研与高等教育的华人教授，知名专家，学者，在读博、硕士生，以及归国留学生组成的学术组织，其宗旨是加强中国和世界华人农业、生物与食品工程领域的交流和合作，促进有关领域先进技术转移，为推进中国相关领域科技创新和实现跨越式发展战略服务。AOC成立于2001年，118名会员涵盖美国、加拿大四十多个州、省和欧亚数国。他们大多在高等院校、研究所、政府部门和工业公司任职，并在科研、教育和推广应用方面起着举足轻重的作用。他们当中有一部分人已经成为著名大学的终身教授或担任了系领导职务，成为在世界农业、生物和食品工程界中具有一定影响的著名学者。

AOC成立三年多来,积极组织大型学术活动,并与国际农业工程协会、美国农业工程学会、加拿大农业工程学会、中国农业工程学会、日本农业工程学会和亚洲农业工程协会建立了会际合作关系。协会主要负责人近几年先后访问了国内十余所院校,就加强协会与国内有关单位的合作进行探讨。在此基础上,协会积极与国内对口单位进行了许多互利的交流和合作。其中最具代表性的是于2002年6月,

与中国农业工程学会和国务院学位委员会农业工程学科评议组在西北农林科技大学联合主办的“农业与生物系统工程科技与教育发展战略研讨会(杨陵会议)”和2002年12月,在浙江大学组织举办的“农业与生物系统工程科技与教育发展战略高层论坛(杭州会议)”。前者还得到了教育部“春晖计划”的大力支持。这两次会议被国内农业工程界视为中国农业工程发展史上具有里程碑意义的重要事件,对推动和帮助有关高等院校和研究院所了解当代农业、生物和食品工程科技发展,研究国际发展前沿和推进教学改革研究起到了重要作用。目前AOC正与中国农业工程学会协商合办国际性农业与生物系统工程专业杂志事宜,相信该杂志将为中外农业工程技术交流打开一个新的窗口。

近年来,通过会员的集体努力,AOC发现了许多新的与国内合作和发展的潜力。在2002年和2003年,AOC的十几位会员分别到国内一些大学和科研机构(包括中国农业大学,浙江大学,华南农业大学,西北农林科技大学,东北农业大学,南昌大学,沈阳农业大学,和吉林大学)开设国际科技发展前沿专题学术讲座和利用学术休假到国内著名高等院校为本科生和研究生开设新课程和开展合作课题研究,有的帮助国内院校建立起最先进的实验室,有的还发展了联合申请合作科研项目。为了更有效和持续地发挥AOC的团队作用,帮助国内相关领域加快与国际接轨,为我国农业工程界跟踪和赶上国际农业、生物和食品工程的

主流和前沿，我们特提出如下方案，希望得到有关部委的大力支持：

AOC希望在国内建立一个（办公室 Or 常设性联络中心更为现实），以方便与国内同行开展交流与合作。该办公室可先设在一所大学，也可在几所有代表性的农业大学轮流设置，每两年转移一次。在我们考虑之中的大学是中国农业大学，浙江大学，华南农业大学，西北农林科技大学，和东北农业大学。我们已和其中几所大学初步接触，反应良好。我们希望经过几年试验，将该办公室过渡到一个长久机构，以作为AOC在国内的活动基地，近期拟先开展对国内作以下服务和合作：

一、定期举办专题讲座和短期培训班，大约每年一至二次，由AOC会员或其他国外著名专家主讲。可选择热点专题，如农产品增值加工，食品安全，再生能源，精细农业，和环境控制。

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Minutes of AOC Executive Board Telephone Conference

By Lingying Zhao

Friday, November 5, 2004

3:00 pm to 4:00 pm, central time

Attendees:

Yanbin Li, Zhongli Pan, Juming Tang, Shaojin Wang, Hongwei Xin, Chenghai Yang, Qiang Zhang, Qin Zhang, Ruihong Zhang, Lingying Zhao

I. Discussions on possible AOC services or functions in technology development

- Zhongli Pan: In addition to the academic communication, should AOC provide a platform for cooperation in technology development between AOC members and related organizations? After the CIGR meeting, Pan visited the Director of Science and Technology Committee of Heilongjiang Province and discussed possibility of cooperation in technology development, which is not in conflict with any intellectual properties. He proposed to start discussing strategies for AOC to nurture the technology cooperation and understand needs of related organizations including organizations in China.
- Technology cooperation activities with Chinese organizations may include: 1) development of applied technologies, 2) consulting, 3) technical training, and 4)

other related activities. There are funds available every year for this kind of activities.

- It was suggested that AOC should establish an expertise database for AOC members to promote the technical expertise of AOC members.
- Zhang Qin: The technology collaboration functions of AOC should in compliance with AOC's mission and vision. It should be non-profit and a service to AOC members.
- The board members agreed to establish an ad-hoc committee to develop a proposal for Board to discuss on how AOC can help its members in the above activities.
- It was suggested that AOC members, especially board members, should promote opportunities for technology cooperation during their academic visits.
- The expertise database will be posted on the AOC web site for public access.
- Zhongli Pan, Yanbin Lin and Yang Tao will form an ad-hoc committee to discuss details.
- It was proposed to add a column in AOC roster to include AOC members' expertise and research interest information. Key words about each member may be added to the member roster.
- Members can make their own information sheets and then post on or link to AOC website. They can also prepare some written material that can be taken by

members who will return to China and introduce AOC members' expertise and research interests to others.

II. Briefing on CIGR Conference in Beijing and associated activities in China (Juming Tang)

- 20 AOC members attended the CIGR Conference in Beijing
- In the second evening, about 40 people attended an AOC general meeting during the CIGR followed a dinner function hosted by Professor Wang Maohua. Professor Wang. Three issues discussed at the meeting: (1) joint publication, (2) AOC service to members in China, and (3) establishment of AOC office in China.
- Roger Ruan will update the joint journal publication issue discussed during the CIGR meeting.
- AOC services to members in China should be through activities such as joint publication, student paper competition, seminars, and workshops.
- It is difficult to find special funding to establish AOC office in China to support AOC activities in China.
- It is however, possible to establish a liaison office hosted by a university in China, and rotate among different universities on a two-year term basis. The hosting university can use their internal funding or submit proposal to governmental agencies for funding. AOC can periodically send its members to organize workshops or seminars. Through these academic activities, the host university can gain income and AOC members can gain understandings to needs in China.
- The biennial meeting of the Chinese Society of Agricultural Engineers will be held at South China Agricultural University in 2005 and at Zhejiang University in 2007. The biennial meetings of the Chinese Society of Agricultural Engineering Education are held in even years. AOC should organize symposium or other activities during the meetings.
- It is a good idea to let universities in China to host the AOC liaison office. The hosting universities should receive benefits including reputation, academic communication, and profit too.
- The Beijing document developed prior to the CIGR meeting already developed functions and tasks for the sponsoring universities.
- AOC will contact Prof. Wang Maohua to talk about this plan and select one host between Wang Baoji and Yin Yibin.

III. IMPACT Newsletter / quarterly (Ruihong Zhang)

- Deadline for materials is Dec. 15.
- The Newsletter will be published at about Dec.20. Some plans still need to be confirmed.
- Feature article for Profess Jaw-Kai Wang.
- Qin Zhang to write introduction of UIUC.
- Need help to collect some CIGR meeting photos.

- The website needs to be updated with the photos. Other contents of the web site are very old and should be updated too.
- Shaojin to write a report on CIGR meeting. Juming Tang will help.

IV. New AOC Website/domain (Jiannong Xin)

- Add a column in the member roster to introduce every member's expertise or research interests.
- Every member can prepare a personal webpage to link to the AOC website. The student members' WebPages are optional.
- It is necessary and convenient to establish and maintain an independent AOC website.
- The domain name "www.aoc.org" has been occupied by used. Require every board member to think a new one that should be readable, meaningful, and easy to remember. Please send your suggestion to Qiang Zhang by email.

V. CIGR membership (Juming Tang)

- CIGR officers expressed strong interest in having AOC as an official organization member of CIGR. Juming met with CIGR president Dr. Munack and CIGR Secretary in General Dr. Lammers to start the dialog on conditions for AOC to join CIGR, including organizational membership fee and the possibility for a representative from AOC to take a position on the CIGR Board of Directors. He brought this issue to the board for discussion.
- Naiqian Zhang: AOC had applied CIGR membership for AOC two years ago, but did not pay a fee.
- Zhang Qin: There is no meaning for individual AOC members to pay fee to CIGR. Because as an ASAE member, each individual member is already a CIGR member.
- Zhang Qin: As long as being a board member of CIGR, AOC will be recognized internationally.
- Zhang Qin: There is a special group in CIGR to determine where the meetings will be.
- The benefit AOC will get is the reputation and the respect from China.
- The board agrees to pursue it matter further. Juming will continue the dialog with CIGR.

VI. Preparation for next China Exchange Session (Ruihong Zhang)

- Ruihong asked suggestions and comments on speakers and format.
- Zhang Qiang: To have large impact, please invite high-profile speakers.
- Ruihong will email the theme for the China Exchange Session for speaker selection.
- Every board member is asked to make suggestion and then email to Ruihong.

VII. Plan for fund raising and activities in China (Yanbin Li, Zhongli Pan)

- Li Yanbin: Please supply ideas and I will work on them.
- Zhang Qiang: Let's think about the use and purpose of funds first.
- Li Yanbin: I will think a few topics or ideas and email out for decision.

VIII. Student Paper competition in China (Qiang Zhang)

- Roger Ruan will negotiate with CSAE and update on the student paper competition

IX. Kishida International Award Nomination for Naiqian Zhang(Juming Tang)

- Naiqian Zhang had been nominated for Kishida International Award in ASAE. The nomination was prepared by an ad-hoc committee consisted of Ni Wang (Chair), Ruihong Zhang, Juming Tang, and Qiang Zhang. Juming Tang wrote a reference letter on behalf of AOC. Wang Ni did a lot of work during the CIGR meeting in Beijing asking for strong support letters from ASAE, CIGR and CSAE leaders.
- Ruihong: We should do more of this kind of nomination.

X. Next meeting

- Next meeting will be hold at 3:00 pm on January 7th, 2005.

Minutes of AOC General Meeting in Beijing

By Ning Wang

Time: October 12, 2004

Location: The 10th meeting room, Beijing International Conference Center, Beijing, China

Attendees: See attached list (Attachment 1)

Qing Zhang, AOC Vice President, called the meeting to order at 5:30 pm

Self- Introduction

Approval of agenda of this meeting

The agenda was approved.

Introduction to the AOC activities in Ottawa in summer 2004

Juming Tang, AOC President, introduced the AOC activities during the 2004 ASAE conference in Ottawa

Business Meeting

Election: President-Elect (Ruihong Zhang) and Vice President (Qing Zhang)

Updating the AOC website

Dinner gathering

Discussion on joint-journal issues – Juming Tang

The “joint-journal” between AOC and Chinese Society of Agricultural Engineering (CSAE) was proposed three years ago. The initial objective of AOC was to help Chinese scholars publish scientific papers on SCI- and EI-cited journals. However, the progress has been slow. AOC would like to have responses from AOC members in China on this issue.

The Secretary- General of CSAE, Mr. Jingguang Qin, reported the situation and progress regarding the journal:

There is a new policy from the 国家新闻出版署 that all the international journals have to be published abroad and imported to China through China Import and Export Corporation. Therefore, the idea for an international journal with an ISSN is difficult to proceed. Last year, CSAE started a procedure to apply for a new English journal. The application needs to be approved by The Ministry of Agriculture, the Ministry of Science and Technology, and the National

Copyright Administration (国家新闻出版署). The name of the new journal is the *English Edition of the Transactions of Agricultural Engineering of CSAE*. This journal will be administrated under Ministry of Agriculture and Chinese Science and Technology Association.

The application package of the new journal did not indicate participation of AOC. The reason was that AOC is not attached to any Chinese administrative agencies. Involving AOC to the application process will complicate the approval process of the new journal. The strategy of CSAE is to receive the approval of this new journal first. The application of a journal number for a completely new journal is very complicated. Applying a new journal that is associated with an existing journal is easier. Therefore, CSAE took the path to apply to publish *the English edition of the Transaction of Agricultural Engineering CSAE*. Once the CN number for a new journal is approved, it is much easier to change the name and number of the journal and add co-sponsoring organizations.

CSAE welcomes various forms of collaboration with AOC for publishing the new journal, *English Edition of the Transaction of Agricultural Engineering CSAE*. CSAE is willing to discuss the collaborations with AOC.

The secretary-general also answered a few questions related to the concerns of collaborations on the journal. His responses were: once this new journal is approved, CSAE anticipates a lot of difficulty at the initial stage. CSAE will definitely count on AOC to provide great help on quality control and other aspects to bring the journal to an international level. An editorial board will be established right after the approval is received.

Naiqian Zhang made a few comments on the report of CSAE: The journal being applied now is very different from the initial joint proposal between CSAE and AOC. AOC is willing to make major contributions mainly in maintaining the high quality of the joint publication and has proposed measures to achieve the goal.

AOC and CSAE have developed several editions of the agreement on the joint publication before. Further discussion on collaborations between CSAE and AOC should be based on these agreements. If the issues on AOC co-sponsorship and journal title can be addressed based on the existing agreement

between AOC and CSAE after receiving the approval in China, AOC sees no problem in continuing the collaboration on this issue.

At this stage, AOC will wait for CSAE to go through the application procedure in China. The detail of collaborations will be discussed later.

Report from AOC Chinese representative – Baoji Wang

The AOC representative in China, Mr. Baoji Wang, reported activities and current situation of AOC in China. AOC has been making great impacts in China, especially through Yangling meeting and Hangzhou meeting. There are about 40 members in China. Considering that not many activities have been organized by AOC in China, the membership fees were collected only once.

A question was raised by Naiqian Zhang about how do AOC members in China see the benefit of AOC as an incentive for them to stay as AOC members. Several AOC members in China commented on positive interactions with AOC members outside of China through networking during conferences, symposiums, AOC special meetings/functions, and sponsoring exchange of visits among AOC members to universities overseas and in China.

Melissa Moors from ASAE , Naiqian Zhang former President of AOC, Professor Ou from South China University and Professor Yang from Northwest Agricultural and Forest University comments about an agreement between ASAE to have a package deal on membership feeds for AOC members in China. According to an agreement between ASAE and AOC, AOC needs to have 80% members to be ASAE members. This goal has now been reached with 36 Chinese agricultural engineers joining the ASAE with a five-year membership as a result of an agreement between ASAE, ASAE, and AOC on group membership. However, not all AOC members in China see the necessities to become ASAE members.

Mr. Wang suggested a discussion on more meaningful activities.

Discussion on activities to promote AOC – Naiqian Zhang

Updating membership database that include s members in China. Naiqian Zhang read a letter that was developed by an ad-hoc committee of AOC and was signed by Drs. Juming Tang, Maohua Wang, and Naiqian Zhang in which suggestions were made on AOC activities that would benefit AOC members both in China and abroad. The main suggestions include:

- Establish an AOC office in China
- Organizing annual seminars and workshops on specific topics, such as food safety, scientific writing, etc.
- Organize collaborative projects
- Help Chinese scholars publish papers on international journals
- Help arrange academic exchanges, including sabbatical leaves
- Co-organizing international conferences

Adding a new column in AOC newsletter to report news and activities in China.

CSAE is planning to organize its regular meeting every two years in the second half of November. Next year, the meeting will be held in Guangzhou, organized by South China Agricultural University. The meeting in 2007 will be held in Hangzhou, organized by Zhejiang University. AOC could

provide great help for the meeting and become a co-sponsor.

List of attendants for AOC general meeting during CIGR conference in Beijing

Chen, Shuren	Jiangsu University
Cheng, Jiayang	North Carolina State University
Guan, Xiaodong	China Agricultural Engineering Society
He, Dongxin	China Agricultural University
Hung, Yencon	University of Georgia
Jiang, Huangji	Zhejiang University
Lan, Yubin	University of Georgia
Li, Jianping	Zhejiang University
Li, Yanbin	University of Arkansas
Liu, Fang	Washington State University
Lu, Renfu	USDA-ARS
Mao, Zhihui	China Agricultural University
Moore, Melissa	ASAE
Ou, Yinggang	South China Agricultural University
Qian, Jinguan	China Agricultural Engineering Society
Pan, Zhongli	USDA-ARS
Ruan, Roger	Minnesota University
Shang, Shuqi	Leiyang Agricultural University
Tang, Juming	Washington State University
Tian, Lei	University of Illinois at Urbana-Champaign
Wang, Baoji	China Agricultural University
Wang, Juan	Zhejiang University
Wang, Liu	China Agricultural Engineering Society
Wang, Maohua	China Agricultural University
Wang, Ning	McGill University
Wang, Shaojin	Washington State University
Wei, Xiujiu	China Agricultural Engineering Society
Wang, Yikuan	China Agricultural Engineering Society
Yang, Qing	North-West Agriculture and Forest Science and Technology University
Yang, Xiusheng	University of Connecticut
Ying, Yibin	Zhejiang University
Zeng, Dechao	China Agricultural University
Zhang, Naiqian	Kansas State University
Zhang, Qin	University of Illinois at Urbana-Champaign

AOC members outside of China: 14

AOC members in China: 8

Non-AOC members: 12

Total: 34

Comments by Maohua Wang

Journal:

The journal needs collaboration between CSAE and AOC. The name of the journal needs to be modified. But the process

may take time.

AOC office in China:

It is a good idea, but is hard to be implemented in China due to administrative difficulty.

AOC activities

Collaborations, cooperation, technical transfer between overseas scholars and scholars in China

Organize seminars, workshops, and forums in China

Co-sponsor international conferences, such as CSAE meeting

Establishing a news or information center and reporting activities of AOC members in China regularly on the AOC newsletter.

The meeting was adjointed at 7:15pm.

Respectively submitted by Ning Wang

University Spotlight: University of Illinois, Urbana-Champaign

By Qin Zhang



Since its founding in 1867, the University of Illinois at Urbana-Champaign has earned a reputation as a premier international institution for teaching and research. Among the University's most significant resources is its talented and highly respected faculty. Another indicator of the University's excellence is the success of its alumni: 11 alumni are Nobel laureates and another 18 have won Pulitzer Prizes. Academic resources on campus are among the finest in the world. The [University Library](#) is the largest public university collection in the world, housing more than 22 million items, including 10 million volumes, more than 13 million print and nonprint materials, and over 90,000 periodicals and journals in the main library and in more than 40 departmental libraries and divisions. More than one million users worldwide access the online catalog each week.

As a world leader in supercomputing design and applications, the University is home to the [National Center for Supercomputing Applications](#), developer of the hypermedia browser Mosaic TM, which revolutionized the use of the World Wide Web. Students have access to thousands of computer terminals in classrooms, residence halls, and campus libraries for use in classroom instruction, study, and research. Students and scholars find the University an ideal place to conduct inter- and multidisciplinary research.

Initiated its B.S. class in 1932, its M.S. program in 1948 and Ph.D. degree in 1964, the Department of Agricultural and Biological Engineering is highly ranked for both its undergraduate and graduate programs. U.S. News & World Report's 2004 listing of America's Best Graduate Schools ranked our department number five in the nation. The 2003 edition of U.S. News rankings of America's Best Colleges listed Agricultural Engineering at the University of Illinois as number two in the nation. The Department of Agricultural and Biological Engineering is fortunate in being associated with two outstanding colleges; The College of Engineering and the College of Agricultural, Consumer and Environmental Sciences (ACES).

The College of Engineering at the University of Illinois is one of the nation's elite engineering schools. Rankings of undergraduate engineering programs by U.S. News and World

Report place the college 4th among approximately 300 engineering programs nationwide. The graduate engineering program at the University of Illinois at Urbana-Champaign ranked 4th for the third year in a row in a recent poll of U.S. News and World Report. These rankings, which are based on a complex system of metrics and reputation surveys, are from the 2005 Best Graduate Schools issue of U.S. News and World Report. The College of Engineering has a long tradition of excellence, a blend of science and engineering, and a reputation for highly interdisciplinary research and education. In 2004, the college of engineering celebrated two Nobel Laureates, a National Medal of Technology recipient, and many other faculty members were singled out for distinction, and who have expanded expertise, research, and programs in some of the most exciting and important areas of engineering and science.

The Princeton Review ranks College of Agricultural, Consumer and Environmental Sciences among the top five colleges of agriculture in the nation. Science Watch identified Illinois as one of the top five universities in the U.S. for recent scientific contributions in the agricultural sciences. ACES departments, programs, and faculty are nationally and internationally recognized for their excellence and impact on research and innovation.

Among its 20 faculty members in the ABE Department at UIUC, there are 5 AOC members. AOC Board Member, Professor K.C. Ting is the Department Head. Prof. Ting is an internationally well-known research leader in Automation-Culture-Environment Systems for production of food, fiber and ornamentals. He served as the leader of the Systems Studies & Modeling Team within the New Jersey NASA Specialized Center of Research and Training (NJ-NSCORT) during 1996-2000. He is starting as a co-principal investigator of a NASA funded three-year project entitled "Development and application of reliability analysis techniques for early advanced life support systems." Another AOC Board Member at UIUC is Professor Yuanhui Zhang. Prof. Zhang is a well-known research leader in bioenvironmental engineering. His current research projects include measurement, and modeling of air quality in livestock facilities and treatment of livestock manure. Professor Lei Tian is a well-known research leader in remote sensing. He works on the control for chemical application rates in the field. Joined the faculty in couple of year ago from industry, Professor Wang is working on Bioenvironmental Engineering with exceptional

expertise in the area of air quality and environmental control. He conducts research in emission control from agricultural operations and vehicles. Professor Qin Zhang serves AOC as the Vice President. His research interests are in off-road vehicle automation and agricultural infotronics. Automated/autonomous off-road vehicles are one of the research focuses for Prof. Zhang.

Just like the University is proud of its excellent alumni, the ABE Department also proud of its alumni in AOC: AOC

President-elect, Professor Ruihong Zhang of University of California at Davis, AOC Board Members, Professor Rongsheng Ruan of University of Minnesota and Professor Zhongli Pan of University of California at Davis, and AOC Secretary, Professor Linying Zhao of Ohio State University. Other outstanding AOC UIUC alumni are Professor Xiuzhi Sun and Professor Donghai Wang of Kansas State University, Dr. Shufeng Han of Deere and Company, Professor Bingjun He of University of Idaho, and Dr. Linsong Guo of Cummine Engine Co.