ASSOCIATION OF OVERSEAS CHINESE AGRICULTURAL, BIOLOGICAL AND FOOD ENGINEERS

VOLUME 25 ISSUE 3

DEC. 16, 2025

IMPACT

PRESIDENT'S REMARK

Dear friends, colleagues, and fellow members of the AOCABFE,

It is a profound honor to serve as the new president of our association. For those I have not met yet, my name is Yin Bao, and I am an Assistant Professor in the Departments of Plant and Soil Sciences and Mechanical Engineering at the University of Delaware. I must begin by thanking Dr. Yeyin Shi for her exceptional leadership this past year. Her vision has inspired me to think deeply about the future of the AOCABFE.

My own journey with this organization began eleven years ago. As a new graduate student attending the ASABE AIM in Montreal, I was invited to an AOC student dinner. That evening, I met several past presidents of AOCABFE such as Drs. Naiqian Zhang, Lingying Zhao, Lie Tang, and Changying Li. I still clearly remember them speaking of the valuable service and leadership experience one could gain through the Student Activity Committee (SAC), which inspired me to join. Over the years, the AOCABFE has been a constant in my career. I have contributed to nearly all aspects of the organization, and in return, I have benefited tremendously from it. It gave me confidence through student awards, provided critical mentorship during my job search, and continues to offer camaraderie and support as a junior faculty member today.

The support I received is the very support I pledge to extend to every member. As president, I will work diligently with our executive board and the SAC to build upon our traditions. We will celebrate the successes of our members through AOCABFE media outlets, strengthen the connections between faculty, professionals, and students with engaging virtual events, and continue to recognize and nurture our brightest students through AOCABFE student competitions.

Our community is rich with talent. Yet, we cannot ignore the headwinds we face: federal funding cuts, a competitive job market, geopolitical tensions, and a shrinking pool of international students. These challenges are especially daunting for our early-career faculty, professionals, postdocs, and graduate students. There are no easy solutions. But like many resilient organizations, our strength lies in our community. We must support one another, look over the horizon, and find creative ways to ensure the AOCABFE remains vital and relevant for years to come.

It is unfortunate that many of us could not attend the past ASABE AIM in Toronto. I want to sincerely express my gratitude to everyone who attended and supported the AOCABFE-sponsored events. I especially want to thank Drs. Qiang Zhang, Ying Chen, and Jikai Zhao, who delivered a thoughtful panel discussion at the China Exchange Forum titled "Navigating Challenges and Paths in Scholarly Exchange and Early Career Development." This discussion came at a time of high uncertainty for our community, and it served as a reminder that it is high time for us to gather strength and support each other to move forward.

Following the forum, we paid tribute to the late Professor Maohua Wang, who made a tremendous positive impact on China's modern agriculture and everyone who worked with him. We were deeply moved by the stories shared by family members, friends, colleagues, and students. He was always passionate about advancing with the world and educating the next generation. We will remember him forever as an inspiration.

In the coming year, I will work closely with the board to prioritize operational improvements. We will put additional effort into updating the contact information for our members and friends to ensure our communication remains wide-reaching. Furthermore, we plan to implement online technologies to streamline voting for business meetings and ticketing for our annual banquet. These steps will help modernize our association and keep us better connected.

Lastly, please join me in congratulating all the 2025 AOCABFE student awardees and our distinguished members who received major awards, which you will see listed in this issue.

Thank you for your trust, and I look forward to a productive year ahead.

Sincerely,

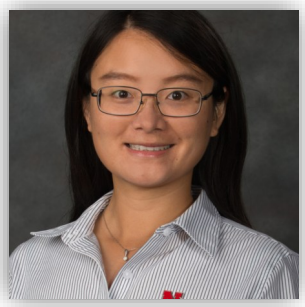
Yin Bao

AOCABFE President (2025-2026)

INSIDE THIS ISSUE

AOCABFE

AOC 2025-2026 Executive Board



SHI, YEYIN

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University of Nebraska-Lincoln

SAC President

2025 AOC Board Meeting Minutes

12:30-1:00 PM EST, Nov 5, 2025

Attendants: Yin Bao, Yeyin Shi, Ce Yang, Lirong Xiang, Johnny (Liujun) Li, Guoming Li, Ke Wang, Jiating Li, Zhaocheng Xiang

Quick Review

The meeting mainly discussed the division of work related to the newsletter and website updates, including content collection, production workflow, and solutions to permission issues.
The team also discussed nonprofit organization bank account management, covering permission settings, tax filing, and account transfer matters.
Finally, the meeting focused on improvements to the member management system, including the online voting system, mailing list usage, membership fee collection process optimization, and enhancement of website functions.

Summary

1. Financial & Legal Administration

- Bank Account: The team discussed managing the nonprofit bank account during annual role rotations. Instead of closing the account, they plan to add authorized users to ensure continuity.
- Tax Compliance: There are outstanding tax filing issues, including overdue forms and a potential need to correct the organization's name in the IRS system.
- Legal Aid: Guoming proposed hiring a lawyer (est. $200–$300) to handle these professional matters. Yeyin will resolve immediate access issues before consulting Chang Chen for legal advice.
- Best Practices: Johnny will consult Tri Society regarding their tax filing processes.

2. Membership & Communication

- Roster: The ASABE system currently lists 73 members (72 paid).
- Voting: To address low attendance at business meetings, Yin proposed an online voting system using Google Forms. This ensures inclusivity for non-WeChat users (students and international members), though voting remains restricted to paid members.
- Communication Channels: The group aims to shift from WeChat groups to mass emails/mailing lists for better reach.
- Registration Issues: Johnny noted potential technical issues with the website's member registration and suggested improvements to contact info collection.

3. Fees & Payment Structure

- Fee Bundling: Yin suggested bundling membership and banquet fees (e.g., a total of $15 for students) to simplify collection.
- Payment Methods: Zhaocheng suggested website integration, while Guoming proposed a QR code system with receipt generation. Guoming noted the core issue is member awareness of dues, not the payment method itself.
- Categories: The team is considering separate fee structures for students vs. faculty and potentially adding a postdoctoral category.

4. Website, Newsletter & Professional Development

- Newsletter: Guoming and Jiating are collecting content, including last year's ASABE/AOC awardees and materials from precision ag/livestock conferences.
- Website: Updates are required, though Zhaocheng needs to resolve permission issues with Wenlong He.
- Workshops: Plans are in place for student-led winter workshops. A key proposal involves inviting editors from Comparative to share strategies on research and grant applications.

SAC 2025-2026 Executive Board

XIANG, ZHAOCHENG

University of Nebraska-Lincoln

SAC CHAIR

HE, WEILONG

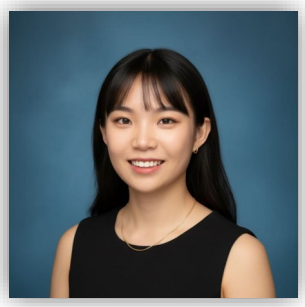
Cornell University

PAST-SAC CHAIR

LIU, WENHAO

University of Florida

SAC VICE CHAIR



JI, LIYIKE

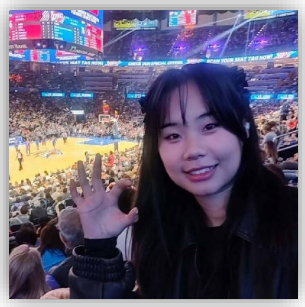
University of Florida

SAC VICE CHAIR

DU, RUIMING

Cornell University

SECRETARY



TAN, YING

Kansas State University

TREASURER

AOCABFE 2025 Awards

2025 AOC Distinguished Career Award

Zhongli Pan, Professor

Biological and Agricultural Engineering Department, University of California-Davis

2025 AOC Early Career Award

Lirong Xiang, Assistant Professor

Biological and Environmental Engineering Department, Cornell University

2025 AOC Outstanding Service Award

Yeyin Shi, Associate Professor

Biological Systems Engineering Department, University of Nebraska-Lincoln

Student Awards

2025 AOC Graduate Leadership and Service Award

Weilong He, Cornell University

2025 AOC Graduate Scholarly Achievement Award

Chenjiao Tan, University of Florida

Weilong He, Cornell University

2025 AOC Student Paper Competition Award

Liyang Wang, University of Idaho, Advisor: Boyu Zhang

Yifu Qian, Shihezi University (China), Advisor: Mengyun Zhang

Lizhi Jiang, University of Florida, Advisor: Charlie (Changying) Li

2025 AOC Student Presentation Competition Award

Wenhao Liu, University of Florida, Advisor: Yiannis Ampatzidis

Md Sabid Hasan, University of Idaho, Advisor: Johnny (Liujun), Li

AOC Interview—Dr. Jikai Zhao

My name is Jikai Zhao, and I am originally from Binzhou in Shandong Province. I am currently an assistant professor in the Carl and Melinda Helwig Department of Biological and Agricultural Engineering at Kansas State University. My research group works on developing biological and catalytic technologies to turn agricultural, food, and dairy waste into valuable products such as biofuels, platform chemicals, and biomaterials. We also engineer microorganisms to produce value-added compounds from biomass hydrolysates. In addition, we use techno-economic analysis and life-cycle assessment to evaluate the economic feasibility and environmental impacts of different biorefinery processes. Since 2023, I have secured over $14 million in research funding as a principal investigator or co-principal investigator from agencies such as the U.S. Department of Agriculture and the National Science Foundation. To date, I have authored or co-authored more than 50 peer-reviewed journal articles and two book chapters.

What's your educational background and professional experience?

I earned my bachelor's and master's degrees in food science and engineering from Henan University of Technology in 2017. In May 2022, I obtained my doctorate in biological and agricultural engineering from Kansas State University. Subsequently, I completed a postdoctoral fellowship in the Department of Chemical and Biological Engineering at the University of Wisconsin-Madison in December 2022.

What inspired you to study abroad and what brought you to the current field?

Growing up, I realized that if I stayed in China and worked in a traditional industry job, I could almost predict exactly what my life would look like decades into the future. I have always been curious about the world, so I felt it was worthwhile to challenge myself, explore new environments, and experience life on the other side of the globe. My bachelor's and master's degrees were in food engineering, but to be honest, the research in that area did not truly excite me. After I changed my focus to biological engineering during my PhD study, I discovered a much stronger passion for scientific research. Later, during my postdoctoral training at UW–Madison, I was introduced to catalysis and advanced bioprocess engineering, which further expanded my interests. These academic transitions—from food science to biological engineering to catalysis—helped me find a field where I genuinely feel excited and motivated. Most importantly, I realized that the technologies and processes developed in my lab can help address real-world challenges in sustainability and resource utilization. Being able to contribute to solutions that make the world a better place is what inspires me to pursue this career path.

What inspired you to study abroad and what brought you to the current field?

One interesting aspect of my research is that many of the technologies we work on start from things most people consider waste—like agricultural residues, food processing byproducts, or dairy waste streams. It's exciting to take materials that have little value and turn them into something meaningful, such as biofuels, bioplastics, or platform chemicals. Sometimes, the "dirtiest" samples entering our lab end up producing the most elegant scientific results. Another interesting fact is that our work often involves both biology and catalysis, so on any given day I might be discussing microbial engineering in the morning and catalytic reaction mechanisms in the afternoon. This interdisciplinary environment keeps the research dynamic and intellectually stimulating. In daily life, I usually start my day early with cooking breakfast for my son Isaiah, lab checking or email response. I also enjoy mentoring students—watching them grow from beginners to independent researchers is one of the most rewarding parts of my job. Outside of research, I enjoy exploring new places, trying different foods, and observing how cultures utilize resources differently. These experiences often give me new ideas for research directions or sustainability opportunities.

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

One of the biggest challenges in my profession has been learning how to mentor students effectively while also building strong, positive relationships with colleagues. As a faculty member, every student has a different background, personality, and learning style, so guiding them requires patience, communication, and continuous adjustment. I constantly try to balance giving them independence with providing enough support so they can grow confidently as researchers. At the same

AOC Interview—Dr. Jikai Zhao (continued)

time, academia is a highly collaborative environment, and working smoothly with colleagues is essential. Everyone has different perspectives, priorities, and working habits. Learning how to communicate openly, respect differences, and find common ground has been both challenging and rewarding. These experiences have taught me to be more empathetic, flexible, and understanding. Although it has been a challenge, it has also become one of the areas where I have grown the most professionally.

Could you provide some suggestions to oversea Chinese students/postdoc who are looking for a faculty position?

Overseas Chinese students and postdocs aiming for faculty positions should focus on finding a supportive advisor and a research environment that allows them to grow, rather than relying solely on university rankings. It's important to build strong core research skills early, and, if possible, participate in writing grant proposals—this helps you understand the broader landscape of your field and shapes how you think about research. Developing your own research identity, communicating effectively, and networking within the academic community are also essential. Finally, be patient and resilient; the path to a faculty career is competitive, but consistent progress and a clear sense of direction make a big difference.

SAC Student Activities - AOC Seminar Panel

Extension in Action: Bridging Research and Real-World Agriculture

July 2, 2025 | 8:00 - 9:00 PM US EDT | Zoom Online Meeting

This seminar brought together leading extension faculties, Dr. Lingying Zhao, Dr. Jiqin Ni, Dr. Zhiwu Wang, and Dr. Congliang Zhou to discuss how Extension programs connect academic research with practical agricultural innovations. Through shared experiences and practical insights, the panel highlighted how Extension empowers researchers and engineers to forge meaningful university–industry partnerships and drive real-world agricultural innovation.

Panel Overview

- How faculty translate scientific findings into actionable guidance for producers
- Strategies for building trust with agricultural communities
- Effective communication of complex scientific information
- Metrics for evaluating Extension impacts beyond academia
- Advice for graduate students engaging in Extension work
- Pathways to Extension funding and best practices for including Extension components in research proposals

Panelists

Dr. Lingying Zhao is a Distinguished Professor in Air Quality Engineering and a State Extension Specialist in Animal Facility and Environment within the College of Food, Agricultural, and Environmental Sciences (CFAES) at The Ohio State University. She also serves as Associate Director of the Ohio Agricultural Experiment Station and Associate Chair of Research in the Department of Food, Agricultural and Biological Engineering at CFAES.Dr. Zhao's research, teaching, and Extension program focuses on advancing knowledge, developing innovative technologies, and educating students, animal producers, and professionals. Her work aims to enhance the management of indoor environments and reduce air emissions from agricultural animal feeding operations. These efforts contribute to improving animal production efficiency, animal and human health, and environmental quality, ultimately supporting sustainable livestock production.

Dr. Jiqin Ni is a professor of agricultural and biological engineering at Purdue University. He received his undergraduate education at Hangzhou University (currently Zhejiang University) and finished his MS and Ph.D. studies at the French-speaking Catholic University of Louvain-la-Neuve and Dutch-speaking Catholic University of Leuven in Belgium, respectively. Before going to Europe for his graduate education, he worked in rural Hangzhou area, China, on Extension and research of renewable energy. His current research and Extension at Purdue University in Indiana focus on knowledge, methodology, and technology of agricultural air quality, waste management, and anaerobic digestion.

Dr. Zhiwu (Drew) Wang is an Associate Professor and an Extension Specialist in the Department of Biological Systems Engineering at Virginia Polytechnic Institute and State University (Virginia Tech). He is also a Director leading a "Center for Applied Water Research and Innovation (CAWRI)" for developing advanced technologies to meet the industrial needs of sustainable wastewater management and to become a role model for University-Utility cooperation in the U.S. As a professional engineer, Dr. Wang's research focuses on developing useful technologies for advanced wastewater treatment and resource recovery. His diverse research portfolio covers aerobic granulation, anaerobic digestion, biological nutrient removal/recovery, as well as biofuel and bioproduct production from a wide spectrum of wasted materials. His research has been performed in close collaboration with utilities, consulting firms, national laboratories, and other higher education institutions with an overarching goal to promote water technology ideation, development, and application.

Dr. Congliang Zhou is an Assistant Professor at Louisiana State University's School of Plant, Environmental and Soil Sciences. He joined the LSU AgCenter in July 2024, focusing on precision agriculture and technology-driven crop management. Dr. Zhou earned his Ph.D. in Agricultural and Biological Engineering from the University of Florida, where he developed AI-powered tools for pest and disease detection in specialty crops. His research interests include remote sensing, computer vision, and smart farming systems, with an emphasis on translating innovative technologies into practical solutions for growers.

AOC Members in ASABE

ASABE Fellow 2025

The Highest Honor in ASABE

Charlie (Changying) Li

Agricultural & Biological Engineering

University of Florida

Donghai Wang

Biological & Agricultural Engineering

Kansas State University

Major Awards

New Holland Young Researcher Award

Yuzhen Lu

Biological & Agricultural Engineering

Michigan State University

Netafim Award for Advancements in Microirrigation

Yunkai Li

College of Water Resources and Civil Engineering

China Agricultural University

Henry Giese Structures & Environment Award

Qiang Zhang

Biosystems Engineering

University of Manitoba

The Excellence in Leadership Award from agInnovation South

Hongwei Xin

Dean of UT AgResearch

University of Tennessee, Knoxville

For More Details

2025 Agricultural Research Innovation Award of Excellence (Southern region)

Zhao Yang

Animal Science

University of Tennessee, Knoxville

For More Details

2024–2025 Illinois State University Environmental Stewardship Award

Liangcheng Yang

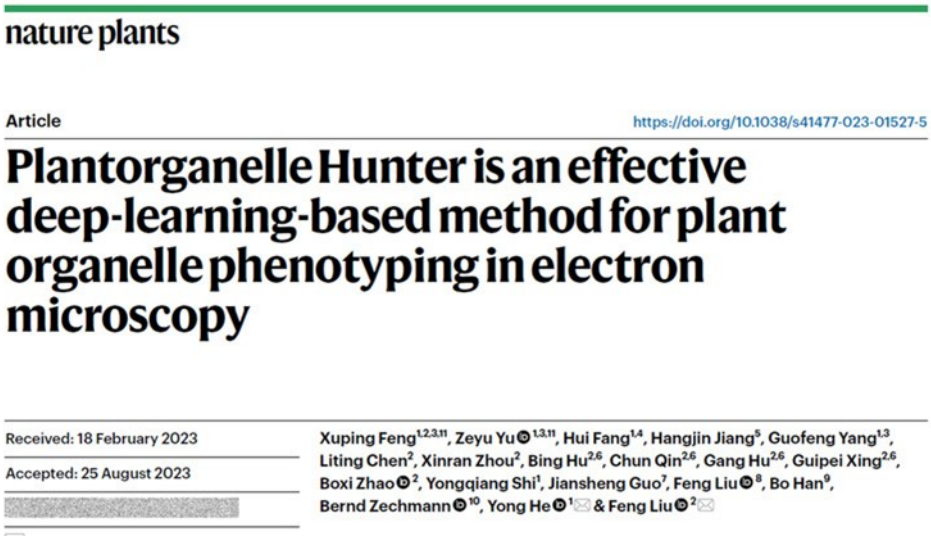
Health Science & Agriculture

Illinois State University

For More Details

Deep-Learning Breakthrough Enables Rapid 3D Reconstruction of Plant Organelles

A research team led by Prof. Yong He from the College of Biosystems Engineering and Food Science at Zhejiang University, has published a groundbreaking study in Nature Plants. The work introduces Plantorganelle Hunter, the first deep-learning pipeline capable of accurately reconstructing multiple plant organelles—nuclei, chloroplasts, vacuoles, and mitochondria, in three dimensions from electron microscopy data. Central to this advance is the OrgSegNet model, which enables precise organelle segmentation and reduces the traditionally labor-intensive 3D reconstruction process from dozens or even hundreds of hours to mere minutes. Built on TEM images from 19 plant species and over 9,000 annotated organelles, the pipeline offers robust quantitative analysis and provides new opportunities for exploring spatial cell biology in plants. All algorithms and datasets have been open-sourced to encourage community collaboration. The study represents a successful integration of agricultural engineering, plant science, and computer science, with support from the National Natural Science Foundation of China and the Zhejiang Provincial Key R&D Program.



nature plants

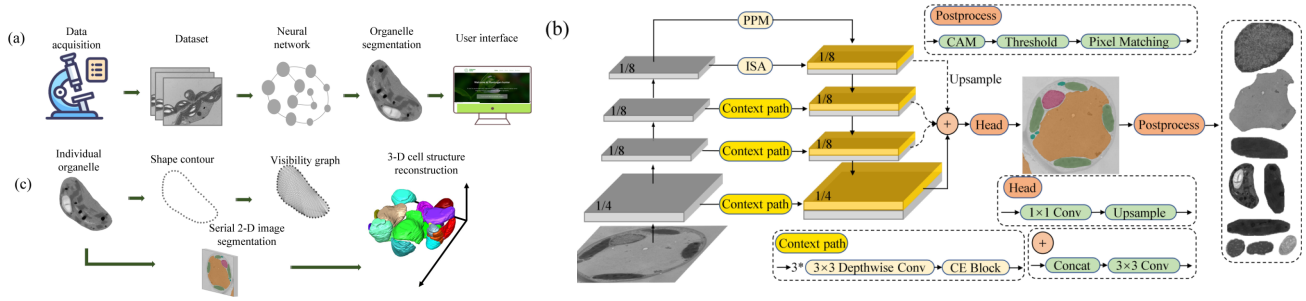
Article https://doi.org/10.1038/s41477-023-01527-5

Plantorganelle Hunter is an effective deep-learning-based method for plant organelle phenotyping in electron microscopy

Received: 18 February 2023

Accepted: 25 August 2023

Xuping Feng[1,2,3,11], Zeyu Yu[1,3,11], Hui Fang[1,4], Hangjin Jiang[5], Guofeng Yang[1,3], Liting Chen[2], Xinran Zhou[2], Bing Hu[2,6], Chun Qin[2,6], Gang Hu[2,6], Guipei Xing[2,6], Boxi Zhao[2], Yongqiang Shi[1], Jiansheng Guo[7], Feng Liu[8], Bo Han[9], Bernd Zechmann[10], Yong He[1] & Feng Liu[2]



(Framework of OrgSegNet)

Source for the original news: http://www.caefs.zju.edu.cn/2023/0926/c69097a2806836/page.htm
Link to the paper: https://doi.org/10.1038/s41477-023-01527-5

AI-Enhanced Multimodal Imaging for Intelligent Crop Inspection and Growth Modeling

On November 14, 2025, Dr. Shangpeng Sun delivered a well-attended invited talk at the College of Biosystems Engineering and Food Science, Zhejiang University.

Dr. Sun is an Assistant Professor at Department of Bioresource Engineering, McGill University. He specializes in agricultural robotics, crop phenotyping, multimodal imaging, and AI modeling. He has published extensively in journals such as Computers and Electronics in Agriculture and Transactions of the ASABE, and leads several national research projects in Canada.

During this talk, Dr. Sun presented recent progress in multimodal imaging and AI for crop phenotyping, including:

- 3D organ and root–shoot reconstruction
- Deep image modeling
- Multisource data fusion for growth modeling

Dr. Sun highlighted how integrating RGB, depth, and spectral data improves crop recognition in complex environments and showcased applications ranging from smart greenhouses to field-scale monitoring. He also discussed challenges such as lighting variability, occlusion, and model generalization across real-world farms.

Introduction to the Speaker

Dr. Shangpeng Sun is Assistant Professor in the Department of Bioresource Engineering at the Macdonald Campus of McGill University. He obtained his second Ph.D. from the University of Georgia (USA) and the first Ph.D. from Beijing Jiaotong University (China), following undergraduate and graduate studies at Xi'an University of Science and Technology (China) and Beijing Jiaotong University. He performed postdoctoral research at the University of Georgia in 2020 before joining McGill. His personal page is https://shangpenglab.github.io/#/

AI in Agriculture 2026

Mar 31–Apr 2, 2026 | StateView Hotel & Conference Center | NC State University | Raleigh, NC

Building on the momentum of past conferences hosted by Auburn Univ (2022), U of Florida (2023), Texas A&M (2024), and Mississippi State (2025), this year's event will bring together researchers, industry leaders, and students to explore how AI, data science, and engineering are transforming agricultural systems. We aim to highlight a wide spectrum of topics—from molecular and genetic research to production, processing, and supply chain analytics—spanning plant, animal, and environmental systems.

This year's theme—Advancing Artificial Intelligence and Data-Driven Innovations for Resilient and Competitive Agricultural Systems—emphasizes how integrative, AI-enabled solutions can enhance productivity, profitability, and environmental stewardship across crop, livestock, and supply-chain domains.

Conference Focus Areas

Presentations and workshops span the full spectrum of agricultural research and application:

- Plants & Crops: Precision agriculture, phenotyping, pest and disease detection, crop management, and AI-based modeling from gene to field.
- Animals & Livestock: Sensing, automation, health and welfare monitoring, and production optimization for poultry, swine, dairy, beef, and aquaculture.
- Soils, Water, Air & Environment: AI for soil health, nutrient and water management, climate adaptation, and environmental monitoring.
- Food, Postharvest & Supply Chains: Intelligent sensing and analytics for food quality, safety, processing, packaging, logistics, and traceability.
- AI Systems & Integrative Approaches: Robotics, automation, digital twins, decision-support systems, and responsible AI frameworks for multi-scale integration.
- Cross-Cutting Topics: Extension and outreach, workforce development, education, policy, and socioeconomic adoption of AI technologies.

Purpose: The conference provides a national forum for collaboration among academia, industry, and government, fostering partnerships that drive responsible and impactful AI adoption across agricultural sectors.

Organizing Committee: Hosted by North Carolina State University, the conference is coordinated by an inter-university planning committee representing leading land-grant institutions, government agencies, and industry partners. (Full committee listed on the "Committee" page.)

Who Should Attend: The event welcomes academic researchers, graduate and undergraduate students, ag-tech and analytics professionals, biotech investors, extension agents, and public-sector stakeholders interested in practical, data-driven innovations for modern agriculture.

For More Details, Please Check https://harvest.cals.ncsu.edu/2026-ai-ag-conference/

2026年第二届智慧农业和人工智能国际学术会议将于2026年5月29-31日在中国哈尔滨召开，本届会议由东北农业大学主办，云南农业大学支持。此次会议旨在为全球学者、研究人员、行业专家和从业者提供一个交流与合作的平台，深入探讨人工智能技术在智慧农业领域的应用与发展。随着全球人口的不断增长和农业生产面临的多重挑战，智慧农业的概念应运而生，通过现代科技手段提升传统农业的生产效率和可持续性已成为行业共识。

会议将涵盖多个前沿主题，包括人工智能、智能农机、精准农业、农业大数据分析、农业中的新兴技术融合、物联网在农业中的应用等。我们邀请了众多国内外知名专家作主题演讲，分享他们在智慧农业和人工智能领域的最新研究成果和实践经验。提供学者们展示其研究成果和探讨的机会，促进学术界与产业界的深度合作。

本次会议将是一个重要的学术盛会，不仅能帮助与会者开拓视野、寻找合作机会，还将推动智慧农业的发展与创新。我们期待着您的参与，共同探索如何利用人工智能技术提升农业生产效率，实现可持续发展。让我们共同致力于推动智慧农业的未来发展，为全球农业的转型与升级贡献智慧和力量。诚邀国内外高校、科研机构的专家、学者、商界人士及其他相关人士到哈尔滨线下参会！

热门征稿主题：智能感知与农业物联网技术、农业中的机器学习与数据挖掘技术、农业计算机视觉与图像智能处理、农业机器人与自动化装备、农业信息系统与智慧管理平台、大数据分析与可持续农业规划、农业中的新兴技术融合、农业智能决策与优化调度、水分等环境参数的智能监测、农业大数据挖掘与分析、病虫害预测与识别中的深度学习方法、农作物病害图像识别与分级、智能农机的路径规划与导航控制等与计算机结合稿件

会议官网：**www.icsaai.org**
会议时间：2026年5月29-31日
会议地点：中国-哈尔滨
截稿时间：2025年12月26日（会前均可投稿，如需投稿请联系会议秘书）
审核周期：3-7个工作日
联系方式：
大会秘书：董老师（推荐码：D226） 17320189207
(同微信，加好友备注“SAAI2026+姓名”）

東北農業大學 Northeast Agricultural University
（主办单位）

雲南農業大學 Yunnan Agricultural University
（支持单位）

Graduate Research Assistantship (MS/Ph.D.)

Agricultural Robotics & AI in Precision Agriculture

Job Title: Graduate Research Assistant

Department: School of Plant, Environment, and Soil Sciences

Institution: Louisiana State University

Location: Baton Rouge, Louisiana

Anticipated Start Time: Summer/Fall Semester 2026

Responsibilities

- Conduct innovative research in agricultural robotics, AI-driven decision support systems, and computer vision applications for precision agriculture.
- Design and implement autonomous systems and robotic platforms for crop monitoring and management.
- Develop and apply advanced machine learning and deep learning models to solve complex challenges in precision agriculture.
- Integrate remote sensing and sensor fusion techniques with robotic systems for real-time data acquisition and analysis.
- Publish findings in high-impact journals and present at leading conferences in robotics, AI, and agricultural technology.
- Collaborate with industry partners and actively engage in extension programs to deliver research-based solutions that support sustainable agriculture.

Qualifications

- Bachelor's or master's degree in Agricultural Engineering, Computer Engineering, Mechanical Engineering, Geography, Crop Science, or related fields with strong emphasis on robotics, artificial intelligence, and computer vision.
- Hands-on experience in robotic system design, sensor integration, and automation technologies.
- Proficiency in programming languages (e.g., Python, C++, ROS) and data analysis tools for agricultural applications.
- Knowledge of deep learning frameworks (e.g., TensorFlow, PyTorch) for image processing.
- Familiarity with remote sensing, GIS, and spatial analysis for precision agriculture.
- Strong communication skills and ability to work in multidisciplinary teams.

Application Procedure: Details on applying to graduate programs at Louisiana State University are available at https://www.lsu.edu/graduateschool/admissions/index.php. Applications are due by February 1, 2026. Applicants are encouraged to contact Dr. Congliang Zhou (congliangzhou@agcenter.lsu.edu) with a copy of your CV, research statement, unofficial transcripts, and contact information for three references.

Fully Funded MS/PhD Position

Precision Livestock Farming

Position Description

The Beef AI & Robotics Network (BARN) Lab at the University of Tennessee, Knoxville (UTK) is seeking a highly motivated MS or PhD student to join its research team. The lab focuses on advancing Precision Livestock Farming (PLF) through the integration of artificial intelligence (AI), robotics, and sensing technologies.

Research topics may include:

- Behavior and health monitoring of beef cattle using computer vision, wearable sensors, and machine learning
- Livestock body condition scoring and activity tracking using 3D imaging, hyperspectral imaging, and remote sensing
- Development of IoT-enabled systems, mobile platforms, and robotic solutions for smart ranch and pasture management
- Digital twin development and real-time decision-support systems for sustainable beef production

Preferred Qualifications

Applicants should have a Bachelor's or Master's degree in a relevant field such as animal science, agricultural/biosystems engineering, electrical/computer engineering, computer science, or data science.

Ideal candidates will have experience or strong interest in one or more of the following areas: machine learning, computer vision, embedded systems, IoT technologies, robotics, drone systems, hyperspectral imaging, or farm animal behavior and welfare monitoring. Proficiency in programming languages such as Python, MATLAB, or C++ is highly desirable. Strong written and oral communication skills and a passion for interdisciplinary research at the intersection of animal science and emerging technologies are essential.

About UTK and the BARN LAB

UTK is the state's flagship university, ranked #52 among public and #109 nationally (U.S. News & World Report, 2025). Located near the Great Smoky Mountains, UTK offers an affordable, scenic, and vibrant living environment with easy access to Nashville and Atlanta.

Beef cattle are consistently among the top three agricultural commodities in Tennessee, which makes UTK a strong base for livestock research. UTK has a strong interdisciplinary team working in PLF, fostering collaboration across animal science, engineering, and data science. The BARN Lab, led by Dr. Yanqiu Yang, develops AI-, robotics-, and sensor-based tools for PLF and collaborates with Oak Ridge National Laboratory (ORNL) and industry partners.

How to Apply

Interested candidates should contact Dr. Yanqiu Yang at yyang118@utk.edu with the subject line: "MS or PhD Position_YourFirstName_YourLastName." Please include the following materials in your email: (1) a one- to two-page statement of research interests and career goals, (2) a CV or resume, (3) unofficial transcripts, (4) IELTS or TOEFL test scores for international applicants, and (5) contact information for 2–3 references.

Cornell CALS College of Agriculture and Life Sciences

Fully Funded Ph.D. Opportunity in Sensing & AI in Food and Agricultural Systems

Position Description

Dr. Chang Chen's lab in the Department of Food Science at Cornell University is seeking a highly motivated candidate to join exciting collaborative research projects as a Ph.D. student in Food Science at Cornell AgriTech (Geneva, NY) to start in Fall 2026. Candidates with research interests and training in non-destructive sensing, agricultural and food intelligence, precision agriculture and food processing are encouraged to apply. The successful candidate will work within a collaborative interdisciplinary team with expertise in food science, agricultural engineering, horticultural science and plant pathology. The candidate is expected to work on research projects with focuses on exploration, development, and application of next generation sensing systems and AI in food quality and safety control, food process monitoring, and precision agriculture for improving the sustainability and resilience of our food and ag systems.

Qualifications

1. B.S./M.S. in electrical and computer engineering, biological and agricultural engineering, food science (with engineering focus), or a closely related field.
2. Strong academic record: GPA > 3.7 for undergraduate and graduate studies.
3. Language proficiency: for international applicants: TOEFL test score >= 100 or IELTS test score >= 7.5; GRE (preferred) >= 325.
4. Demonstrated research experience in relevant areas with publication records (first author publications preferred) in peer reviewed journals, and oral communication skills (poster or oral presentations in conferences).
5. Skills: Programming and coding (e.g., Python, R, and MATLAB) and/or robotics, mechanical design and development; Machine learning and AI, spectrometry analysis
6. Ability to conduct independent and collaborative research in a multidisciplinary environment.

To Apply

Please apply via CollegeNet ApplyWeb online application system at Cornell University Graduate School (https://gradschool.cornell.edu/admissions/application-steps/apply-now/). Qualified candidates should submit the application form, a personal statement, an academic statement of purpose, curriculum vitae (including a list of publications) related to this position, academic transcripts, English proficiency test results (if apply), and three recommendation letters. Please also email Dr. Chang Chen (cc2774@cornell.edu) for any questions related to the application. Deadline for application submission is December 1st, 2025.

More information about the PI (Dr. Chang Chen) can be found at:
https://cals.cornell.edu/people/chang-chen-0
More information about the Food Science Department and Food Science Graduate Program at Cornell: https://cals.cornell.edu/food-science
https://cals.cornell.edu/food-science/degrees-programs/graduate
More information about our facilities and resources at Cornell AgriTech:
https://cals.cornell.edu/cornell-agritech

Cornell University is an innovative Ivy League and Land-grant university and a great place to work. Our community of scholars, students, and staff impart an uncommon sense of larger purpose and contribute creative ideas to further the university's mission of teaching, discovery, and engagement.

Cornell University

Fully Funded Ph.D. Opportunities in Ag Robotics & AI

Position Description

The Automation and Robotics Lab at Cornell University is seeking multiple highly motivated Ph.D. students to join our team. Prospective doctoral students will conduct research in robotics, computer vision, and artificial intelligence for agricultural applications under the guidance of Dr. Lirong Xiang. The positions include stipends, tuition coverage, health insurance, and travel support for conferences. The minimum stipend is $47,548 per year, with eligibility for annual increases based on strong academic performance and research achievements. The anticipated start date is Fall 2026.

Qualifications

- B.S. /M.S. in Agricultural Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering, or other closely related disciplines.
- Background or strong interest in one or more of the following:
  - Robotics and automation, robotic system design and control
  - Artificial intelligence, machine learning, deep learning, reinforcement learning
  - Computer vision and multi-modal perception
  - Mechanical design or electrical design
- Strong programming (e.g., C++, ROS, Python), written, and oral communication skills.

How To Apply

If you are interested, please email your CV, transcripts, representative work to Dr. Lirong Xiang at lxiang@cornell.edu with the subject: Your Name_ PhD Application. Review of applications will begin immediately and continue until the positions are filled. Selected applicants will be invited for virtual interviews. The final decision will be made by the Cornell Graduate School. The application deadline is December 1. Additional details about the application process can be found at Cornell Graduate Admissions.

About the PI

Dr. Lirong Xiang is an Assistant Professor in the Department of Biological and Environmental Engineering at Cornell University. Her lab is well-funded by federal agencies and industry. She received her B.S. from Zhejiang University and her Ph.D. from Iowa State University. Prior to joining Cornell, she was an Assistant Professor at NC State. Dr. Xiang has published over 30 papers in leading journals and conferences and is the recipient of several prestigious honors, including the FFAR New Innovator Award (awarded to no more than 10 scientists nationwide each year), Cisco Faculty Research Award, NC State Goodnight Early Career Award, and NC State Research Excellence Award. Her students have earned top honors, including 1st Place in the ASABE Robotics Competition, FFAR Fellowships, NC State Scholarly Achievement Award, and Outstanding Teaching Award. Dr. Xiang's long-term vision is to develop intelligent robotic and AI systems that advance the future of agriculture.

USDA CISCO NSF FOUNDATION FOR FOOD & AGRICULTURE RESEARCH

Cornell is an equal opportunity employer. For more information visit hr.cornell.edu/eeeo.

MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF AGRICULTURAL AND BIOLOGICAL ENGINEERING

PhD Position Available in Food Engineering

Position Description

Mississippi State University is inviting applications for a Ph.D. level Graduate Research Assistantship (GRA) in the Department of Agricultural and Biological Engineering (https://www.abe.msstate.edu/). The GRA is a 4-year position funded with stipends, tuition and insurance, and the anticipated start date for the position is Spring 2026 (negotiable). The successful candidate will work with Dr. Wenbo Liu, on original research broadly within the field of aquatic food processing yield, food product diversity, food safety and quality and to provide solutions to engineering problems encountered in the aquatic food industries. Potential research topics include but are not limited to water-jet cutting design for food processing machinery, and food production automation design. The successive candidate will be organized, self motivated and has a strong desire to learn new skills and collaborate in a multidisciplinary environment.

Qualifications

- Students should earn a B.S. or M.S. degree in Industrial Engineering, Electrical Engineering, Computer Science, or other fields with relevant research experience, with a 3.0 or higher GPA
- Students should have demonstrated excellence in English writing and communication skills
- Students with non-English credentials must obtain a TOEFL score of 79 iBT or IELTS score of 6.5 or higher (GRE may be waived)
- Students proficient in machine design, and programming (e.g., MATLAB, Python, C++/C, Qt, etc.) are highly encouraged to apply

How To Apply

Please contact Dr. Wenbo Liu (email: wl579@msstate.edu), if you are interested in or have any questions regarding this position. A full application for an official offer to be made should include a cover letter describing the applicant's research interest, a CV, transcripts, test score(s), writing examples, and a list of three references including names, email, address and telephone number. Review of applications will begin immediately and continue until the position is filled. Video conference interviews will be requested for potential candidates. Successful applicants will need to apply to the Graduate School of Mississippi State University. The application deadline for 2026 spring enrollment is October 1 (international) or November 1 (domestic).

Please visit the website https://www.grad.msstate.edu/students/admissions for application details.

Mississippi State University (www.msstate.edu) is a public, Land-Grant, Sea-Grant research university founded in 1878, adjacent to Starkville, Mississippi. At Mississippi State University, we believe in getting personal. Our university provides the academic, leadership, and social opportunities to help each person excel. Your success—in whatever field of study or career goal—is our success. We take that mission seriously. Here, faculty, staff and students share a common goal: to make the Mississippi State University experience a lifetime opportunity.

Position Description

The University of Florida invites applications for a fully funded 5-year Ph.D. position in Agricultural Autonomy (AA) under the supervision of Prof. Won Suk Lee. This project aims to advance autonomous systems for modern agriculture by integrating artificial intelligence, robotics, and agricultural engineering. The selected candidate will develop perception and decision-making algorithms that enable agricultural robots to operate safely and efficiently in complex, unstructured environments.

Research Topics

- Autonomous navigation and perception for agricultural machinery
- Obstacle detection and avoidance (including negative obstacles such as ditches)
- Multi-modal data fusion and AI model development
- Open-source agricultural datasets for benchmarking and algorithm training

Funding and Support

- Full tuition waiver, competitive stipend, and health insurance (5 years guaranteed)
- Access to advanced robotics, sensors, and field testing facilities
- Travel support for conferences and professional development

Qualifications

- B.S. or M.S. degree in Agricultural, Mechanical, Electrical, or Computer Engineering, or related fields
- Strong background or interest in robotics, AI, machine learning, computer vision, or automation
- Proficiency in programming (Python, C++, etc.)
- Excellent written and oral communication skills
- TOEFL/IELTS scores meeting UF Graduate School requirements (for international applicants)

Start Date: Spring 2026

Application Procedure

Please email the following materials to Prof. Won Suk Lee (wslee@ufl.edu) with the subject line: PhD Application – Agricultural Autonomy:
— Curriculum Vitae (CV)
— Research statement (1–2 pages)
— Academic transcripts

UM | Faculty of Agricultural and Food Sciences

Position Description

Dr. Jiating Li's lab at the Department of Biosystems Engineering, University of Manitoba is actively recruiting highly motivated graduate students (MSc or PhD level). Successful candidates will receive full stipend support. My lab specializes in digital technologies for agri-food systems, with a focus on proximal and remote sensing, multimodal (optical) sensors, robotics and automation systems, Internet-of-Things, and the integration of AI and process-based models (knowledge-guided machine learning).

Minimal Qualifications

- Qualified applicants must have earned a bachelor's (for MSc) or master's (for PhD) degree in Agricultural and Biological Engineering, Biosystems Engineering, Computers and Electrical Engineering, Computer Science, Mechanical Engineering, or other related fields.
- Meet the minimum admission and English language proficiency requirements of the Faculty of Graduate Studies.

Preferred Qualifications

- Programing skills in Python, R, Matlab, C++, etc.
- Machine learning and deep learning.
- Process-based modeling (e.g., radiative transfer model, crop growth model, climate model).
- Remote sensing (e.g., UAV, satellite, optical sensing, 2D/3D image processing).
- Mechatronics and robotics (e.g., mechanical design, Robot Operating System).
- Records of previous scientific publications.

About the University

As a member of the U15 Group of Canadian Research Universities, the University of Manitoba is one of Canada's leading research-intensive institutions. With more than 145 years of history, it is the oldest university in Western Canada. The university has strong research capacity and international recognition in agriculture, food, engineering, health, and many other fields. Specifically, our faculty (Faculty of Agriculture and Food Sciences) has been ranked 2nd in Canada by Shanghai Ranking's 2024 Global Ranking of Academic Subjects. Learn more at https://umanitoba.ca/about-um/facts-figures

Application Process

If you are interested in joining us, please email Dr. Li (jiating.li@umanitoba.ca) with a statement of intent (2-page maximum), Curriculum Vitae, copies of all post-secondary transcripts, and a writing sample (if available). Applications will be reviewed immediately. Please understand that, due to the large volume of emails received, I may not be able to reply to all email inquiries. I accept applications on a rolling basis, but note that each term has its own online application deadline, please check the details here.

Scan the code to learn more about Dr. Jiating Li:

DEPARTMENT OF BIOLOGICAL SYSTEMS ENGINEERING

University of Nebraska Lincoln

Graduate Research Assistant (PhD) Announcement

Position Description

The Irrigation & Digital Agriculture Laboratory at the Panhandle Research, Extension and Education Center (PREEC), Department of Biological Systems Engineering (BSE), University of Nebraska-Lincoln (UNL) is seeking a highly motivated PhD student to join our research group in summer/fall 2025. The successful candidate will collaborate with a multi-institutional and interdisciplinary team focusing on irrigation management and weather intelligence, while contributing to the development of educational programs for two year colleges, high schools, agricultural producers, and other stakeholders. This position is based at PREEC in Scottsbluff, NE, with periodic time required on the main campus for coursework completion.

Required Qualifications

- M.S. degree in Agricultural and Biological Systems Engineering, Agronomy, Environmental Engineering, Electrical Engineering, or Computer Science; or a bachelor's degree in aforementioned fields with significant research accomplishments (including research products, journal publications, etc.)
- Strong written and verbal communication skills
- Meeting GPA and English proficiency requirements set by UNL Graduate School
- Ability to obtain a valid driver's license within 6 months of hiring

Preferred Qualifications

- Demonstrated publication record in peer-reviewed journals
- Evidence of independence, innovation, and strong problem-solving capabilities
- Advanced programming and instrumentation skills, with demonstrated contributions to coding or instrumentation projects
- Research experience in irrigation engineering or management

What We Offer

- Competitive annual stipend of $32,000 with full tuition remission
- Comprehensive student health insurance coverage
- Support for attending national and international conferences
- Extensive networking opportunities with academia, stakeholder groups (producers, regulatory agencies), industry partners, and educational institutions
- Flexibility in research direction with open-ended topic selection

About Our Program

The Irrigation and Digital Agriculture Laboratory specializes in developing cutting-edge technology, tools, and management strategies for optimal water resource utilization in crop production. Our research encompasses the development of advanced sensors and methodologies for data collection and analysis from commercial production fields. We focus on reducing crop production risks from various biotic and abiotic stresses through enhanced real time monitoring capabilities. Our research emphasizes understanding the relationships between farming practices, processes, and their impacts on yield and environmental outcomes. The ultimate goal is to create effective, user-friendly, and scalable tools that enable producers and industries to improve resource efficiency, reduce environmental impact, and enhance economic returns. The laboratory has secured multiple grants from industry partners, state

DEPARTMENT OF BIOLOGICAL SYSTEMS ENGINEERING

University of Nebraska Lincoln

(Continued)

agencies, and federal institutions (USDA-NIFA, NSF). Notable projects include:

- Web-based irrigation management dashboard: https://phrec-irrigation.com/#/
- Self-powering variable rate valve development with KZValve, LLC: https://www.farmprogress.com/farming-equipment/new-valve-for-pivot-irrigation-has self-powering-capabilities
- USDA-NIFA Data Science yield prediction project with Georgia Institute of Technology: https://portal.nifa.usda.gov/web/crisprojectpages/1031579-dsfas-deepyield--integrating multi-scale-sensing-time-series-imaging-and-management-data-with-artificial intelligence-for-crop-yield-prediction.html
- NSF-EPSCoR project: https://now.uiowa.edu/news/2024/07/ui-spearheads-6m multistate-nsf-grant-help-midwest-agricultural-communities-better

How to Apply

Interested candidates should submit their personal statement, curriculum vitae and academic transcripts to Dr. Xin Qiao (xin.qiao@unl.edu). For detailed information about the BSE graduate program application process at UNL, please visit: https://engineering.unl.edu/bse/graduate-programs-faq/. The University of Nebraska-Lincoln is an equal opportunity employer committed to creating a diverse and inclusive environment.

TEXAS A&M AGRILIFE RESEARCH

Postdoctoral Research Associate

Job Location: Temple, TX

Proposed Minimum Salary: $4,416.67 monthly

Position Description
The successful candidate will contribute to developing and evaluating terrestrial and aquatic nitrogen dynamics and emission modeling, with applications in the multi-scale APEX/SWAT agroecosystem models for conservation assessment.

Responsibilities
- Conduct a comprehensive search of scientific research papers and findings on aquatic N2O emission monitoring and modeling across various freshwater systems.
- Compile and critically review the current state of knowledge on N2O emissions and modeling in freshwater ecosystems.
- Acquire, organize, and analyze N2O emissions data from freshwater systems, integrating it with environmental and other measurement datasets.
- Develop and implement N2O emission processes and parameterization within the APEX model.
- Assess and enhance the performance of the improved model across various freshwater agroecosystem landscapes.
- Integrate and evaluate the enhanced processes within the SWAT model framework.
- Document the model development process and publish findings in peer-reviewed journals.
- Performs other duties assigned.

Required Education and Experience
Ph.D. in Agricultural Engineering, Civil and Environmental Engineering, Soil and Crop Sciences, Earth and Environmental Sciences, or related fields, with a focus on terrestrial and freshwater ecosystem modeling and water quality assessment at the watershed scale.

Required Knowledge, Skills and Abilities
- Demonstrated publication record in watershed modeling and analysis.
- Proficiency in scientific programming.
- Experience in grant proposal writing within a collaborative environment.

Preferred Knowledge, Skills and Abilities
- Proficient understanding of agroecosystems, watershed hydrology, soil-plant-water relations, and aquatic nitrogen dynamics.
- Solid experience with process-based models, including APEX, SWAT, EPIC, DayCent, or DNDC.
- Proficiency in computer programming, including scripting in Python, Fortran, or other computing tools for data processing and modeling.
- Strong interdisciplinary teamwork skills.
- Ability to work independently or as part of a team under supervision.
- Excellent communication, interpersonal skills, professionalism, and competency.
- Capacity to multi-task and work cooperatively with others.

For more details, please check https://tamus.wd1.myworkdayjobs.com/AgriLife_Research_External/job/Temple-TX/Postdoctoral-Research-Associate_R-084515

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Postdoctoral Research Scientist

Job Location: Morningside Heights, NY

Salary Range: $74,000 - $74,000

Position Description
The Columbia Climate School, Center for Climate Systems Research (CCSR) is seeking a Postdoctoral Research Scientist (PDRS) to work in the area of global crop modeling and climate change assessment at its Morningside campus in New York City, co-located at the NASA Goddard Institute for Space Studies.

The PDRS will be part of an international team within the Agricultural Model Intercomparison and Improvement Project (AgMIP) helping to advance our understanding of historical and future crop breeding efforts in view of expected climate change impacts. The project is in collaboration with Corteva Agriscience and while the candidate will be located at Columbia University in New York City, they are expected to participate in research visits to the Corteva Headquarters in Indianapolis, IN.

The successful candidate will primarily be working with the global gridded crop model pDSSAT to calibrate and evaluate various historical, current, and hypothetical corn hybrid lines under different climate change scenarios. We will leverage Corteva's Era trial dataset to parameterize crop cultivars, but also to infer future breeding requirements needed to offset expected adverse climate impacts. We will test the modeling framework in a reginal setup and then expand to other maize growing regions globally to develop a novel picture of potentially attainable maize productivity under climate change worldwide.

Insights from these modeling exercises will be of significant interest for a broad audience and we will pursue publication of the results in high-ranking peer reviewed journals. The work will be integrated into the AgMIP Global Gridded Crop Modeling Initiative (GGCMI), a highly collaborative and active research community with international visibility.

We are seeking a skilled crop modeler with agronomic expertise and experience working with the DSSAT crop model, ideally at larger spatial scales. Good coding skills are a requirement (R or Python, Fortran, and shell script).

Qualifications
- A PhD in required in agronomy, earth-system sciences, geography, physics, computer science, or related field.
- Experience in crop modeling, large-scale crop impact analyses.
- Strong coding skills (R, Python, Fortran, shell script) and expertise in large data processing is required.

This position is appointed annually, contingent on performance and can be extended pending further funding. Dr. Jonas Jägermeyr will be the Columbia University supervisor.

The search will remain open for at least 30 days after the ad appears and will remain open until the position is filled.

Columbia University benefits are offered with this Officer of Research appointment.

For more details, please check https://academic.careers.columbia.edu/#!/168193

Martin-Gatton College of Agriculture, Food and Environment

Two Postdoctoral Researcher Positions in Cropping System Modeling

Job Location: Lexington, KY

Position Description

Drs. Hanna Poffenbarger and Montse Salmeron in the Department of Plant and Soil Sciences at the University of Kentucky seek two postdoctoral scientists to begin in fall of 2025. The postdoctoral scholars will: (1) investigate factors affecting cover crop mixture performance and their impact on subsequent crops using a new intercrop module in DSSAT, (2) evaluate and improve DSSAT-CROPGRO model performance for simulation of crop nitrogen dynamics, biological nitrogen fixation, and seed composition. The postdoctoral scholars will have the opportunity to work with robust and readily available experimental datasets as part of USDA and USB-funded projects that offer ample publication opportunities, as well as multidisciplinary collaborations that include crop model developers at University of Florida. Professional development activities, including conferences, workshops, and other training opportunities are fully funded.

The ideal candidates will have a Ph.D. in agronomy, crop science, ecology, or a related field, and experience working with crop models. Strong organizational, quantitative, and communication skills are required.

The application process will remain open until a suitable candidate is identified. Health insurance is provided and salary is competitive and negotiable. Candidates interested in this exciting opportunity should email their cover letter, CV, and transcripts (unofficial is acceptable) to the two contacts below:

Dr. Hanna Poffenbarger

Associate Professor of Soil Nutrient Management

Department of Plant and Soil Sciences

University of Kentucky

Email: hanna.poffenbarger@uky.edu

Dr. Montse Salmeron

Associate Professor of Grain Crops Ecophysiology and Modeling

Department of Plant and Soil Sciences

University of Kentucky

Email: msalmeron@uky.edu

Applications and inquiries from women and minorities are particularly encouraged. The University of Kentucky is an Equal Opportunity Employer. Applications will be accepted without regard to race, color, age, sex, religion, disability, or national origin.

ETH zürich

Postdoctoral Position/Data Scientist in Animal Nutrition

Project Background: The Animal Nutrition Group, led by Prof. Mutian Niu at ETH Zurich's Institute of Animal Sciences, focuses on advancing sustainable livestock production through innovative nutritional strategies. Our research integrates hypothesis-driven experiments with data-driven approaches to enhance nutrient utilization efficiency in ruminants, particularly dairy cattle. Key areas include feed and feeding, nutritional physiology, precision livestock farming, and multi-omics approaches toward sustainable dairy farming, leveraging advanced statistical modeling, machine learning, and AI to uncover biological insights and optimize production efficiency, animal health and environmental impact. We are seeking a talented researcher to join our dynamic, interdisciplinary team and drive forward our computational efforts in these domains.

Job Description: You will identify critical knowledge gaps, develop and apply machine learning models, statistical analyses, and AI-driven tools to analyze large-scale datasets of animals, including metabolomics, microbiomics, behavior, and production performance data.

Responsibilities include:

- Designing and implementing statistical and machine learning models for nutrient metabolism, rumen function, physiological responses, and feed efficiency.
- Integrating multi-omics data with environmental and production metrics to support precision farm management strategies.
- Leveraging emerging methodologies (e.g., causal inference) to uncover complex biological functions.
- Collaborating with experimental biologists to validate models and translate insights into practical recommendations for sustainable farming.
- Contributing to grant proposals, publications in high-impact journals, and open-source tool development.
- For PhD holders, opportunities for independent research projects and mentoring junior team members; for experienced data scientists, focus on applied analytics within ongoing group initiatives.

This position offers flexibility to align with your expertise, bridging computational innovation with biological applications in animal nutrition.

Qualifications:

- A PhD in data science, computer science, applied mathematics, bioinformatics, statistics, animal science, or a related field is preferred.
- Candidates with a Master's degree and 3+ years of relevant professional experience will also be considered.
- Strong expertise in statistical modeling, machine learning (e.g., supervised/unsupervised learning, deep learning), and AI frameworks (e.g., Python, R, TensorFlow, PyTorch).
- Experience with biological or animal science data (e.g., omics, time-series production data) is highly desirable; familiarity with ruminant nutrition, sustainability modeling, or precision agriculture is a plus.
- Proficiency in data handling, visualization, and high-performance computing (e.g., Python/R for analysis, cloud computing).
- Excellent communication skills and a collaborative mindset, with a track record of interdisciplinary work.
- Fluency in English (written and spoken).

For More Details, Please Check https://jobs.ethz.ch/job/view/JOPG_ethz_0KL1ZfGS0nI2A1mHiY

Kansas State University

Assistant/Associate/Full Professor

About This Role: The Carl and Melinda Helwig Department of Biological and Agricultural Engineering at Kansas State University seeks applicants with expertise in water quality and contaminant mitigation for a tenure-track faculty position with the rank of assistant professor (preferred), associate professor or professor (considered in exceptional cases). Areas of interest include detecting and mitigating emerging contaminants (e.g., PFAS, pharmaceuticals and personal care products (PPCPs), pesticides) in surface and groundwater, with interconnections to sustainable wastewater treatment for resource recovery and nutrient removal to enable circular economies in municipal and agricultural contexts.

This position is one of several water-related thematic team hires that will join K-State across multiple departments. Each of these positions will hold a scholarly connection to the Kansas Water Institute and will join an interdisciplinary cohort of water-related faculty with the opportunity to collaborate on research, teaching, and engagement. The Kansas Water Institute develops and supports interdisciplinary research, teaching, and outreach on high-priority water resources problems and objectives identified through the state water plan. The institute also facilitates effective communication among water resource professionals and works to share and apply research results.

Responsibilities: You will identify critical knowledge gaps, develop and apply machine learning models, statistical analyses, and AI-driven tools to analyze large-scale datasets of animals, including metabolomics, microbiomics, behavior, and production performance data.

Responsibilities include:

- Develop and teach undergraduate and graduate courses in environmental engineering, water quality, and/or wastewater treatment.
- Establish a nationally recognized, externally funded research program in:
  - Detection and mitigation of traditional (e.g., nitrate and other nutrients, uranium) and emerging contaminants (PFAS, PPCPs, pesticides)
  - Sustainable wastewater treatment for nutrient recovery and reuse
  - Circular economy strategies for water and wastewater systems, and/or
  - Interfaces with agriculture and municipal systems for water sustainability
- Collaborate across K-State and with the Kansas Water Institute.
- Mentor undergraduate and graduate students.
- Contribute to professional societies, outreach, and university service.

Minimum Qualifications:

- Ph.D. in Agricultural, Biological, Civil, or Environmental Engineering, or a closely related discipline by the time of appointment.
- Demonstrated potential for excellence in teaching at the undergraduate and graduate levels.
- Evidence of scholarly achievement and potential to secure external research funding.
- Strong communication and interpersonal skills.

The degree requirement is necessary for accreditation purposes and to ensure candidates possess the specialized knowledge, skills, and abilities that can only be attained through a formal educational program at this level.

For More Details, Please Check https://careers.k-state.edu/jobs/assistant-associate-full-professor-manhattan-kansas-united-states-f7f74dcc-0b4c-4547-975d-7637abff8d5b

NC STATE UNIVERSITY

Assistant Professor - Robotics & Sensors

About This Role: The Department of Biological and Agricultural Engineering (BAE) in the College of Agriculture and Life Sciences (CALS) at North Carolina State University invites applications for a tenure-track Assistant Professor position in robotics and sensors, with complementary expertise in artificial intelligence (AI) and data analytics applied to agricultural and biological engineering challenges.

The successful candidate will develop a nationally recognized research, teaching, and extension program that advances intelligent sensing, automation, and data-driven decision support for agriculture and food systems relevant to North Carolina and beyond. Expertise in robotics, particularly in developing highly reliable field platforms, is desirable. Potential research directions include: field-deployable sensors and biosensors for monitoring animal and plant health; robotic and cyber-physical systems for controlled environment agriculture and automation; precision livestock farming and AI-enabled analytics for proactive decision-making; and integrated sensing and control approaches that maximize farmer profitability (e.g., crop yield, quality, etc.) while minimizing farmer costs (e.g., water, nutrients, labor, etc.). Over the next decade, agricultural robotics and sensing will move beyond proof-of-concept toward systems that transform how food is produced under increasingly variable weather, labor availability, and resource constraints. This position will lead innovation in scalable, field-ready platforms that integrate robotics, sensing, and AI to deliver resilient, data-secure, and farmer-friendly technologies. The successful candidate will help shape the future of agriculture, making it more adaptive, affordable, and sustainable for varied operations from small family farms to large-scale enterprises.

NC State provides exceptional opportunities for cross-disciplinary collaboration. The BAE Department, ranked 4th nationally among graduate programs, boasts nationally recognized programs in digital agriculture, robotics, AI, aquacultural and environmental systems, big data analytics, and sustainable waste management. The position will connect with university-wide initiatives including the Plant Sciences Initiative (PSI), the emerging Food Animal Initiative (FAI), and the Genome Editing Center for Sustainable Agriculture (GEC), as well as statewide infrastructure such as 18 agricultural research stations. Commodity groups across North Carolina and companies in the Research Triangle Park (RTP) provide strong industry engagement and funding opportunities to support applied innovation and extension programming.

The successful candidate will teach an upper-level undergraduate and graduate course on sensors and controls and may develop additional courses in robotics, circuits and electronics, or data-driven decision systems. They will also have the opportunity to mentor students in cross-disciplinary teams and advise the department's robotics team. Candidates should demonstrate the ability to collaborate across disciplines, attract extramural funding, and contribute to NC State's land-grant mission of research, teaching, and extension.

Qualifications:

- Ph.D. in Biological and Agricultural Engineering or an equivalent engineering discipline.
- Ability to demonstrate the potential to build a strong research, extension, and teaching program.
- Must demonstrate competencies in oral and written communication as well as interpersonal skills.
- Current registration and/or qualification for licensure as a professional engineer is highly desired.
- Valid NC driver's license or the ability to obtain one within 60 days of the start date.

For More Details, Please Check https://jobs.ncsu.edu/postings/224848

UNIVERSITY OF GEORGIA
College of Agricultural & Environmental Sciences

Assistant or Associate Research Scientist
Circular Bioeconomy Systems

Description: The College of Agricultural and Environmental Sciences (CAES) at the University of Georgia seeks to recruit an Assistant or Associate Research Scientist to work on the Circular Bioeconomy Systems (CBS) initiative.

This is a non-tenured track position at the rank of Assistant or Associate Research Scientist with 95% research and 5% service responsibility. The incumbent is expected to develop biophysical models and work with multidisciplinary teams, and coordinate and lead in building holistic, integrated biosystems, ecosystems, and socio-economic-systems models for identifying:

a) grand challenges in advancing sustainable circular bioeconomy systems,
b) critical knowledge, techniques, and skills needed for addressing the challenges,
c) priority actions for meeting short and long-term CBS goals, and
d) methods to prototype and extend innovation for adoption by users.

The incumbent should be knowledgeable of the systems that produce biomass on land, in water and controlled environmental systems, and scientific and technical processes that use biomass as feedstock for synthesizing materials, chemicals and products for human needs. The chosen candidate will be expected to show evidence of expertise in biophysical modeling, life cycle analysis, big data, building digital twins, and latest modeling and AI techniques. The person will coordinate and draft proposals for external funding to support the CBS initiative. The person should possess excellent interpersonal skills to aid collaboration and build consensus. Although this position is predominantly a research appointment, the person will interact with undergraduate/graduate students and stakeholders and contribute to the teaching and outreach mission of the University.

The position will be housed in the UGA CAES in Athens, GA; however, the incumbent will be expected to work closely with faculty in the multidisciplinary teams from Colleges/Schools of Engineering, Forestry and Natural Resources, Arts and Sciences, Family and Consumer Sciences, and others. The candidate is expected to maintain an internationally renowned research program that produces and publishes work recognized and used by researchers and stakeholders around the world. The incumbent will report to the office of the CAES Associate Dean of Research.

Minimum Qualifications: A Ph.D. in biochemical/chemical/agricultural/systems engineering, or agricultural science, or qualitative biology or equivalent with strong background and proven experience in modeling biophysical systems is required. Candidates with postdoctoral training and a strong publication record will be preferred. Internship/hands-on experiences in biosystems industries and proficiency in preparing interdisciplinary grant proposals for external funding will be favored. The successful candidate will have excellent skills in written and oral communication and traits required to successfully collaborate with multidisciplinary teams.

Application Materials:

(1) a letter of application including a description of academic qualifications and experience;
(2) curriculum vitae;
(3) sample publications;
(4) statement of research philosophy/goals; and
(5) a list of three professional references.

For More Details, Please Check https://www.ugajobsearch.com/postings/443028

The 2025-2026 AOC IMPACT Editorial Board

Call for
News & Activity Reports

The 2025-2026 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!

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