



## Lilong Chai

**Lilong Chai** is the recipient of the 2021 Sunkist Young Designer award for his work developing and applying innovative systems and processes to improve indoor air quality of cage-free laying-hen production systems.

Chai is an assistant professor and engineering specialist in the department of poultry science, college of agricultural and environmental sciences at the University of Georgia (UGA) in Athens. There, he conducts research and extension work in animal environmental engineering and precision livestock farming.

Chai has made significant improvements to air quality and animal welfare in US commercial laying hen and broiler housing. Chai is among the first to develop and refine an engineering dust suppression method in commercial cage-free houses to improve air quality and health and welfare of laying hens and their caretakers. He was instrumental in evaluating poultry stress relief with thermal imaging methods on the commercial egg farm. He co-designed, applied, and evaluated an electrostatic air filtration system for prevention of airborne dust and virus transmission from entering the poultry houses on a commercial poultry farm. In addition, he developed a deep learning-based method for monitoring broiler floor distribution.

Prior to joining the faculty of UGA, Chai was a postdoc research associate in the department of agricultural and biosystems engineering at Iowa

State University (ISU). At ISU, Chai led the field studies on commercial farms for two USDA-NIFA funded projects, aimed to improve indoor air quality of cage-free egg production facilities and exploring practical means to prevent and control airborne infectious poultry diseases.

Chai is author or coauthor of more than 100 peer-refereed journal articles, conference proceeding papers, and other publications. Chai has received a number of awards for his work, including the 2020 and 2019 ASABE Outstanding Reviewer award, the 2018 Outstanding Service award from the Association of Overseas Chinese Agricultural, Biological, and Food Engineers, and he placed the second in the 2020 UGA Extension Conference Presentation Competition.

An 8-year member of ASABE, Chai has made significant contributions to ASABE through his work as reviewer and Associate Editor of ASABE journals, including *Transactions of the ASABE* and *Applied Engineering in Agriculture*. Chai has been a leader in the ASABE Plant, Animal, and Facility Systems Environmental Air Quality committee and an ASABE Annual International Meeting session moderator. Chai is currently serving as the Coordinator of the Georgia Layer Conference and the Georgia Precision Poultry Farming Conference, two UGA annual extension conferences for the poultry industry.