Junxiao Zhang

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Department of Biological Systems Engineering, University of Nebraska-Lincoln

EDUCATION:

PhD. Biological/Biological Systems Engineering   **Expected May 2027**

University of Nebraska-Lincoln   *Lincoln, Nebraska*

Advisor: Dr. Yufeng Ge

M.S. Agricultural & Biological Systems Engineering   **May 2023**

University of Nebraska-Lincoln   *Lincoln, Nebraska*

Advisor: Dr. Yufeng Ge

B.S. Agricultural Engineering   **May 2021**

The Ohio State University   *Columbus, Ohio*

RESEARCH EXPERIENCES:

Graduate Research Assistant   **June 2021 ~ Present**

University of Nebraska-Lincoln, Department of Biological System Engineering

- Conducted research in high-throughput plant phenotyping, focusing on innovative imaging techniques and data analysis
- Conducted experiments on stomatal conductance estimation
- Developed data pipelines for large-scale phenotypic analysis

TEACHING EXPERIENCES:

Co-Instructor   **Autumn 2024**

University of Nebraska-Lincoln, BSEN 460 Instrumentation & Controls

- Delivered lectures and lab sessions, held office hours, and prepared lab setups.
- Use Project-based learning to help students learn knowledge with real world challenges.

Teaching Assistant   **Spring 2024**

University of Nebraska-Lincoln, BSEN 260 Instrumentation I

- Delivered lab sessions, graded assignments, and prepared lab setups

Teaching Assistant   **Autumn 2022**

University of Nebraska-Lincoln, BSEN 460 Instrumentation & Controls

- Delivered lab sessions, graded assignments, and prepared lab setups

Teaching Assistant   **Spring 2021**

The Ohio State University, FABE 3130 Heat & Mass Transfer

- Graded assignments, supported lab sessions, and prepared lab setups

Teaching Assistant   **Spring 2021**

The Ohio State University, FABE 3150 System Dynamic & Electricity

- Graded assignments, supported lab sessions, and prepared lab setups

AWARDS & HONORS:

Milton Mohr Fellowship   **2024 - 2025**

University of Nebraska-Lincoln

David H. and Annie E. Larrick Graduate Student Travel Award   **2022**
University of Nebraska-Lincoln

Dean's List   **2021**
The Ohio State University

PROFESSIONAL ACTIVITIES:

Undergraduate Proposal Reviewer   **2023 ~ 2024**
University of Nebraska-Lincoln, Office of Undergraduate Research and Fellowships

Secretary   **2023 ~ 2024**
The Association of Overseas Chinese Agricultural, Biological, and Food Engineers

Website Editor   **Since 2022**
The Association of Overseas Chinese Agricultural, Biological, and Food Engineers

PROFESSIONAL MEMBERSHIPS:

Member   **Since 2022**
North American Plant Phenotyping Network

Member   **Since 2021**
American Society of Agricultural and Biological Engineers

CONFERENCE PRESENTATIONS:

1. **Zhang, J**, Chamara, N., Bai, G., & Ge, Y. Estimate Stomatal Conductance of Maize and Soybean Plants in Greenhouse via Imaging and Pot Weighting. ICPA 2024, Manhattan, KS; also presented at ASABE 2024, Anaheim, CA.

2. **Zhang, J**, Chamara, N., Bai, G., & Ge, Y. Diurnal Variation of NDVI for Soybean and Maize under Different Water Treatments. NAPPN 2024, West Lafayette, IN.

3. **Zhang, J**, Chamara, N., Thapa, K., Bai, G., & Ge, Y. Estimating Crop Stomatal Conductance from RGB, NIR, and Thermal Infrared Images. SPIE 2023, Orlando, FL.

4. Thapa, K, **Zhang, J**, Bai, G., & Ge, Y. Characterization of Maize Responses to Differential Nitrogen Rates using Image-Based Phenotyping. NAPPN 2023, St. Louis, MO.

5. **Zhang, J**, Chamara, N., Thapa, K., Bai, G., & Ge, Y. Estimating Maize and Soybean Stomatal Conductance Based on Time Series Canopy Temperature, NDVI and Weather Conditions. NAPPN 2023, St. Louis, MO.

6. **Zhang, J.,** Thapa, K., Bai, G., & Ge, Y. Estimating Winter Wheat Stomatal Conductance Using Thermal and Spectral Imaging, Weather Variables, and Machine Learning. ASABE 2022, Houston, TX.

PUBLICATIONS:

1. **Zhang, J.**, Thapa, K., Bai, G. (Frank), & Ge, Y. (2025). Improved estimation of stomatal conductance by combining high-throughput plant phenotyping data and weather variables through machine learning. *Agricultural Water Management*, *309*, 109321. https://doi.org/10.1016/j.agwat.2025.109321

2. **Zhang, J.**, Thapa, K., Chamara, N., Bai, G., & Ge, Y. (2023). Estimating Crop Stomatal Conductance from RGB, NIR, and Thermal Infrared Images. *Proc. SPIE 12539*, 125390A. https://doi.org/10.1117/12.2663888