**ALL STATION PUBLICATIONS**

**Refereed Journals/Book Chapters**

Oregon State University

1. **Zhang, Y**., Hartemink, A.E., Weerasekara, M., 2023. An automated, web-based soil property and soil health estimation tool using mid-infrared (MIR) spectroscopy and machine learning. National Cooperative Soil Survey Meeting, July 9–13, Bismarck, ND, USA.

South Dakota State University, SDSU

1. Antora, S.S., **Chang, Y.K.,** Nguyen-Quang, T., & Heung, B. (2023). Development and Assessment of a Field-Programmable Gate Array (FPGA)-Based Image Processing (FIP) System for Agricultural Field Monitoring Applications. AgriEngineering, 5(2), 886-904.
2. Shin, J., Mahmud, M., Rehman, T. U., Ravichandran, P., Heung, B.,& **Chang, Y.K.** † (2023). Trends and Prospect of Machine Vision Technology for Stresses and Diseases Detection in Precision Agriculture. AgriEngineering, 5(1), 20-39.
3. Conference paper
4. Alahe, M.A., Kemeshi, J., & **Chang, Y.** (2024) Comparison Between Jetson Nano and Jetson Xavier NX for Ag Data Security. In 2024 ASABE Annual International Meeting. Oral presentation with conference paper (doi: 10.13031/aim.202400811).
5. Kemeshi, J., Alahe, M.A., **Chang, Y**., & Yadav, P.K. (2024) Effect of Camera Shutter Mechanism on the Accuracy of a Custom YOLOv8 Model for Pattern Recognition in Motion on a UGV. In 2024 ASABE Annual International Meeting. Oral presentation with conference paper (doi: 10.13031/aim.202400812).
6. Alahe, M.A., Kemeshi, J., **Chang, Y.,** & Menendez, H. (2024) Sustainable Livestock Management and Pasture Utilization using Automotive Electric Fencing System. In 2024 ASABE Annual International Meeting. Oral presentation with conference paper (doi: 10.13031/aim.202400820).
7. Kemeshi, J., Gummi, S.R., & **Chang, Y.** (2024) R2B2 Project: Design and Construction of a Low-cost and Efficient Autonomous UGV For Row Crop Monitoring. 16th ICPA. Oral presentation with conference paper (#10111).
8. Gummi, S.R., Kemeshi, J., & **Chang, Y**. (2024) Botanix Explorer (BX1): Precision plant phenotyping robot detecting Stomatal openings for Precision Irrigation and Drought Tolerance experiments. 16th ICPA. Oral presentation with conference paper (#10202).
9. Kemeshi, J., **Chang, Y.,** Yadav, P.K., & Alahe, M.A. (2024) Comparing Global Shutter and Rolling Shutter Cameras for Image Data Collection in Motion on a UGV. 16th ICPA. Oral presentation with conference paper (#10223).
10. Alahe, M.A., Kemeshi, J., **Chang, Y.,** Won, K., Yang, X., & Sher, M. (2024) Securing Agricultural Data with Encryption Algorithms on Embedded GPU based Edge Computing Devices. 16th ICPA. Oral presentation with conference paper (#10244).
11. Alahe, M.A., Kemeshi, J., Gummi, S.R., **Chang, Y.,** & Menendez, H. (2024) Design of an Automatic Travelling Electric Fence System for Sustainable Grazing Management. 16th ICPA. Oral presentation with conference paper (#10246).
12. Gummi, S.R., Alahe, M.A., Kemeshi, J., & **Chang, Y.** (2024) Securing Agricultural Imaging Data in Smart Agriculture: A Blockchain-Based Approach to Mitigate Cybersecurity Threats and Future Innovations. 16th ICPA. Oral presentation with conference paper (#10247).
13. Gummi, S.R., Alahe, M.A., Pack, C., & **Chang, Y.** (2024) A Swarm Robotics Navigation Simulator for Phenotyping Soybean Plants using Voronoi-Ant Colony Optimization. 16th ICPA. Oral presentation with conference paper (#10282).
14. Brennan, J**., Parsons, I.,** Harrison, M. & Menendez, H. Development of an Application Programming Interface (API) to automate downloading and processing of precision livestock data. (2024).
15. Brennan, J., **Parsons, I**., Harrison, M. & Menendez, H. Development of an Application Programming Interface (API) to automate downloading and processing of precision livestock data. ASAS, Calgary Alberta (2024).
16. **Parsons, Ira Lloyd**, Brandi B Karisch, Amanda E Stone, Stephen L Webb, Durham A Norman, and Garrett M Street. Machine Learning Methods and Visual Observations to Categorize Behavior of Grazing Cattle Using Accelerometer Signals, 2024.
17. **Wang T.**, H. Jin, H. Sieverding, S. Kumar, Y. Miao, O. Obembe, X. Rao, A. Nafchi, D. Redfearn, S. Cheye. 2023. “Understanding farmer views of precision agriculture profitability in the US Midwest.” *Ecological Economics*, 213, 107950.
18. **Wang T.**, H. Jin, and S. Heidi. 2023. Factors affecting farmer perceived challenges towards precision agriculture. *Precision Agriculture*. <https://doi.org/10.1007/s11119-023-10048-2>.
19. Adereti, D. T., Gardezi, M., **Wang, T.**, McMaine, J. 2023. Understanding farmers’ engagement and barrier to machine learning-based intelligent agricultural decision support systems. *Agronomy Journal*. <https://doi.org/10.1002/agj2.21358>.

LSU

1. **Setiyono, T., Gentimis, T.,** Rontani, F., Duron, D., Bortolon, G., Adhikari, R., ... & Pitman, W. D. (2024). Application of TensorFlow model for identification of herbaceous mimosa (Mimosa strigillosa) from digital images. *Smart Agricultural Technology*, *7*, 100400.
2. Santos, L. B., Gentry, D., Tryforos, A., Fultz, L., Beasley, J., & **Gentimis, T.** (2024). Soybean yield prediction using machine learning algorithms under a cover crop management system. *Smart Agricultural Technology*, 100442.
3. Bampasidou, M., Goldgaber, D., **Gentimis, T.,** & Mandalika, A. (2024). Overcoming ‘Digital Divides’: Leveraging higher education to develop next generation digital agriculture professionals. *Computers and Electronics in Agriculture*, *224*, 109181.

Clemson

1. **Koc, A.B**., Erwin, C., Aguerre, M., Chastain, J. 2024. Estimating Tall Fescue and Alfalfa Forage Biomass Using an Unmanned Ground Vehicle. 15th International Congress on Agricultural Mechanization and Energy in Agriculture Cham 2024. Lecture Notes in Civil Engineering, vol 458. Springer, Cham. <https://doi.org/10.1007/978-3-031-51579-8_32>. Publisher: Springer Nature Switzerland Pages: 357-372.
2. Singh, J., **Koc, A.B**., Aguerre, M.J., Chastain, J.P., and Shaik, S. 2024. Estimating Bermudagrass Aboveground Biomass Using Stereovision and Vegetation Coverage. *Remote Sensing*, 16, 2646. <https://doi.org/10.3390/rs16142646> .
3. **Koc, A.B.,** Erwin, C., Aguerre, M., Chastain, J. 2023. Estimating Tall Fescue and Alfalfa Forage Biomass Using an Unmanned Ground Vehicle. 15ᵗʰ International Congress of Agricultural Mechanization and Energy in Agriculture (AnkAgEng'23 - Antalya-Turkiye, Oct. 29 - Nov. 2,2023).
4. **Koc, A. B.,** Singh, J., Aguerre, M. J. (2023). Estimating forage biomass using unmanned ground and aerial vehicles. In Proceedings of International Grassland Congress 2023. Pp. 1449-1452. <https://doi.org/10.52202/071171-0352> .

MSU

1. Ahmed, T., Wijewardane, N., **Lu, Y**., Jones, D., Kudenov, M., Williams, C., Villordon, A., Kamruzzaman, M., 2024. Advancing sweetpotato quality assessment with hyperspectral imaging and explainable artificial intelligence. Computers and Electronics in Agriculture 220, 108855.
2. Xu, J., **Lu, Y**., 2024. Prototyping and evaluation of a novel machine vision system for real-time, automated quality grading of sweetpotatoes. Computers and Electronics in Agriculture 219, 108826.
3. Xu. J., Lu, Y., Deng, B., 2024. Design, prototyping, and evaluation of a machine vision-based automated sweetpotato grading and sorting system. Journal of the ASABE (under review).
4. Xu, J., **Lu, Y**., Deng, B., 2024. OpenWeedGUI: an open-source graphical tool for weed Imaging and YOLO-based weed detection. Electronics 13 (9), 1699. (Project#2, Lu)
5. Deng, B., **Lu, Y**., 2024. Canopy Image-based Blueberry Detection by YOLOv8 and YOLOv9. Artificial Intelligence in Agriculture (under review).
6. Wang, Y., **Lu, Y**., Morris, D., Benjamin, M., Lavagnino, M., McIntyre, J., 2024. Automated sow body condition estimation by 3D computer vision towards precision livestock farming. Artificial Intelligence in Agriculture (submitted to journal).
7. Olaniyi, E., **Lu, Y.,** Sukumaran, A., Jarvis, T., Clinton, R., 2023. Non-destructive Assessment of White Striping in Broiler Breast Meat Using Structured Illumination Reflectance Imaging with Deep Learning. Journal of the ASABE 66(6), 1437-1447.
8. Dang, F., Chen, D., **Lu, Y.,** Li, Z., 2023. YOLOWeeds: a novel benchmark of YOLO object detectors for multi-class weed detection in cotton production systems. Computers and Electronics in Agriculture 205, 107655.
9. Chen, D., Qi, X., Zheng, Y., **Lu, Y.,** Huang, Y., Li, Z., 2024. Synthetic data augmentation by diffusion probabilistic models to enhance weed recognition. Computers and Electronics in Agriculture 216, 108517.
10. Deng, B., **Lu, Y.,** Xu, J., 2024. Weed database development: An updated survey of public weed datasets and cross-season weed detection adaptation. Ecological Informatics, 102546.

UArk

1. Li, Z., **Wang, D.,** Zhu, T., Tao, Y., & Ni, C. (2024). Review of deep learning-based methods for non-destructive evaluation of agricultural products. *Biosystems Engineering*, *245*, 56-83.
2. **Wang, D.,** Sethu, S., Nathan, S., Li, Z., Hogan, V. J., Ni, C., ... & Seo, H. S. (2024). Is human perception reliable? Toward illumination robust food freshness prediction from food appearance—Taking lettuce freshness evaluation as an example. *Journal of Food Engineering*, 112179.
3. Zhou, C., Li, Z., **Wang, D.,** Xue, S., Zhu, T., & Ni, C. (2024). SSNet: Exploiting Spatial Information for Tobacco Stem Impurity Detection with Hyperspectral Imaging. *IEEE Access*.
4. Ali, M. A., **Wang, D.,** & Tao, Y. (2024). Active Dual Line-Laser Scanning for Depth Imaging of Piled Agricultural Commodities for Itemized Processing Lines. *Sensors*, *24*(8), 2385.
5. Xu, Z., Uppuluri, R., Shou, W., **Wang, D.,** & She, Y. (2024). Whole Chicken Pushing Manipulation via Imitation Learning. In *2024 ASABE Annual International Meeting*. American Society of Agricultural and Biological Engineers.
6. Li, Z., **Wang, D.,** Zhu, T., Ni, C., & Zhou, C. (2023). SCNet: A deep learning network framework for analyzing near-infrared spectroscopy using short-cut. *Infrared Physics & Technology*, *132*, 104731.

UF

1. da Cunha V.G., A. Hariharan J., **Ampatzidis Y.,** Roberts P., 2023. Early detection of tomato bacterial spot disease in transplant tomato seedlings utilizing remote sensing and artificial intelligence. *Biosystems Engineering*, 234, 172-186, <https://doi.org/10.1016/j.biosystemseng.2023.09.002>.
2. da Cunha V.A.G., Pullock D., Ali M., Neto A.D.C., **Ampatzidis Y.,** Weldon C., Kruger K., Manrakhan A., Qureshi J., 2024. Psyllid Detector: a web-based application to automate insect detection utilizing image processing and artificial intelligence. Applied Engineering in Agriculture, 40(4), 427-439. https://doi.org/10.13031/aea.15826.
3. Javidan S.M., Banakar A., Rahnama K., Vakilian K.A., **Ampatzidis Y.,** 2024. Feature engineering to identify plant diseases using image processing and artificial intelligence: a comprehensive review. *Smart Agricultural Technology*, 8, 100480, <https://doi.org/10.1016/j.atech.2024.100480>.
4. Javidan S.M., Banakar A., Vakilian K.A., **Ampatzidis Y.,** Rahnama K., 2024. Diagnosing the spores of tomato fungal diseases using microscopic image processing and machine learning. *Multimedia Tools and Applications*, 1-19, https://doi.org/10.1007/s11042-024-18214-y.
5. Kim, D.W., S.J. Jeong, **W.S. Lee**, H. Yun, Y.S., Chung, Y.-S. Kwon, and H.-J. Kim. 2023. Growth monitoring of field-grown onion and garlic by CIE L\*a\*b\* color space and region-based crop segmentation of UAV RGB images. Precision Agric 24, 1982–2001. <https://doi.org/10.1007/s11119-023-10026-8>.
6. Kondaparthi AK, **Lee WS**, Peres NA. Utilizing High-Resolution Imaging and Artificial Intelligence for Accurate Leaf Wetness Detection for the Strawberry Advisory System (SAS). Sensors. 2024; 24(15):4836. <https://doi.org/10.3390/s24154836>.
7. Liu X., Zhang Z., Igathinathane C., Flores P., Zhang M., Li H., Han X., Ha T., **Ampatzidis Y.,** Kim H-J., 2024. Infield corn kernel detection using image processing, machine learning, and deep learning methodologies. *Expert Systems with Applications*, 238 (part E), 122278, <https://doi.org/10.1016/j.eswa.2023.122278>.
8. Mehdizadeh S.A., Noshad M., Chaharlangi M., **Ampatzidis Y.,** 2023. Development of an innovative optoelectronic nose for detecting adulteration in quince seed oil. *Foods*, 12(23), 4350, <https://doi.org/10.3390/foods12234350>.
9. Mirbod, O., **Choi, D.,** Heinemann, P. H., Marini, R. P., & He, L. (2023). On-tree apple fruit size estimation using stereo vision with deep learning-based occlusion handling. Biosystems Engineering, 226, 27-42.
10. Ojo I., **Ampatzidis Y.,** Neto A.D.C., Batuman O., 2024. Development of an automated needle-based trunk injection system for HLB-affected citrus trees. *Biosystems Engineering*, 240, 90-99, <https://doi.org/10.1016/j.biosystemseng.2024.03.003>.
11. Ojo I., **Ampatzidis Y.,** Neto A.D.C., Bayabil K.H., Schueller K.J., Batuman O., 2024. Determination of needle penetration force and pump pressure for the development of an automated trunk injection system for HLB-affected citrus trees. *Journal of ASABE*, 67, 4, https://doi.org/10.13031/ja.15975.
12. Teshome F.T., Bayabil H.K., Hoogenboom G., Schaffer B., Singh A., **Ampatzidis Y.,** 2023. Unmanned aerial vehicle (UAV) imaging and machine learning applications for plant phenotyping. *Computers and Electronics in Agriculture*, 212, 108064, <https://doi.org/10.1016/j.compag.2023.108064>.
13. Teshome F.T., Bayabil H.K., Schaffer B., **Ampatzidis Y.,** Hoogenboom G., Singh A., 2024. Simulating soil hydrologic dynamics using crop growth and machine learning models. Computers and Electronics in Agriculture, 224, 109186, <https://doi.org/10.1016/j.compag.2024.109186>.
14. Zhang L., Ferguson L., Ying L., Lyons A., Laca E., and **Ampatzidis Y.,** 2024. Developing a web-based pistachio nut growth prediction system for orchard management. *HortTechnology*, 34,1, 1-7, <https://doi.org/10.21273/HORTTECH05270-23>.
15. Zhou, C., **W.S. Lee**, O. E. Liburd, I. Aygun, X. Zhou, A. Pourreza, J. K. Schueller, Y. Ampatzidis. 2023. Detecting two-spotted spider mites and predatory mites in strawberry using deep learning. Smart Agricultural Technology, 4, 100229. <https://doi.org/10.1016/j.atech.2023.100229>.
16. Zhou C., **W.S. Lee**, S. Zhang, O. E. Liburd, A. Pourreza, J. K. Schueller, **Y. Ampatzidis**. 2024. A smartphone application for site-specific pest management based on deep learning and spatial interpolation. *Computers and Electronics in Agriculture*, 218, 2024, 108726, ISSN 0168-1699, <https://doi.org/10.1016/j.compag.2024.108726>.
17. De Vries, A., **Bliznyuk, N.,** & Pinedo, P. (2023). Invited Review: Examples and opportunities for artificial intelligence (AI) in dairy farms. Applied Animal Science, 39(1), 14-22.
18. Kalopesa, E., **Tziolas, N.,** Tsakiridis, N., Multimodal Fusion for soil organic carbon estimation at continental scale. Remote Sensing. (submitted)
19. Rosin, N. A., Demattê, J. A. M., Carvalho, H. W. P., Rodriguez-Albarracín, H. S., Rosas, J. T. F., Novais, J. J., Dalmolin, R. S. D., Alves, M. R., Falcioni, R., **Tziolas, N.,** Mallah, S., de Mello, D. C., & Francelino, M. R. (2024). Spatializing soil elemental concentration as measured by X-ray fluorescence analysis using remote sensing data. Catena, 240, 107988. <https://doi.org/10.1016/j.catena.2024.107988>
20. **Tziolas, N.,** Tsakiridis, N., Heiden, U., & van Wesemael, B. (2024). Soil organic carbon mapping utilizing convolutional neural networks and Earth observation data: A case study in Bavaria state, Germany. Geoderma, 444, 116867. <https://doi.org/10.1016/j.geoderma.2024.116867>
21. Patnam Reddy, K., **Tziolas, N.**, Dematte, J., AI-driven online spectral analysis tool for global use. Geoderma. (being prepared).
22. Qian, H., McLamore, E., & **Bliznyuk, N.** (2023). Machine learning for improved detection of pathogenic E. coli in hydroponic irrigation water using impedimetric aptasensors: A comparative study. *ACS omega*, *8*(37), 34171-34179.

Mississippi State University

1. **Gharakhani, H., Thomasson, J. A**., Lu, Y., & Reddy, K. R. (2023).Field Test and Evaluation of an Innovative Vision-Guided Robotic Cotton Harvester. *Computers and Electronics in Agriculture.* 225: 109314.

UTK

1. Amirivojdan, A., Nasiri, A., Zhou, S., Zhao, Y., & **Gan, H**. (2024). ChickenSense: A Low-Cost Deep Learning-Based Solution for Poultry Feed Consumption Monitoring Using Sound Technology. AgriEngineering, 6(3), 2115-2129.
2. Nasiri, A., Zhao, Y., & **Gan, H**. (2024). Automated detection and counting of broiler behaviors using a video recognition system. Computers and Electronics in Agriculture, 221, 108930. DOI: 10.1016/j.compag.2024.108930
3. Nasiri, A., Amirivojdan, A., Zhao, Y., & **Gan, H.** (2024). An automated video action recognition-based system for drinking time estimation of individual broilers. Smart Agricultural Technology, 100409. <https://DOI:10.1016/j.atech.2024.100409>

UK

1. Ekramirad, N., Doyle, L.E., Loeb, J.R., Santra, D., **Adedeji, A.A.** (2024).Hyperspectral imaging and machine learning as a nondestructive method for proso millet seed detection and classification. *Foods 13*(9), 1330*.*
2. **Adedeji, A**.**A,** Ekramirad, N., Khaled, Y.A., and Villanueva, R**.** (2024).Impact of storage on nondestructive detectability of codling moth infestation in apples. *Journal of ASABE 67*(2):401-408. <https://doi.org/10.13031/ja.15583>. **JIF**
3. Tizhe Liberty, J., Sun, S., Kucha, C., **Adedeji, A. A.,** Agidi, G., & Ngadi, M. O. (2024). Augmented reality for food quality assessment: Bridging the physical and digital worlds. *Journal of Food Engineering* 367, 111893. <https://doi.org/10.1016/j.jfoodeng.2023.111893>
4. **Adedeji, A.A.**, Okeke, A., and Rady, A. (2023). Utilization of FTIR and machine learning for evaluating gluten-free bread contaminated with wheat flour. *Sustainability* – *Food Processing Safety and Public Health 15*(11),8742.
5. Khaled, Y.A., Ekramirad, N., Donohue, K., Villanueva, R.,and **Adedeji, A**.**A.** (2023). Non-destructive hyperspectral imaging and machine learning-based predictive models for physicochemical quality attributes of apples during storage as affected by codling moth infestation. *Agriculture – Digital Agriculture 13*(5),1086. <https://doi.org/10.3390/agriculture13051086>.
6. Ekramirad, N., Khaled, Y.A., Donohue, K., Villanueva, R.,and **Adedeji, A**.**A.** (2023). Classification of codling moth infested apples using sensor data fusion of acoustic and hyperspectral features coupled with machine learning. *Agriculture - Agricultural Technology 13*(4), 839. <https://doi.org/10.3390/agriculture13040839>.

TAMU

* 1. Fernandes, M.M., Fernandes Junior, J.d., Adams, J.M., **Tedeschi, L.O.** *et al.* (2024). Using sentinel-2 satellite images and machine learning algorithms to predict tropical pasture forage mass, crude protein, and fiber content. *Scientific Report.* 14, 8704. <https://doi.org/10.1038/s41598-024-59160-x>
	2. **K. Kaniyamattam,** **Bhandari, M.,** Hardin, R., Tao, J., **Landivar, J**., and **Tedeschi, L.** (2023). Scalable Data-driven Intelligent Agri-Systems: Opportunities, Challenges, and Research Investment Analysis for the State of Texas. A white paper submitted to Texas A&M AgriLife Research.
	3. Risal, A., Niu, H., Landivar-Scott, J. L., Maeda, M. M., Bednarz, C. W., **Landivar-Bowles, J.,** ... & **Bhandari, M.** (2024). Improving Irrigation Management of Cotton with Small Unmanned Aerial Vehicle (UAV) in Texas High Plains. *Water,* 16(9), 1300.
	4. Niu, H., Peddagudreddygari, J. R., **Bhandari, M., Landivar, J. A.,** Bednarz, C. W., & Duffield, N. (2024). In-Season Cotton Yield Prediction with Scale-Aware Convolutional Neural Network Models and Unmanned Aerial Vehicle RGB Imagery. *Sensors,* 24(8), 2432.
	5. Khuimphukhieo, I., **Bhandari, M.,** Enciso, J., & da Silva, J. A. (2024). Assessing Drought Stress of Sugarcane Cultivars Using Unmanned Vehicle System (UAS)-Based Vegetation Indices and Physiological Parameters. *Remote Sensing,* 16(8), 1433.
	6. Zhao, L., **Bhandari, M**., Um, D., Nowka, K., **Landivar, J.,** & Landivar, J. Cotton Yield Prediction Utilizing Unmanned Aerial Vehicles (Uav) and Bayesian Neural Networks. *Available at SSRN 4693599*.
	7. Dhal, S. B., Kalafatis, S., Braga-Neto, U., Gadepally, K. C., **Landivar-Scott, J. L.,** Zhao, L., ... & **Bhandari, M.** (2024). Testing the Performance of LSTM and ARIMA Models for In-Season Forecasting of Canopy Cover (CC) in Cotton Crops. *Remote Sensing,* 16(11), 1906.
	8. Happs, R. M., Hanes, R. J., Bartling, A. W., Field, J. L., Harman-Ware, A. E., Clark, R. J., **Yaping, X.,** ... & Davison, B. H. (2024). Economic and Sustainability Impacts of Yield and Composition Variation in Bioenergy Crops: Switchgrass (Panicum virgatum L.). *ACS Sustainable Chemistry & Engineering*, 12(5), 1897-1910.
	9. **Bhandari, M.,** Chang, A., Jung, J., Ibrahim, A. M., Rudd, J. C., Baker, S., ... & **Landivar, J.** (2023). Unmanned aerial system‐based high‐throughput phenotyping for plant breeding. *The Plant Phenome Journal*, 6(1), e20058.

K-State

1. McGinty H, Shimizu C, Hitzler P, & **Sharda A.** (2024). Towards a Global Food Systems Datahub. Semantic Web -1 (2024) 1–4. <https://DOI.org/10.3233/SW-243688>
2. Badua S, Sharda A, Aryal B. 2024. Quantifying real-time opening disk load during planting operations to assess compaction and potential for planter control. [Precision Agriculture](https://www.researchgate.net/journal/Precision-Agriculture-1573-1618?_sg=wUVWW5w9BbswL7KgR9KknO3rNEp_a_fBz-v-UX2O0jOoYmHnWXNTcKrIADquDo4pEnm87PnWoQnh84MJQh5CqvNw-lvBkg.3nevR9ILfX0BhSZcIKZPOor82Jpkn8mHa2Q8bF2knyI2Tqp0T1AZWJfNNVypNUa7pfMSwyVZBFbZE1r90HxDYA&_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InByb2ZpbGUiLCJwYWdlIjoicHVibGljYXRpb24iLCJwcmV2aW91c1BhZ2UiOiJwcm9maWxlIiwicG9zaXRpb24iOiJwYWdlSGVhZGVyIn19) 25(4):1-13. https://DOI.org/[10.1007/s11119-024-10151-y](http://dx.doi.org/10.1007/s11119-024-10151-y)
3. Das S, **Flippo D,** Welch S. 2024. Autonomous robot system for steep terrain farming operations. U.S. Patent and Trademark Office.
4. Grijalva I, Kang Q, Flippo D, **Sharda A,** McCornack B. 2024. Unconventional strategies for aphid management in sorghum. Insects, 15(475).
5. Rahman R, Indris C, Bramesfeld G, Zhang T, Li K, Chen X, Grijalva I, McCornack B, **Flippo D,** **Sharda A,** Wang G. 2024. A new dataset and comparative study for aphid cluster detection and segmentation in sorghum fields. Journal of Imaging, 10(5), 2024-5-08.
6. Pokharel P, **Sharda A, Flippo D,** Ladino K. 2024. Design and systematic evaluation of an under-canopy robotic spray system for row crops.  Smart Agricultural Technology, 8:100510.

**ALL STATION CONFERENCE PRESENTATIONS: PODIUM/POSTER**

SDSU

1. **Wang, T.** and H. Jin. Factors Affecting Farmer Adoption of Unmanned Aerial Vehicles: Current and Future. 2024 AI in Agriculture and Natural Resources Conference. April 15-17, 2024, College Station, Texas.
2. **Wang, T.** and H. Jin. Factors Affecting Farmer Adoption of Unmanned Aerial Vehicles: Current and Future. Southern Agricultural Economics Association (SAEA) 56th Annual Meeting. February 3-6, 2024, Atlanta, Georgia.
3. Adereti, D. T., Gardezi, M., **Wang, T.**, McMaine, J. 2023. Understanding farmers’ engagement and barrier to machine learning-based intelligent agricultural decision support systems. 85th Annual Meeting of the Rural Sociological Society. August 2-6, Burlington, VT.

LSU

1. Adhikari, R., **Setiyono, T.,** Dodla, S. K., Pabuayon, I. L., Duron, D., Acharya, B., ... & Shiratsuchi, L. S. (2023, October). Evaluation of Varying Canopy Distance on Crop Circle Phenom Sensor Measurements: Implications for Remote Sensing of Crop Parameters. In *ASA, CSSA, SSSA International Annual Meeting*. ASA-CSSA-SSSA
2. **Setiyono, T.,** Dodla, S. K., Rontani, F. A., Acharya, B., Duron, D., Adhikari, R., ... & Gentimis, T. (2023, October). Precision Positioning in UAV Remote Sensing: Case Study in Corn N Rates and Soybean Seeding Rates Experiments. In *ASA, CSSA, SSSA International Annual Meeting*. ASA-CSSA-SSSA.
3. Acharya, B., **Setiyono, T.,** Rontani, F. A., Dodla, S. K., Adhikari, R., Duron, D., ... & Parvej, R. (2023, October). Application of UAV Remote Sensing for Monitoring Nitrogen Status in Corn Under Excessive Rainfall Conditions. In *ASA, CSSA, SSSA International Annual Meeting*. ASA-CSSA-SSSA.
4. Duron, D., Rontani, F. A., Acharya, B., Adhikari, R., Taylor, Z., Blanchard, B., ... & **Setiyono, T.** (2023, October). Integrating Crop Modeling and Remote Sensing Data for Prediction of Sugarcane Growth, Yield, and Sugar Content and Their Field Spatial Variability. In *ASA, CSSA, SSSA International Annual Meeting*. ASA-CSSA-SSSA.
5. Adhikari, R., **Setiyono, T.,** Dodla, S. K., Pabuayon, I. L., Duron, D., Acharya, B., ... & Shiratsuchi, L. S. (2023, October). Multi-Sensor Crop Sensing Platforms for Monitoring Agronomic Practices Under Different Tillage and Fertilization Systems. In *ASA, CSSA, SSSA International Annual Meeting*. ASA-CSSA-SSSA.
6. Lanza, P., Santos, L., **Gentimis, A.,** Yang, Y., Conger, S., & Beasley, J. (2023). Parameters to increase LiDAR mounted UAV efficiency on agricultural field elevation measurements. In *Precision agriculture'23* (pp. 715-721). Wageningen Academic.
7. Júnior, M. R. B., de Almeida Moreira, B. R., Duron, D., **Setiyono, T.,** Shiratsuchi, L. S., & da Silva, R. P. (2024). Integrated sensing and machine learning: Predicting saccharine and bioenergy feedstocks in sugarcane. *Industrial Crops and Products*, *215*, 118627.

Clemson

1. Singh, J., **Koc, A.B.,** Aguerre, M.J., Chastain, J.P., and Shaik, S. 2024. Stereoscopic Morphometry in Forages: Predicting Pasture Quantity with Field Robotics. Presented at the 2024 ASABE Annual International Meeting, July 28-31, 2024. Anaheim CA.
2. Lisa Umutoni, Vidya Samadi, George Vellidis, Jose Payero, **Bulent Koc,** Charles Privette III. 2024. Application of Deep Neural Networks for Seasonal Cotton Yield Estimation. Presented at the 2024 ASABE Annual International Meeting, July 28-31, 2024. Anaheim CA.
3. Shaik, S., **A. B. Koc**, J. Singh, M. Aguerre, J. P. Chastain. 2024. Aboveground Biomass Prediction of Bermudagrass: A Comparative Analysis of Machine Learning Models. 2024 AI in Agriculture and Natural Resources Conference. April 15, 2024 - April 17, 2024.

MSU

1. Xu, J., **Lu, Y.,** Deng, B., 2024. Design, prototyping, and evaluation of a machine vision-based automated sweet potato grading and sorting System. ASABE Annual International Meeting 2400102.
2. Xu, J., **Lu, Y,** 2024. Design and preliminary evaluation of a machine vision-based automated sweet potato sorting system. Sensing for Agriculture and Food Quality and Safety XVI Proceedings Volume PC13060.
3. Xu., J., **Lu, Y.,** 2024. Prototyping and preliminary evaluation of a real-time multispectral vision system for automated sweet potato quality grading. Presented at the 2024 International Conference on Precision Agriculture. (Project #1, Lu)
4. Xu, J., **Lu, Y.,** 2023. OpenWeedGUI: an open-source graphical user interface for weed imaging and detection. Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping VIII 12539, 97-106.
5. Deng, B., **Lu, Y.,** Vander Weide, J., 2024. Development and Preliminary Evaluation of a Deep Learning-based Fruit Counting Mobile APP for High-bush Blueberries. ASABE Annual International Meeting 2401022
6. Wang, Y., **Lu, Y.,** Morris, D., Benjamin, M., Lavagnino, M., McIntyre, J., 2024. 3D Computer Vision-Based Sow Body Condition Estimation Towards Precision Livestock Farming. Presented at the 2024 AI Conference in Agriculture.
7. Wang, Y., **Lu, Y.,** Morris, D., Benjamin, M., Lavagnino, M., McIntyre, J., 2024. 3D Computer Vision with A Spatial-Temporal Neural Network for Lameness Detection of Sows. Presented at the 2024 International Conference on Precision Agriculture.
8. Deng, B., **Lu, Y**., 2023. Factors influencing the detection of Lambsquarters by YOLOv8 towards precision weed control. Poster presented at the Great Lakes EXPO (Grand Rapids, Michigan).
9. Deng, B., **Lu, Y**., 2024. Weed Image Augmentation by ControlNet-Added Stable Diffusion. Proceedings Volume 13035, Synthetic Data for Artificial Intelligence and Machine Learning: Tools, Techniques, and Applications II 130350M. <https://doi.org/10.1117/12.3014145>

UArk

1. Pallerla C., Owens, C., **Wang D.,** (2024) Hyperspectral imaging and Machine learning algorithms for foreign material detection on the chicken surface. *In 2024 American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting.*Anaheim, CA [Poster presentation]
2. Pallerla C., Owens, C., **Wang D.,** (2024) Hyperspectral imaging and Machine learning algorithms for foreign material detection on the chicken surface. *In 2024 Poultry Science Asscoiation Annual International Meeting.* Louisville, KY [Poster presentation]
3. Feng Y., **Wang D.,** (2024) Synthetic Data Augmentation for Chicken Carcass Instance Segmentation with Mask Transformer. *In 2024 American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting.* Anaheim, CA [Poster presentation]
4. Mahmoudi S., **Wang D.,** (2024) Automated Solutions for Poultry Processing: Integrating Robotic Swab Sampling and Pathogen Detection Technologies. *In 2024 American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting.* Anaheim, CA [Poster presentation]
5. Sohrabipour P., Wan S., Yu S., **Wang D.,** (2024) Depth image guided Mask-RCNN model for chicken detection in poultry processing line. *In 2024 American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting.*Anaheim, CA [Oral presentation]
6. Mahmoudi S., Sohrabipour P., Obe T., Gibson K., Crandall P., Jeyam S., **Wang D.** (2024), Automated Environmental Swabbing: A Robotic Solution for Enhancing Food Safety in Poultry Processing. *In 2024 the Third Annual Artificial Intelligence in Agriculture Conference. College Station, TX* [Poster presentation]
7. Sohrabipour P., Mahmoudi S., She Y., Shou W., Pallerla C., Schrader L., **Wang D.** (2024), Advanced Poultry Automation: Integrating 3D Vision Reconstruction and Mask R-CNN for Efficient Chicken Handling. *In 2024 the Third Annual Artificial Intelligence in Agriculture Conference.* College Station, TX [Poster presentation, First place winner]

UF

1. **Ampatzidis Y.,** 2024. Can AI and automation transform specialty crop production? 16th International Conference on Precision Agriculture (ICPA), International Symposium on robotics and Automation, Manhattan, Kansas, USA, July 21-24.
2. **Ampatzidis Y.**, 2024. Agroview and Agrosense for AI-enhanced precision orchard management. SE Regional Fruit and Vegetable Conference, Savannah, GA, January 11-14, 2024
3. **Ampatzidis Y.,** 2023. Emerging and advanced technologies in agriculture. Link (Linking Industry Networks through Certifications; High School Teachers Training) Conference, Daytona Beach, FL, October 10-12, 2023.
4. **Ampatzidis Y.,** 2023. AI and Extension. Possibilities and Challenges. 2023 SR-PLN Middle Managers Conference, Next Generation: Evolving the Extension Enterprise, Orlando, FL, August 22-24.
5. **Ampatzidis Y.,** 2023. AI-Enhanced Technologies for Precision Management of Specialty Crops. Sustainable Precision Agriculture in the Era of IoT and Artificial Intelligence, Bard Ag-AI Workshop, Be’er Sheva, Israel, July 18-20, 2023.
6. **Ampatzidis Y.,** Ojo I., Neto A.D.C., Batuman O., 2024. Automated needle-based trunk injection system for HLB-affected citrus trees. AgEng International Conference of EurAgEng, Agricultural Engineering Challenges in Existing and New Agrosystems, Athens, Greece, July 1-4, 2024.
7. **Ampatzidis Y.,** Vijayakumar V., Pardalos P., 2024. AI-enabled robotic spraying technology for precision weed management in specialty crops. Optimization, Analytics, and Decision in Big Data Era Conference (in honor of the 70th birthday of Dr. Panos Pardalos), Halkidiki, Greece, June 16-21.
8. Banakar A., Javidan S.M., Vakilian K.A., **Ampatzidis Y.,** 2024. Detection of spectral signature and classification of Alternaria alternata and Alternaria solani diseases in tomato plant by analysis of hyperspectral images and support vector machine. AgEng International Conference of EurAgEng, Agricultural Engineering Challenges in Existing and New Agrosystems, Athens, Greece, July 1-4, 2024.
9. Cho Y., Yu, Z., **Ampatzidis Y.,** Nam J., 2024. Blockchain-enhanced security and data management in smart agriculture. 6th CIGR International Conference, Jeju, Korea, May 19–23, 2024.
10. Dutt, N., & **Choi, D.** (2024). A Computer Vision System for Mushroom Detection and Maturity Estimation using Depth Images. 2024 ASABE Annual International Meeting.
11. Etefaghi, A., **Medeiros, H**. “ViLAD: Video-based Lettuce Association and Detection ,” American Society of Agricultural and Biological Engineers Annual International Meeting, Anaheim, CA, July 2024.
12. Gallios, I., & **Tziolas, N.** (2024). Synergistic use of low-cost NIR scanner and geospatial covariates to enhance soil organic carbon predictions using dual input deep learning techniques. IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 8-12 July, Athens, Greece.
13. Hernandez, B., **Medeiros, H.** “Multiple Plant Tracking for Robotized Spraying of Ground Plants,” 2023 IROS Workshop on Agricultural Robotics for a Sustainable Future Innovation in Precision Agriculture (3rd paper prize), Detroit, MI, Oct 2023.
14. Huang, Z., **W. S. Lee, N.C.** Takkellapati. 2024. Strawberry canopy size estimation with SAM guided by YOLOv8 detection. ASABE Paper No. 2400181. St. Joseph, MI.: ASABE.
15. Huang, Z**., W. S. Lee,** N.C. Takkellapati. 2024. HOPSY: Harvesting Optimization for Production of StrawberrY using real-time detection with modified YOLOv8-nano. In Proceedings of the 16th International Conference on Precision Agriculture (unpaginated, online). Monticello, IL: International Society of Precision Agriculture.
16. Ilodibe, U., & **Choi, D.** (2024). Evaluating The Performance of a Mite Dispensing System for Biological Control of Chilli Thrips in Strawberry Production in Florida. 2024 ASABE Annual International Meeting.
17. Lacerda C., and Neto A.D.C**., Ampatzidis Y.,** 2024. Agroview: enhance satellite imagery using super-resolution and generative AI for precision management in specialty crops. AgEng International Conference of EurAgEng, Agricultural Engineering Challenges in Existing and New Agrosystems, Athens, Greece, July 1-4, 2024.
18. **Lee, W. S.** 2023. Strawberry plant wetness detection using color imaging and artificial intelligence for the Strawberry Advisory System (SAS). 2023 Annual Strawberry AgriTech Conference, Plant City, FL, May 17, 2023.
19. **Lee, W. S.,** T. Burks, and **Y. Ampatzidis.** 2023. Precision agriculture in Florida, USA – The Beginning, Progress, and Future. Chungnam National University, Daejeon-si, Korea. May 24, 2023.
20. **Lee, W. S., T**. Burks, **and Y. Ampatzidis**. 2023. Precision agriculture in Florida, USA – The Beginning, Progress, and Future. Department of Agricultural Engineering, Division of Smart Farm Development, National Institute of Agricultural Sciences, Jeonju-si, Korea. May 25, 2023.
21. **Lee, W. S.,** T. Burks, and **Y. Ampatzidis**. 2023. Precision agriculture in Florida, USA – The Beginning, Progress, and Future. Seoul National University, Seoul, Korea. May 31, 2023.
22. Lee, W. S., Y. Ampatzidis, and D. Choi. 2023. University of Florida 2023 W-3009 Report (presented via Zoom). Cornell AgriTech, Cornell
23. Mirbod, O., & **Choi, D.** (2023). Synthetic Data-Driven AI Using Mixture of Rendered and Real Imaging Data foUniversity, Geneva, NY. June 20-21, 2023.
24. **Medeiros, H.** “Self-supervised Learning for Panoptic Segmentation of Multiple Fruit Flower Species,” IEEE/RSJ International Conference on Intelligent Robots and Systems, Detroit, MI, Oct 2023.r Strawberry Yield Estimation. 2023 ASABE Annual International Meeting.
25. Ojo I., Neto A.D.C., **Ampatzidis Y**., Batuman O., Albrecht U., 2024. Needle-based, automated trunk injection system for HLB-affected citrus trees. International Research Conference on Huanglongbing VII, Riverside, CA, March 26-29, 2024.
26. Ottoy, S., Karyotis, K., Kalopesa, E., Van Meerbeek, K., Nedelkou, J., Gkrimpizis, T., De Vocht, A., Zalidis, G., & **Tziolas, N.** (2024). Digital mapping of soil organic carbon using drone remote sensing. IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 8-12 July, Athens, Greece.
27. Vijayakumar V., **Ampatzidis Y.,** 2024. Development of a machine vision and spraying system of a robotic precision smart sprayer for specialty crops. 3rd Annual AI in Agriculture and Natural Resources Conference, College Station, TX, April 15-17, 2024.
28. Wang, R., Hofstetter, D. **Medeiros, H.** Boney, J. Kassub, H. “Evaluation of turkey behavior under different night lighting treatments using machine learning.” American Society of Agricultural and Biological Engineers Annual International Meeting, Anaheim, CA, July 2024.
29. Zhou C., **Ampatzidis Y.,** Pullock D., 2024. Detecting citrus pests from sticky traps using deep learning. 3rd Annual AI in Agriculture and Natural Resources Conference, College Station, TX, April 15-17, 2024.
30. Zhou, X., **Y. Ampatzidis, W. S. Lee**, S. Agehara, and J. K. Schueller. 2023. AI-based inspection system for mechanical strawberry harvesters. AI in Agriculture: Innovation and discovery to equitably meet producer needs and perceptions Conference, Orlando, FL, April 17-19, 2023.
31. Zhou, C., **W. S. Lee,** W. Kratochvil, J. K. Schueller, and A. Pourreza. 2023. A portable imaging device for twospotted spider mite detection in strawberry. ASABE Annual Meeting, Omaha, NE, July 9-12, 2023.
32. Zhou, C., **W. S. Lee,** N. Peres, B. S. Kim, J. H. Kim, and H. C. Moon. 2023. Strawberry flower and fruit detection based on an autonomous imaging robot and deep learning. 14th European Conference on Precision Agriculture, Bologna, Italy, July 2-6, 2023.

UTK

1. Nasiri, A., Zhao, Y., **Gan, H.** (2024). Automated broiler behaviors measurement through deep learning models. ASABE Annual International Meeting, Anaheim, CA.
2. Amirivojdan, A., Nasiri, A., Zhao, Y., **Gan, H.** (2024). A machine vision system for broiler body weight estimation. ASABE Annual International Meeting, Anaheim, CA.

UCDavis

1. Li, Z; Karimzadeh, S.; **Ahamed, M. S.** (2024). Detection of Calcium Deficiency in the Growing Stage of Lettuce Using Computer Vision. ASABE Annual Meeting 2024, July 28-31, Anaheim, California.
2. Karimzdeh, S.; Chowdhury, M.; **Ahamed, M. S**. (2023). Fault Detection and Diagnosis of Hydroponic System using Intelligent Computational Model. ASABE Annual Meeting, July 9-12, Omaha, Nebraska.
3. Li, Z; Karimzadeh, S.; **Ahamed, M. S.** (2024). Nutrient Dosing Algorithms to Mitigate Ion Imbalance in Closed-Loop Hydroponic Systems. ASABE Annual Meeting 2024, July 28-31, Anaheim, California.

UK

1. **Mizuta K.**, Miao Y, Lu J, and Negrini R. (2024) Evaluating Different Strategies to Analyze On-farm Precision Nitrogen Trial Data. 16th International Conference on Precision Agriculture, Manhattan, KS.
2. Miao Y, Kechchour A, Sharma V, Flores A, Lacerda L, **Mizuta K**, Lu J, and Huang Y. (2024) In-season Diagnosis of Corn Nitrogen and Water Status Using UAV Multispectral and Thermal Remote Sensing. 16th International Conference on Precision Agriculture, Manhattan, KS.
3. Oloyede, A. and **Adedeji, A.A.** (2024). Near-infrared hyperspectral imaging sensing for gluten detection and quantification. Accepted for presentation at 2024 ASABE Annual International Meeting, Anaheim, CA. July 28 – 31, 2024. Paper #: 2400053.
4. **Adedeji, A.A,** Loeb, J.R., Doyle, L.E., Ekramirad, N., and Khaled, Y. Al Fadhl. (2023). Photon-induced reduction in barley malt processing time and quality improvement. A paper presented (oral) at the 14th International Congress on Engineering and Food (ICEF14) held in the city of Nantes France from June 20 – 23, 2023.
5. **Adedeji, A.A.,** Ekramirad, N., Al Khaled, Y.A., Donohue, K., and Villanueva, R. (2023). Sensor data fusion and machine learning approach for pest infestation detection in apples. A poster presented at the SEC Conference with the theme: “USDA-NIFA AI in Agriculture: Innovation and Discovery to Equitably Meet Producers’ Needs and Perceptions” held in Orlando Florida on April 17 – 19, 2023.

K-State

1. Alamdari S, **Brokesh** E. 2024. “Enhancing Soil Health Monitoring in Precision Agriculture: A Comparative Analysis of avDAQ Vibration Data Collection System and Traditional Soil Sensors” ASABE-AIM, Presentation # 2400896
2. Peiretti J, **Sharda A.** 2024. “Experimental study on the impact of planter tool bar position on row unit behavior” ASABE-AIM, Presentation # 2400215
3. Vail B, **Brokesh E.** 2024. “Design and field-testing of a pull-force measuring frame for the testing of agricultural tire rolling resistance” ASABE-AIM, Presentation # 2401007
4. Shende K, **Sharda A.** 2024. “Integration & testing of wireless data communication system for autonomous liquid application platform” ASABE-AIM, Presentation # 2400833
5. Kaushal S, **Sharda A.** 2024. “Enhancing Agricultural Feedback Analysis through VUI and Deep Learning Integration” ASABE-AIM, Presentation # 2400287
6. Abon J**, Sharda A.** 2024. “Optimizing Corn Irrigation Strategies: Insights from ND VI Trends, Soil Moisture Dynamics, and Remote Sensing” ASABE-AIM, Presentation # 2400814
7. Peiretti J, **Sharda A.** 2024. “Effective Strategies for Closing Furrows Based on Corn Planter Settings” ASABE-AIM, Presentation # 2400215

**Extension Articles**

UF

1. **Choi, D.**, Mirbod, O., Ilodibe, U., & Kinsey, S. (2023). Understanding Artificial Intelligence: What It Is and How It Is Used in Agriculture: AE589, 10/2023. *EDIS*,*2023*(6).
2. Her Y.G., **Bliznyuk N., Ampatzidis** Y., Yu Z., and Bayabil H., 2024. Introduction to Artificial Intelligence in Agriculture. EDIS, University of Florida, IFAS Extension (accepted).
3. Sharma L., and **Ampatzidis Y.,** 2023. Approaches to consider for site-specific field mapping. SS713, EDIS, University of Florida, IFAS Extension, [doi.org/10.32473/edis-SS713-2023](https://doi.org/10.32473/edis-SS713-2023).

**EXTENSION TRAINING AND CONFERENCES FACILITATED**

UK

1. Kentucky Fruit and Vegetable Growers Meeting- 30m Informational Session on using digital remote sensing platforms for precision apple crop load management. 48 attendees
2. PickTN (Tennessee fruit growers)1h Informational Session on using digital remote sensing platforms for precision apple crop load management. 55 attendees
3. Kentucky State Hort Society Spring Field Day
4. 30 Minute training on use of digital platforms for weather and crop load management 37 attendee