

Auburn University Biosystems Engineering

Smart Systems for Production Ag and Forestry Research Focus Area 2023 Publications

- Wani, M. A., Din, A., Nazki, I. T., Rehman, T. U., Al-Khayri, J. M., Jain, S. M., & Mushtaq, M. (2023). Navigating the future: exploring technological advancements and emerging trends in the sustainable ornamental industry. *Frontiers in Environmental Science*, 11, 1188643.
- Niu, Z., Rehman, T., Young, J., Johnson, W. G., Yokoo, T., Young, B., & Jin, J. (2023). Hyperspectral Analysis for Discriminating Herbicide Site of Action: A Novel Approach for Accelerating Herbicide Research. *Sensors*, 23(23), 9300.
- Bidese-Puhl, R., Butts, C., Lewis, M., McIntyre, J., Morris, J., Branch, B., Bao, Y. An mmWave radar-based mass flow sensor using machine learning towards a peanut yield monitor. *Computers and Electronics in Ag.*, 216, 108340.
- Baherian, K., Bidese-Puhl, R., Bao, Y., Zhang, Q., Sanz-Saez, A., Dang, P., Lamb, M., Chen, C. 2023. Phenotyping agronomic and physiological traits in peanut under mid-season drought stress using uAV-based hyperspectral imaging and machine learning. *The Plant Phenome Journal*, 6, e20081.
- Niknejad, N., Bidese-Puhl, R., Bao, Y., Payn, K., Zheng, J. 2023. Phenotyping of architecture traits of loblolly pine trees using stereo machine vision and deep learning: stem diameter, branch angle, and branch diameter. *Computers and Electronics in Ag.* 211, 107999.
- Xiang, L., Gai, J., Bao, Y., Yu, J., Schnable, P., Tang, L. 2023. Field-based robotic leaf angle detection and characterization of maize plants using stereo vision and deep convolutional neural networks. *Journal of Field Robotics* 40, 1034.
- Oliveira, M., Soouza, J., Ortiz, B., Bao, Y., Sanz-Saez, A., da Silva, R. 2023. Integrating artificial neural networks and remote sensing for prediction of peanut maturity as a function of management zones. *Precision Ag*, 23, 1083.
- Niknejad, N., Caro, J., Bidese-Puhl, R., Bao, Y., Staiger, E. 2023. Equine kinematic gait analysis using stereo videography and deep learning: stride length and stance duration estimation. *Journal of the ASABE* 66, 865.
- Bidese-Puhl, R., Bao, Y., Pahne, N., Stokes, T., Nadel, R., Enebak, S. 2023. In-field pine seedling counting using end-to-end deep learning for inventory management. *Journal of the ASABE*, 66, 469.