

Curriculum Vitae

Changying “Charlie” Li

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Research interests: agricultural automation and robotics, sensing, machine learning, deep learning, computer vision, high throughput phenotyping, digital/precision agriculture.

A. ACADEMIC PREPARATION

- University of Illinois at Urbana-Champaign, Agricultural & Biological Engineering, Postdoctoral training, 2006-2007.
- The Pennsylvania State University, Agricultural and Biological Engineering, Ph.D. 2006.
- China Agricultural University, Agricultural & Bioenvironmental Engineering, M.S. 2003.
- China Agricultural University, Agricultural & Bioenvironmental Engineering, B.S. 2000.

B. PROFESSIONAL POSITIONS HELD

- 2020-present Distinguished Faculty Scholar, College of Engineering, University of Georgia
- 2018-present Founding Director of Phenomics & Plant Robotics Center, University of Georgia
- 2016-present Professor of School of Electrical and Computer Engineering, College of Engineering, University of Georgia
- 2012-2016 Associate Professor of College of Engineering, University of Georgia
- 2013-present Faculty of Institute of Artificial Intelligence, University of Georgia
- 2014-present Adjunct Professor of Computer Science, University of Georgia
- 2014-present Fellow of Faculty of Robotics, University of Georgia
- 2007-2012 Assistant Professor of Biological & Agricultural Engineering, University of Georgia

C. HONORS AND AWARDS

- Distinguished Faculty Scholar, College of Engineering, University of Georgia, 2020.
- ASABE Information Technology, Sensors and Controls (ITSC) Division Best Paper Award. 2021.
- ASABE Information Technology, Sensors and Controls (ITSC) Division Best Paper Award. 2020.
- Chang Jiang Lecture Professorship, Chinese Ministry of Education. 2018-2021.
- Excellence in Research Award, College of Engineering, University of Georgia, 2018.
- ASABE Superior Paper Award. 2018.
- ASABE Information Technology, Sensors and Controls (ITSC) Division Best Paper Award. 2018.
- ASABE Information Technology, Sensors and Controls (ITSC) Division Best Paper Award. 2017.
- ASABE Rain Bird Engineering Concept of the Year Award. 2017.
- ASABE New Holland Young Researcher Award. 2016.
- ASABE Information and Electrical Technology (IET) Division Best Paper Award. 2014.
- Early Career Award. Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOCABFE). 2011.

- Gary A. Herzog Award of Excellence for Junior Research Scientist. University of Georgia Tifton Campus. 2011.
- University of Georgia Junior Research Fellow. 2009.
- Gamma Sigma Delta, the Honor Society for Agriculture, 2005 – present.
- Alpha Epsilon, the Honor Society of Agricultural, Food, and Biological Engineering, 2004 – present.

D. PATENT

- Changying Li, Rui Xu. US Patent: Berry Impact Recording Device (US10082519B2)

E. PEER REVIEWED PUBLICATIONS

a. Book chapters

- Li, C. and W. Wang. LCTF Hyperspectral Imaging for Vegetable Quality Evaluation. In: Hyperspectral Imaging Technology in Food and Agriculture (series editors: Bosoon Park and Renfu Lu). 2015. ISBN 978-1-4939-2835-4. Springer. New York, NY.
- Li, C. and W. Wang. Basic techniques for measuring optical absorption and scattering properties of food, In: Light Scattering Technology for Food Property, Quality and Safety Assessment (editor: Renfu Lu). 2017. CRC Press. Taylor & Francis Group.

b. Peer reviewed journal papers (* indicates corresponding or co-corresponding author. Underlined names are those mentored by Dr. Li)

Under review:

- 1) Edger, P., M. Iorizzo, C. Li, et al. 2021. There and back again; historical perspective and future directions for *Vaccinium* breeding and research studies. *Plant Phenomics* (Invited review). Under review.
- 2) Rodriguez-Sanchez, J. C. Li*, and A. Paterson. 2021. Cotton yield estimation from aerial imagery using machine learning approaches. *Computers and Electronics in Agriculture*. Under review.
- 3) Petti, D. and C. Li*. 2021. Weakly-supervised learning to count cotton flowers in aerial imagery. *Computers and Electronics in Agriculture*. Under review.
- 4) Tan, C., C. Li*, D. He, and H. Song. 2021. Towards real-time tracking and counting of seedlings with a one-stage detector and optical flow. *Computers and Electronics in Agriculture*. Under review.
- 5) Xu, R., C. Li*. 2021. Development of the modular agricultural robotic system (MARS): concept and implementation. *Journal of Field Robotics*. Minor revision.

Published:

- 6) Xu, R., C. Li, & S. Bernardes. 2021. Development and testing of a UAV-based multi-sensor system for plant phenotyping and precision agriculture. *Remote Sensing*, 13(17), 3517.
- 7) Sun, S., C. Li*, P. W. Chee, A. H. Paterson, C. Meng, J. Zhang, P. Ma, J. S. Robertson, J. Adhikari. 2021. High resolution 3D terrestrial LiDAR for cotton plant main stalk and node detection. *Computers and Electronics in Agriculture*. 187: 106276.
- 8) Virk, S., Porter, W., Snider, J., Rains, G., Li, C., & Liu, Y. 2021. Cotton emergence and yield response to planter depth and downforce settings in different soil moisture conditions. *AgriEngineering*. 3(2):323-338.
- 9) S. Adke, K. Mogel, Y. Jiang, and C. Li*. 2021. Instance segmentation to estimate consumption of corn ears by wild animals for GMO preference tests. *Frontiers in Artificial Intelligence*. doi: 10.3389/frai.2020.593622. Issue 3. Article: 593622.

- 10) Ni, X., C. Li*, H. Jiang*, F. Takeda. 2021. Three-dimensional photogrammetric reconstruction and deep learning instance segmentation to extract berry fruit harvestability traits. *ISPRS Journal of Photogrammetry and Remote Sensing*. 171: 293-309.
- 11) Jiang, Y., C. Li*, Xu R, Sun S, Robertson JS, Paterson AH. 2020. DeepFlower: a deep learning-based approach to characterize flowering patterns of cotton plants in the field. *Plant Methods*. 16(1):156. doi:10.1186/s13007-020-00698-y
- 12) Fue, K., Porter, W., Barnes, E., Li, C., & Rains, G. (2020). Evaluation of a stereo vision system for cotton row detection and boll location estimation in direct sunlight. *Agronomy*, 10(8), 1137.
- 13) Fue, K., Porter, W., Barnes, E., Li, C., & Rains, G. (2020). Center-articulated hydrostatic cotton harvesting rover using visual-servoing control and a finite state machine. *Electronics*, 9(8), 1226.
- 14) Fue, K., Porter, W., Barnes, E., Li, C., & Rains, G. (2020). autonomous navigation of a center-articulated and hydrostatic transmission rover using a modified pure pursuit algorithm in a cotton field. *Sensors*, 20(16), 4412.
- 15) Virk, S. S., Porter, W. M., Li, C., Rains, G. C., Snider, J. L., & Whitaker, J. R. (2020). On-farm evaluation of planter downforce in varying soil textures within grower fields. *Precision Agriculture*, 1-23.
- 16) Virk, S.S., W.M. Porter, J.L. Snider, J.R. Whitaker, G.C. Rains and C. Li. 2020. Influence of seeding rate, planter downforce and cultivar on crop emergence and yield in singulated and hill-dropped cotton. *J. Cotton Science*. 24(3):137-147.
- 17) Iqbal, J., Xu, R., Halloran, H., & Li, C*. (2020). Development of a multi-purpose autonomous differential drive mobile robot for plant phenotyping and soil sensing. *Electronics*, 9(9), 1550.
- 18) Iqbal, J., Xu, R., Sun, S., & Li, C*. (2020). Simulation of an autonomous mobile robot for lidar-based in-field phenotyping and navigation. *Robotics*, 9(2), 46.
- 19) Jiang, Y., C. Li*. 2020. Convolutional neural networks for image-based high throughput plant phenotyping: A review. *Plant Phenomics*. Volume 2020, Article ID 4152816, 22 pages. <https://doi.org/10.34133/2020/4152816>.
- 20) Ni, X., Li, C.*, Jiang, H.*, & Takeda, F. (2020). Deep learning image segmentation and extraction of blueberry fruit traits associated with harvestability and yield. *Horticulture Research*, 7(1), 1-14.
- 21) Jiang, Y., J. Snider, C. Li*, G. Rains, A. Paterson. 2020. Ground based hyperspectral imaging for characterization of canopy-level photosynthetic activities. *Remote Sensing*. 12, 315.
- 22) Wang, D., C. Li, H. Song, H. Xiong, C. Liu and D. He. 2020. Deep learning approach for apple edge detection to remotely monitor apple growth in orchards. *IEEE Access*, vol. 8, 26911-26925.
- 23) Zhang, M., Y. Jiang, C. Li*, F. Yang. 2020. Fully convolutional networks for blueberry bruising and calyx segmentation using hyperspectral transmittance imaging. *Biosystems Engineering*. 192: 159-175.
- 24) Sun, S., C. Li*, P. Chee, A. Paterson, Y. Jiang, R. Xu, J. Robertson, J. Adhikari, T. Shehzad. 2020. Three-dimensional mapping of cotton bolls in situ based on point cloud segmentation and clustering. *ISPRS Journal of Photogrammetry and Remote Sensing*. 60:195-207.
- 25) Jiang, Y., C. Li*, A. Paterson, J. Robertson. 2019. DeepSeedling: Deep convolutional network and Kalman filter for plant seedling detection and counting in the field. *Plant Methods*. 15 (1): 141.
- 26) Sun, S., C. Li*, A. Paterson, and P. Chee. 2019. Image processing algorithms for infield single cotton boll counting and yield prediction. *Computers and Electronics in Agriculture*. 166, 104976.
- 27) Lu, R., Van Beers, R., Saeys, W., Li, C., & Cen, H. 2020. Measurement of optical properties of fruits and vegetables: A review. *Postharvest Biology and Technology*, 159, 111003.
- 28) Gazula, H., H. Scherm, C. Li, F. Takeda, and J. Chen. 2019. Ease of biofilm accumulation, and efficacy of sanitizing treatments in removing the biofilms formed, on coupons made of materials commonly used in blueberry packing environment. *Food Control*. 104:167–173.

- 29) Gazula, H., Quansah, J., Allen, R., Scherm, H., Li, C., Takeda, F., & Chen, J. 2019. Microbial loads on selected fresh blueberry packing lines. *Food Control*, 100, 315-320.
- 30) DeVetter, L. W., Yang, W. Q., Takeda, F., Korthuis, S., & Li, C. 2019. Modified over-the-row machine harvesters to improve northern highbush blueberry fresh fruit quality. *Agriculture*, 9(1), 13.
- 31) Quansah, J. K., Gazula, H., Holland, R., Scherm, H., Li, C., Takeda, F., & Chen, J. 2019. Microbial quality of blueberries for the fresh market. *Food Control*. 100: 92-96.
- 32) Jiang, Y., Li, C.*, Takeda, F., Kramer, E. A., Ashrafi, H., & Hunter, J. (2019). 3D point cloud data to quantitatively characterize size and shape of shrub crops. *Horticulture research*, 6(1), 43.
- 33) Zhang, M., Li, C.*, & Yang, F. 2019. Optical properties of blueberry flesh and skin and Monte Carlo multi-layered simulation of light interaction with fruit tissues. *Postharvest Biology and Technology*, 150, 28-41.
- 34) Xu, R., C. Li*, and A. H. Paterson. 2019. Multispectral imaging and unmanned aerial systems for cotton plant phenotyping. *PloS one* 14.2: e0205083.
- 35) Kim, E., Freivalds, A., Takeda, F., & Li, C. 2018. Ergonomic evaluation of current advancements in blueberry harvesting. *Agronomy*, 8(11), 266.
- 36) Fan, S., Li, C.*, Huang, W., & Chen, L. 2018. Data fusion of two hyperspectral imaging systems with complementary spectral sensing ranges for blueberry bruising detection. *Sensors*, 18(12), 4463.
- 37) Davoodi, Mohammadreza, Javad Mohammadpour Velni, and Changying Li. 2018. Coverage control with multiple ground robots for precision agriculture. *Mechanical Engineering Magazine Select Articles* 140.06: S4-S8.
- 38) Ozturk, S., F. Kong, R. K. Singh, J. Kuzy, C. Li. 2018. Dielectric properties, heating rate, and heating uniformity of various seasoning spices and their mixtures with radio frequency heating. *Journal of Food Engineering*. 228, 128-141.
- 39) Sun, S., C. Li*, A.H. Paterson, Y. Jiang, R. Xu, J. Roberson, J. Snider, and P. Chee. 2018. In-field high throughput phenotyping and cotton plant growth analysis using LiDAR. *Frontiers in Plant Sciences*. 9, 16.
- 40) Xu, R., Li, C.*, Paterson, A. H., Jiang, Y., Sun, S., & Robertson, J. S. 2018. Aerial images and convolutional neural network for cotton bloom detection. *Frontiers in plant science*, 8, 2235.
- 41) Jiang, Y., C. Li, A.H. Paterson, J. Roberson, S. Sun, and R. Xu. 2018. GPhenoVision: A ground mobile system with multi-modal imaging for field-based high throughput phenotyping of cotton. *Scientific Reports*. 1-15. doi: 10.1038/s41598-018-19142-2.
- 42) Jiang, Y., C. Li*, A.H. Paterson, S. Sun, R. Xu, and J. Roberson. 2017. Quantitative analysis of cotton canopy size in field conditions using a consumer-grade RGB-D camera. *Frontiers in Plant Sciences*. 8, 2233.
- 43) Patrick, A., and C. Li*, 2017. High throughput phenotyping of blueberry bush morphological traits using unmanned aerial systems. *Remote Sensing*. 9 (12): 1250.
- 44) Kuzy, J., Y. Jiang, and C. Li*, 2017. Blueberry bruise detection by pulsed thermographic imaging. *Postharvest Biology and Technology*, 136 (2018): 166-177.
- 45) Gallardo, R. K., E.T. Stafne, L.W DeVetter, Q. Zhang, C. Li, F. Takeda, J. Williamson, W. Yang, R. Beaudry, W. Cline, R. Allen. 2018. Blueberry producers' attitudes toward harvest mechanization for fresh market. *Hort Technology*. 28.1: 10-16.
- 46) Zhang, M., C. Li, F. Takeda, and F. Yang. 2017. Detection of internally bruised blueberries using hyperspectral transmittance imaging. *Transactions of ASABE*, 60(5): 1-14.
- 47) Fan, S.X., C. Li, W.Q. Huang, and L.P. Chen. 2017. Detection of blueberry internal bruising over time using NIR hyperspectral reflectance imaging with optimum wavelengths. *Postharvest Biology and Technology*, 134:55-66.

- 48) Zhang, M., C. Li and F. Yang. 2017. Classification of foreign matter embedded inside cotton lint using short wave infrared (SWIR) hyperspectral transmittance imaging. *Computers and Electronics in Agriculture*. 139: 75-90.
- 49) Ozturk, S., Kong, F., Singh, R. K., Kuzy, J. D., & Li, C. 2017. Radio frequency heating of corn flour: Heating rate and uniformity. *Innovative Food Science & Emerging Technologies*. 44:191-201.
- 50) Takeda, F., W. Yang, C. Li, A. Freivalds, K. Sung, R. Xu, B. Hu, J. Williamson and S. Sargent. 2017. Applying new technologies to transform blueberry harvesting. *Agronomy*, 7: 33.
- 51) Sun, S., C. Li, and A. H. Paterson. 2017. In-field high-throughput phenotyping of cotton plant height using LiDAR. *Remote Sensing*, 9(4): 377.
- 52) Kuzy, J. and Li, C., 2017. A pulsed thermographic imaging system for detection and identification of cotton foreign matter. *Sensors*, 17(3): 518.
- 53) Patrick, A., S. Pelham, A. Culbreath, C. Holbrook, I.J.d. Godoy, and C. Li. 2017. High throughput phenotyping of tomato spot wilt disease in peanuts using unmanned aerial systems and multispectral imaging. *IEEE Instrumentation & Measurement Magazine*, 20(3), 4-12.
- 54) Jiang, Y., C. Li, and F. Takeda. 2016. Nondestructive detection and quantification of blueberry bruising using near-infrared (NIR) hyperspectral reflectance imaging. *Scientific Reports*, 6: srep35679.
- 55) Jiang, Y., C. Li., and A. Paterson. 2016. High-throughput phenotyping of cotton plant height using depth images under field conditions. *Computers and Electronics in Agriculture*, 130: 57-68.
- 56) Zhang, R., C. Li, M. Zhang, and J. Rodgers. 2016. Shortwave infrared hyperspectral reflectance imaging for cotton foreign matter classification. *Computers and Electronics in Agriculture*, 127: 260-270.
- 57) Jiang, Y. and C. Li. 2015. mRMR-based feature selection for classification of cotton foreign matter using hyperspectral imaging. *Computers and Electronics in Agriculture*, 119: 191-200.
- 58) Chugunov, S. and C. Li*. 2015. Monte Carlo simulation of light propagation in healthy and diseased onion bulbs with multiple layers. *Computers and Electronics in Agriculture*, 117, 91-101.
- 59) Xu, R., F. Takeda, G. Krewer, and C. Li*. 2015. Measure of mechanical impacts in commercial blueberry packing lines and potential damage to blueberry fruit. *Postharvest Biology and Technology*, 110, 103-113.
- 60) Wang, W. and C. Li*. 2015. A multimodal machine vision system for quality inspection of onions. *Journal of Food Engineering*, 166: 291-301.
- 61) Mustafic, A., Y. Jiang, and C. Li*. 2015. Cotton contamination detection and classification using hyperspectral fluorescence imaging. *Textile Research Journal*, 86(15), 1574-1584.
- 62) Konduru, T., G. Rains, and C. Li*. 2015. Detecting sour skin infected onions using a customized gas sensor array. *Journal of Food Engineering*, 160: 19-27.
- 63) Jiang, Y. and C. Li*. 2015. Detection and discrimination of cotton foreign matter using push-broom based hyperspectral imaging: system design and capability. *PLOS One*, 10.3: e0121969.
- 64) Chugunov, S. and C. Li*. 2015. Parallel implementation of inverse adding-doubling and Monte Carlo multi-layered programs for high performance computing systems with shared and distributed memory. *Computer Physics Communications*, 194, 64-75.
- 65) Xu, R. and C. Li*. 2015. Development of the second generation berry impact recording device (BIRD II). *Sensors*, 15(2), 3688-3705.
- 66) Konduru, T., G. Rains, and C. Li*. 2015. A customized metal oxide semiconductor-based gas sensor array for onion quality evaluation: system development and characterization. *Sensors*, 15, 1252-1273.
- 67) Mustafic, A., C. Li*, M. Haidekker. 2014. Blue and UV LED-induced fluorescence in cotton foreign matter. *Journal of Biological Engineering*, 8:29.
- 68) Wang, W. and C. Li*. 2014. Optical properties of healthy and diseased onion tissues in the visible and near-infrared spectral region. *Transactions of ASABE*, 57(6): 1771-1782.

- 69) Mustafic, A., and C. Li*. 2014. Classification of cotton foreign matter using color features extracted from fluorescent images. *Textile Research Journal*, 85(12), 1209-1220.
- 70) Wang, W. and C. Li*. 2014. Size estimation of sweet onions using consumer-grade RGB-depth sensor. *Journal of Food Engineering*, 142: 153–162.
- 71) Yu, P., C. Li*, F. Takeda, G. Krewer, G. Rains, and T. Hamrita. 2014. Evaluation of rotary, slapper, and sway blueberry mechanical harvesters for potential fruit impact points using a miniature instrumented sphere. *Computers and Electronics in Agriculture*, 101:84–92.
- 72) Yu, P., C. Li*, F. Takeda and G. Krewer. 2014. Visual bruise assessment and analysis of mechanical impact measurement in southern highbush blueberry. *Applied Engineering in Agriculture*, 30(1): 29-37.
- 73) Wang, W. and C. Li*. 2013. Measurement of the light absorption and scattering properties of onion skin and flesh at 633 nm. *Postharvest Biology and Technology*. 86: 494–501.
- 74) Wang, H., C. Li*, and M. Wang. 2013. Quantitative determination of onion internal quality using hyperspectral imaging with reflectance, interactance, and transmittance modes. *Transactions of ASABE*, 56(4): 1623-1635.
- 75) Takeda, F., G. Krewer, C. Li, D. MacLean, and J. W. Olmstead. 2013. Techniques for increasing machine-harvest efficiency in southern highbush and rabbiteye blueberries. *HortTechnology*, 23(4): 430-436.
- 76) Li, C*., P. Yu, F. Takeda, G. Krewer. 2013. A miniature instrumented sphere to understand impacts created by mechanical blueberry harvesters. *HortTechnology*, 23(4): 425-429.
- 77) Li, C.*., D. Thibodeaux, A. Knowlton and J. Foulk. 2012. Effect of cleaning treatments and cotton variety on fiber and yarn quality. *Applied Engineering in Agriculture*, 28(6): 833-840.
- 78) Yu, P., C. Li*, F. Takeda, G. Krewer, G. Rains and T. Hamrita. 2012. Quantitative evaluation of a rotary blueberry mechanical harvester using a miniature instrumented sphere. *Computers and Electronics in Agriculture*, 88 (10): 25–31.
- 79) Wang, W., C. Li*, W. Tollner and G. Rains. 2012. Development of software for spectral imaging data acquisition using LabVIEW. *Computers and Electronics in Agriculture*, 84: 68–75.
- 80) Wang, W., C. Li*, W. Tollner, G. Rains and R. Gitaitis. 2012. Shortwave infrared hyperspectral imaging for detecting sour skin (*Burkholderia cepacia*)-infected onions. *Journal of Food Engineering*, 109(1): 38-48.
- 81) Yu, P., C. Li*, G. Rains, and T. Hamrita. 2011. Development of the berry impact recording device sensing system: software. *Computers and Electronics in Agriculture*, 77(2): 195-203.
- 82) Wang, W., C. Li*, W. Tollner, G. Rains, R. Gitaitis. 2011. A liquid crystal tunable filter based shortwave infrared spectral imaging system for food quality and safety inspection: design and integration. *Computers and Electronics in Agriculture*, 80: 126-134.
- 83) Wang, W., C. Li*, W. Tollner, G. Rains and R. Gitaitis. 2011. Development of an LCTF-based shortwave infrared spectral imaging system for food quality and safety inspection: calibration and characterization. *Computers and Electronics in Agriculture*, 80: 135-144.
- 84) Yu, P., C. Li*, G. Rains, and T. Hamrita. 2011. Development of the Berry Impact Recording Device sensing system: hardware design and calibration. *Computers and Electronics in Agriculture*, 79(1): 103-111.
- 85) Lin, T., L.F. Rodriguez, C. Li, and S.R. Eckhoff. 2011. An engineering and economic evaluation of wet and dry pre-fractionation processes for dry-grind ethanol facilities. *Bioresource Technology*, 102(19): 9013–9019.
- 86) Li, C.*., J. Luo, and D. MacLean. 2011. A novel instrument to delineate varietal and harvest effect on blueberry fruit texture during storage. *Journal of the Science of Food and Agriculture*, 91(9): 1653–1658.
- 87) Li, C.*., A. Knowlton, S. Brown, and G. Ritchie. 2011. A comparative study of a microgin with a lab gin stand and commercial gins in southeast U.S. *Applied Engineering in Agriculture*, 27(2): 167-175.

- 88) Li, C.*, R. Gitaitis, and N. Schmidt. 2011. Detection of onion postharvest diseases by analyses of headspace volatiles using a gas sensor array and GC-MS. *LWT - Food Science and Technology*, 44: 1019-1025.
- 89) Adedoyin, A., C. Li*, and M. Toews. 2011. Characterization of single cotton fibers using a laser diffraction system. *Textile Research Journal*, 81(4): 355-367.
- 90) Lee, W. S., V. Alchanatis, C. Yang, M. Hirafuji, D. Moshou, C. Li. 2010. Sensing technologies for precision specialty crop production. *Computers and Electronics in Agriculture*, 74: 2-33.
- 91) Rodriguez, L.F., C. Li*, M. Khanna, A.D. Spaulding, Tao Lin, and S.R. Eckhoff. 2010. An engineering and economic evaluation of quick germ-quick fiber process for dry-grind ethanol facilities: analysis. *Bioresource Technology*, 101(14): 5275–5281.
- 92) Li, C., L.F. Rodriguez, M. Khanna, A.D. Spaulding, Tao Lin, and S.R. Eckhoff. 2010. An engineering and economic evaluation of quick germ quick fiber process for dry-grind ethanol facilities: model description and documentation. *Bioresource Technology*, 101(14): 5282–5289.
- 93) Li, C.*, G. Krewer, P. Ji, H. Scherm, and S.J. Kays. 2010. Gas sensor array for blueberry fruit disease detection and classification. *Postharvest Biology and Technology*, 55(3): 144-149.
- 94) Li, C.*, R. Gitaitis, E.W. Tollner, P. Sumner, and D. MacLean. 2009. Onion sour skin detection using a gas sensor array and support vector machine. *Sensing and Instrumentation for Food Quality and Safety*, 3(4): 193-202.
- 95) M.R.P. Mosqueda, E.W. Tollner, G.E. Boyhan, C. Li, and R. W. McClendon. 2009. Simulating onion packinghouse product flow for performance evaluation and education. *Biosystems Engineering*, 102(2): 135-142.
- 96) Li, C., P. Heinemann and P. Reed. 2008. Using genetic algorithms (GAs) and CMA evolutionary strategy to optimize electronic nose sensor selection. *Transactions of the ASABE*, 51(1): 321-330.
- 97) Li, C. and P. Heinemann. 2007. ANN integrated electronic nose system for apple quality evaluation. *Transactions of the ASABE*, 50(6): 2285-2294.
- 98) Li, C., P. Heinemann and R. Sherry. 2007. Neural network and Bayesian network fusion models to fuse electronic nose and surface acoustic wave sensor data for apple defect detection. *Sensors and Actuators B: Chemical*, 125(1): 301-310.
- 99) Li, C. and P. Heinemann. 2007. A comparative study of three evolutionary algorithms for a surface acoustic wave sensor wavelength selection. *Sensors and Actuators B: Chemical*, 125(1): 311-320.
- 100) Li, C., P. Heinemann and J. Irudayaraj. 2007. Detection of apple defects using an electronic nose and zNose. *Transactions of the ASABE*, 50(4): 1417-1425.
- 101) Wu, C., G. Teng and C. Li. 2005. Application and validation of computer vision based nondestructive measurement system for cucumber seedling growth conditions. *Transactions of the Chinese Society of Agricultural Engineering*, 21 (4) 109-112.
- 102) Li, C., G. Teng, C. Zhao, X. Qiao, and C. Wu. 2003. Implementation of non-contact measurement of the plant growth in greenhouse using computer vision. *Transactions of Chinese Society of Agricultural Engineers*, 19 (3): 140-144.
- 103) Teng, G. and C. Li. 2002. DNCS-A new scheme for the automation of greenhouse environment control. *Transactions of the Chinese Society of Agricultural Engineering*, 18 (5): 118-122.
- 104) Teng, G. and C. Li. 2002. The application of computer vision in industrialized agriculture. *Journal of China Agricultural University*, 7 (2): 62-67.
- 105) Ying, X., G. Teng and C. Li. 2002. The application of distributed network control system in greenhouse environmental control. *Transactions of the Chinese Society of Agricultural Engineering*, Supplement. 18 (5): 83-86.

c. Conference proceedings and presentations

- 1) Li, C. Autonomous mobile robots for plant phenotyping: simulation and implementation. North American Plant Phenotyping Network Annual Conference. Virtual. February 17-19, 2021.
- 2) Rodriguez-Sanchez, J. and C. Li. Cotton Yield Estimation from 2D UAV Imagery using Machine Learning. North American Plant Phenotyping Network Annual Conference. Virtual. February 17-19, 2021.
- 3) Tan, C. and C. Li. Deep convolutional neural network with optical flow for cotton seedling detection and counting. North American Plant Phenotyping Network Annual Conference. Virtual. February 17-19, 2021.
- 4) Saeed, F. and C. Li. Plant organ segmentation from point clouds using 3D Deep learning. North American Plant Phenotyping Network Annual Conference. Virtual. February 17-19, 2021.
- 5) Petti, D., and C. Li. Weakly-supervised learning to count cotton flowers in aerial imagery. National Association of Plant Phenotyping Network Annual Conference. Virtual. February 17-19, 2021.
- 6) Petti, D., and C. Li. Graph Neural Networks for Plant Organ Counting. ASABE Annual International Meeting Paper Number: 2100843. Virtual. July 12-16, 2021.
- 7) Tan, C., C. Li, D. He, and H. Song. Anchor-free deep convolutional neural network for plant and plant organ detection and counting. ASABE Annual International Meeting Paper Number: 2100738. Virtual. July 12-16, 2021. **[ITSC Division Best Paper Award]**
- 8) Saeed, F. and C. Li. Plant organ segmentation from point clouds using Point-Voxel CNN. ASABE Annual International Meeting Paper No: 2100428. Virtual. July 12-16, 2021.
- 9) Sun, S., C. Li, and A. Paterson. Three-dimensional cotton plant shoot architecture segmentation and phenotypic trait characterization using terrestrial LiDAR point cloud data. ASABE Annual International Meeting Paper No: 2001267. Omaha, Nebraska. July 12-15, 2020.
- 10) Ni, X., C. Li, and H. Jiang. Blueberry harvestability trait extraction from 2D images and 3D point clouds based on deep learning and photogrammetric reconstruction. ASABE Annual International Meeting Paper No: 2001338. Omaha, Nebraska. July 12-15, 2020. **[ITSC Division Best Paper Award]**
- 11) Sun, S., C. Li, A. Paterson, J. Adhikari, J. Robertson, C. Meng. Automated plant node detection using terrestrial LiDAR data under field conditions. Paper No: 1900598. Boston, Massachusetts. July 7–10, 2019.
- 12) Han, T. and C. Li. Developing a High Precision Cotton Boll Counting System Using Active Sensing. ASABE Annual International Meeting Paper No: 1900597. Boston, Massachusetts. July 7–10, 2019.
- 13) Xu, R., C. Li. Development of a modular agricultural robot for high throughput phenotyping. Paper No: 1900599. Boston, Massachusetts. July 7–10, 2019.
- 14) Jiang, Y., R. Xu, R. Brown, S. Sun, L. Li, J. Robertson, P. Pandey, C. Li, and A. Paterson. Deep Learning to Characterize Flowering Patterns of Angiosperms in the Field. Paper No: 1901225. Boston, Massachusetts. July 7–10, 2019.
- 15) Jiang, Y., L. Shuang, C. Li, A. Paterson, and J. Robertson. Deep learning for thermal image segmentation to measure canopy temperature of Brassica oleracea in the field. ASABE Annual International Meeting Paper No: 1800305. Detroit, Michigan. July 29-August 1, 2018.
- 16) Sun, S., C. Li, A. Paterson, Y. Jiang, J. Robertson. 3D computer vision and machine learning based technique for high throughput cotton boll mapping under field conditions. ASABE Annual International Meeting Paper No: 1800677. Detroit, Michigan. July 29-August 1, 2018. **[ITSC Division Best Paper Award]**
- 17) Zhang, M. and C. Li. Fully convolutional networks for blueberry bruising and calyx segmentation using hyperspectral transmittance imaging. ASABE Annual International Meeting Paper No: 1801489. Detroit, Michigan. July 29-August 1, 2018.

- 18) Xu, R., C. Li, A. Paterson. Develop an in-field calibration method for aerial thermal imaging: preliminary result. ASABE Annual International Meeting Paper No: 1800830. Detroit, Michigan. July 29-August 1, 2018.
- 19) Jiang, Y., C. Li, S. Sun, A. Paterson, R. Xu. GPhenoVision: a ground mobile system with multi-modal imaging for field-based high throughput phenotyping of cotton. ASABE Annual International Meeting Paper No: 1700438. Spokane, Washington. July 16-July 19, 2017. [**ITSC Division Best Paper Award**]
- 20) Xu, R., C. Li, and A. Paterson. Cotton flower detection using aerial color images. ASABE Annual International Meeting Paper No: 1701080. Spokane, Washington. July 16-July 19, 2017.
- 21) Sun, S., C. Li, and A. Paterson. In-field high throughput phenotyping and phenotype data analysis for cotton plant growth using LiDAR. ASABE Annual International Meeting Paper No: 1701210. Spokane, Washington. July 16-July 19, 2017.
- 22) Zhang, M., C. Li, and S. Fan. Optical properties of healthy and bruised blueberry tissues in the near-infrared spectral region. ASABE Annual International Meeting Paper No: 1700423. Spokane, Washington. July 16-July 19, 2017.
- 23) Patrick, A., C. Li. Phenotyping morphological traits of blueberry bushes using UAS. ASABE Annual International Meeting Paper No: 1701353. Spokane, Washington. July 16-July 19, 2017.
- 24) Fan, S., C. Li, and W. Huang. Data fusion of two hyperspectral imaging systems for blueberry bruising detection. ASABE Annual International Meeting Paper No: 1701055. Spokane, Washington. July 16-July 19, 2017.
- 25) Jiang, Y. and C. Li. Development of a field based high-throughput phenotyping platform for cotton using imaging techniques. ASABE Annual International Meeting Paper No: 162456248. Orlando, Florida. July 17-July 20, 2016.
- 26) Rui, X. and C. Li. Design an Unmanned Aerial System (UAS) for Field Phenotyping. ASABE Annual International Meeting Paper No: 162460894. Orlando, Florida. July 17-July 20, 2016.
- 27) Kuzy, J. and C. Li. Identifying cotton trash by pulse-phase thermography. ASABE Annual International Meeting Paper No: 162460082. Orlando, Florida. July 17-July 20, 2016.
- 28) Sun, S. and C. Li. Development of a field robotic phenotyping system for cotton canopy mapping with LiDAR. ASABE Annual International Meeting Paper No: 162461174. Orlando, Florida. July 17-July 20, 2016.
- 29) Zhang, M. and C. Li. Identification of cotton foreign matter using line scan hyperspectral transmittance imaging. ASABE Annual International Meeting Paper No: 162460707. Orlando, Florida. July 17-July 20, 2016.
- 30) Jiang, Y., C. Li, and F. Takeda. A Method to non-destructively detect and quantify blueberry bruising using hyperspectral imaging. XI International Vaccinium Symposium, Orlando, Florida. April 13, 2016.
- 31) Zhang, R., and C. Li. Cotton foreign matter classification by shortwave infrared hyperspectral imaging. beltwide cotton conference. New Orleans, Louisiana. January 5-7, 2016.
- 32) Zhang, M., C. Li, and F. Yang. Cotton foreign matter detection using hyper-spectral transmittance imaging. Beltwide Cotton Conference. New Orleans, Louisiana. January 5-7, 2016.
- 33) Kuzy, J. and C. Li. 2015. ASABE paper 2015. Blueberry bruise detection by pulse-phase thermography and neural network. ASABE Annual International Meeting Paper No: 2191006. New Orleans, Louisiana. July 26-July 29, 2015.
- 34) Jiang, Y. and C. Li. Non-destructive detection of internal bruising of blueberries using hyperspectral imaging. ASABE Annual International Meeting Paper No: 2189892. New Orleans, Louisiana. July 26-July 29, 2015.
- 35) Xu, R. and C. Li. Blueberry bruising evaluation using second generation Berry Impact Recording Device. ASABE Annual International Meeting Paper No: 2191006. New Orleans, Louisiana. July 26-July 29, 2015.

- 36) Zhang, R. and C. Li. Detection of synthetic foreign matter in cotton lint by near infrared hyperspectral imaging. ASABE Annual International Meeting Paper No: 2189878. New Orleans, Louisiana. July 26-July 29, 2015.
- 37) Xu, R., Y. Jiang, and C. Li. Using aerial images for cotton and blueberry phenotyping. Association for Unmanned Vehicle Systems International Unmanned Systems in Precision Agriculture Conference. Tifton, Georgia. March 17-18, 2015.
- 38) Jiang, Y. and C. Li. Identification of cotton foreign matter using line-scan based hyperspectral imaging system. Beltwide Cotton Conference. San Antonio, TX. January 5-7, 2015.
- 39) Li, C. and S. Chugunov. Study of light propagation in healthy and infected onion bulbs with the use of monte carlo simulations in multi-layered geometry. CIGR International Conference. Beijing, China. September 15-19, 2014.
- 40) Xu, R., C. Li, F. Takeda, and G. Krewer. A miniature instrumented sphere to measure impacts experienced by blueberries during postharvest handling. International Horticulture Congress. Mechanization, Precision Horticulture and Robotics Session. August 18-22, 2014. Brisbane, Australia.
- 41) Wang, Weilin and C. Li. A multimodal quality inspection system based on 3D, hyperspectral, and X-ray imaging for onions. ASABE Paper No: 141900673. Montreal, Quebec July 13-16, 2014. **[ASABE IET Best Paper Award]**.
- 42) Xu, Rui, Changying Li, Fumiomi Takeda, and Gerard Krewer. Measuring impacts of blueberries during transportation and packing. ASABE Paper No: 141898243. Montreal, Quebec July 13-16, 2014.
- 43) Jiang, Yu and C. Li. A Push-broom based Hyperspectral Imaging System for Cotton Trash Identification. ASABE Paper No: 141898244. Montreal, Quebec Canada. July 13-16, 2014.
- 44) Xu, R. and C. Li. Development of the second generation of berry impact recording device. ASABE Paper No. 1615960. Kansas City, Missouri. July 21-24, 2013.
- 45) Wang, Weilin; Li, Changying; Tollner, Ernest W., Haidekker, Mark A. Estimating the diameter and volume of Vidalia sweet onions using the consumer-grade RGB-depth camera. ASABE Paper No. 131593519. Kansas City, Missouri. July 21-24, 2013.
- 46) Konduru, T., C. Li, and G. Rains. Development of a customized gas sensor array for onion storage disease detection. CIOSTA XXXV International Conference. Billund, Denmark. July 2-5, 2013.
- 47) Wang, H., C. Li, M. Wang. 2012. Onion internal quality prediction using a near infrared hyperspectral imaging system. ASABE paper No. 121341135. Dallas, Texas, July 29-August 1, 2012.
- 48) Wang, W. C. Li, R. Gitaitis, W. Tollner. 2012. Optical properties of healthy and sour skin-infected onion tissues in vis-nir region. ASABE paper No. 121338380. Dallas, Texas, July 29-August 1, 2012.
- 49) Wang, W., C. Li, W. Tollner, R. Gitaitis, G. Rains. 2012. Design and calibration of liquid crystal tunable filter based spectral imaging system. ASABE paper No. 1338382. Dallas, Texas, July 29-August 1, 2012.
- 50) Konduru, T., C. Li, G. Rains. 2012. Development of a customized gas sensor array for postharvest disease detection in onions during storage. ASABE paper No. 121337633. Dallas, Texas, July 29-August 1, 2012.
- 51) Wang, W. and C. Li. The optical properties of onion dry skin and flesh at the wavelength 633 nm. Paper No. 8369-15. Sensing for Agriculture and Food Quality and Safety IV. DSS12 SPIE Defense, Security, and Sensing. Baltimore, MD, USA. April 24, 2012.
- 52) Li, C., P. Yu, F. Takeda, G. Krewer. Using berry impact recording device for bruising assessment in southern highbush blueberry. Acta Horticulturae Proceedings: International Symposium of Mechanical Harvesting and Handling Systems of Fruits and Nuts. Orlando, FL, USA. April 2-4, 2012.

- 53) Li, C., D. Thibodeaux, A. Knowlton, and J. Faulk. Effect of cleaning treatment and cotton cultivar on textile yarn quality. BWCC in Orlando, January 6, 2012.
- 54) Yu, P., C. Li, G. Rains, T. Hamrita, G. Krewer, and F. Takeda. 2011. Develop an electronic blueberry to advance blueberry mechanical harvesting. ASABE Paper No. 1111592. Louisville, Kentucky, August 8-10, 2011.
- 55) Wang, W., C. Li, B. Tollner, R. Gitaitis, and G. Rains. 2011. Measuring absorption and scattering properties of onions at 632 nm using inverse adding doubling method. ASABE Paper No. 1110722. Louisville, Kentucky, August 8-10, 2011.
- 56) Wang, H. C. Li, M. Wang. 2011. Onion internal quality prediction using line-scan hyperspectral imaging. ASABE Paper No. 1110708. Louisville, Kentucky, August 8-10, 2011.
- 57) Li, C., A. Knowlton, S. Brown, and G. Ritchie. 2011. Comparison of the UGA microgin, a laboratory gin, and commercial gins in Georgia. Proceedings of 2011 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 58) Li, C., D. Thibodeaux, and A. Knowlton. 2011. Effect of cleaning treatments on cotton fiber quality. Proceedings of 2011 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 59) Ayodeji, A., C. Li, and M. Toews. Single cotton fiber characterization using a laser diffraction system. Proceedings of 2011 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 60) Yu, P., C. Li, G. Rains, T. Hamrita. 2010. Develop a miniature sensor to record impacts during blueberry mechanical harvest. ASABE Paper No. 1009272. Pittsburgh, Pennsylvania, June 20-23, 2010.
- 61) Wang, W., C. Li, E.W. Tollner, R. Gitaitis, G. Rains, S. Yong. 2010. Near-infrared hyperspectral reflectance imaging for early detection of sour skin disease in Vidalia sweet onions. ASABE Paper No. 1009106. Pittsburgh, Pennsylvania, June 20-23, 2010.
- 62) Adedoyin, A., and C. Li. 2010. Single cotton fiber diameter determination by using Fraunhofer diffraction. Proceedings of 2010 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 63) Li, C. Postharvest disease detection in Vidalia onions using a gas sensor array. Proceedings of Beijing Joint International Agricultural Conferences. Abstract. Beijing, China. October 14-17, 2009.
- 64) Wang, W., C. Thai, C. Li, R. Gitaitis, W. Tollner. 2009. Detection of sour skin diseases in Vidalia sweet onions using near-infrared hyperspectral imaging. ASABE Paper No. 096364. Reno, Nevada, June 21-24, 2009.
- 65) Li, C., G. Krewer, S. Kays. Blueberry postharvest disease detection using an electronic nose. ASABE Paper No. 096783. Reno, Nevada, June 21-24, 2009.
- 66) Li, C., A. Knowlton, and S. Brown. 2009. A comparison study of UGA micro gin, commercial gin, and table top gin. Proceedings of 2009 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 67) Li, C., M. Toews. GC-FID and E-nose for detection of stink bug infestation on cotton bolls. Proceedings of 2009 Beltwide Cotton Conferences. Memphis, Tenn.: National Cotton Council of America.
- 68) Li, C., L.F. Rodriguez, S.R. Eckhoff. 2008. Economics of wet and dry fractionation processes for corn ethanol production. ASABE Paper No. 084363. Providence, Rhode Island, USA, June 29-July 2, 2008.
- 69) Li, C. Development of an electronic blueberry to improve mechanical harvesting technologies for fresh market blueberries. The Fifth International Conference on Computer and Computing Technologies in Agriculture. Beijing, China. October 30, 2011.
- 70) Li, C. Sensing and automation for specialty crops in Georgia. USDA W-1009 Multi-state Project Meeting. Honolulu, Hawaii. June 16, 2011.

- 71) Li, C. SCRI: Advancing onion postharvest handling efficiency and sustainability by automated sorting, disease control, and waste stream management. Southeast Regional Fruits and Vegetable Conference. Savannah, GA. January 6-8, 2011.
- 72) Yu, P., C. Li, F. Takeda, G. Krewer, and H. Scherm. Using the electronic blueberry to evaluate blueberry bruising in the mechanical harvest process. Poster presentation. Southeast Regional Fruits and Vegetable Conference. Savannah, GA. January 6-8, 2011.
- 73) Watson, A., R. Gitaitis, and C. Li. 2010. Detection of sour skin of onion, caused by *Burkholderia cepacia*, using zNose technology. Poster presentation at National Allium Research Conference. Reno, Nevada, December 8-10, 2010. (this poster was the winner of the First Prize of the Graduate Student Poster Competition)
- 74) Li, C., H. Schwartz, K. Mohan, J. Molnar, K. Morgan, R. Gitaitis, G. Hawkins, D. MacLean, R. Shewfelt, C. Thai, W. Tollner. 2010. SCRI: Advancing onion postharvest handling efficiency and sustainability through multi-disciplinary approach. Poster presentation at National Allium Research Conference. Reno, Nevada, December 8-10, 2010.
- 75) Li, C., H. Schwartz, K. Mohan, J. Molnar, K. Morgan, R. Gitaitis, G. Hawkins, D. MacLean, R. Shewfelt, C. Thai, W. Tollner. 2010. Holistic approach to advance onion postharvest handling efficiency and sustainability. Invited poster presentation at ASHS annual meeting. Palm Desert, California, August 1-3, 2010.
- 76) Adedoyin, A., C. Li. Single cotton fiber quality characterization: an optical approach. Presentation at Georgia Cotton Conference. Tifton, GA. January 27, 2010.
- 77) Li, C., A. Knowlton, S. Brown. A comparison study of the lab gin, UGA Micro gin, and commercial gins. Presentation at Georgia Cotton Conference. Tifton, GA. January 27, 2010.
- 78) Yu, P., C. Li, G. Rains, T. Hamrita. Design a sensor prototype for blueberry bruising study during mechanical harvesting. Poster presentation. Southeast Regional Fruits and Vegetable Conference. Savannah, GA. January 7-10, 2010.
- 79) Wang, W., C. Li, R. Gitaitis, G. Rains, C. Thai, E.W. Tollner. A near-infrared hyperspectral imaging system for quality inspection of specialty crops. Poster presentation. Southeast Regional Fruits and Vegetable Conference. Savannah, GA. January 7-10, 2010.
- 80) Li, C., Ron Gitaitis, William Tollner, Chi Thai, Paul Sumner, and Dan MacLean. Detection of sour skin in Vidalia onions using an electronic nose. Georgia Fruits and Vegetable Conference. Savannah, GA. January 8-11, 2009.
- 81) Li, C., R. Gitaitis, W.E. Tollner, C. Thai, P. Sumner, and D. MacLean. Sour skin detection in vidalia onions using a gas sensor array. National Allium Research Conference. Savannah, GA, USA, December 10-13, 2008.
- 82) Li, C. 2008. A new non-destructive sensing method for Vidalia onion quality measurement. ASABE presentation. Providence, Rhode Island, USA, June 29-July 2, 2008.
- 83) Li, C., Q. Zhang, L. F. Rodriguez. 2007. Holistic management of agri-ecosystems for an organic-based animal-crop rotating production. Modeling and Design of Control Systems in Agriculture. Proceedings of International Federation of Automatic Control Conference. Osijek, Croatia, September, 2007.
- 84) Li, C., L.F. Rodriguez, M. Khanna and A.D. Spaulding, S.R. Eckhoff. 2007. Engineering-economic system models for rural ethanol production facilities. ASABE Paper. Minneapolis, Minnesota, USA, June 2007.
- 85) Li, C., R.P. Goss, L.F. Rodriguez, A.C. Hansen, B.F. Tracy and Q. Zhang. 2007. Artificial approaches for holistic modeling and control of a cattle-corn rotation. ASABE Paper. Minneapolis, Minnesota, USA, June 2007.
- 86) C. and P. Heinemann. 2007. Sensor fusion models to integrate electronic nose and zNose for fruit quality evaluation. ASABE Paper. Minneapolis, Minnesota, USA, June 2007.

- 87) Li, C., P. Heinemann, and P. Reed. 2006. Evolutionary strategy (ES) to optimize electronic nose sensor selection. Proceedings of Computers in Agriculture and Natural Resources, Orlando, Florida, USA, July 2006.
- 88) Li, C. and P. Heinemann. 2006. Evolutionary algorithms and ANN integrated Enose and zNose system for apple defect detection. ASABE Paper No. 066120, Portland, Oregon, USA, July 2006.
- 89) Li, C. and P. Heinemann. 2005. Apple defect detection using the electronic nose and zNose. ASAE Paper No. 056013, Tampa, Florida, USA, July 2005.
- 90) Li, C. and G. Teng. 2003. Development of non-contact measurement on plant growth in greenhouses using machine vision. ASAE Paper No. 034098, Las Vegas, Nevada, USA, 27- 30 July 2003.
- 91) Teng, G. and C. Li. 2003. A distributed network based environmental control system for multi-span greenhouses. ASAE Paper No. 034099, Las Vegas, Nevada, USA, 27-30 July 2003.
- 92) Li, C. and P. Heinemann. 2007. Surface acoustic wave sensor wavelength selection using three evolutionary algorithms. Biological Sensorics Conference. Minneapolis, Minnesota, USA, June 2007.
- 93) Eckhoff, S.R. and C. Li. An engineering economic evaluation of quick germ quick fiber process for dry-grind ethanol facilities. Presented at Livestock Industry and Renewable Fuels: Dynamics, Opportunities and Challenges. University of Illinois at Urbana-Champaign. May 23-24, 2007.
- 94) Li, C., R.P. Goss, L.F. Rodríguez, A.C. Hansen, B.F. Tracy, Q. Zhang. 2007. Holistic modeling and control of farm using swarm algorithm and Global Positioning System. Institute of Biological Engineering. St. Louis, Missouri, USA. March 2007.
- 95) Li, C., L.F. Rodríguez, S.R. Eckhoff, M. Khanna, and A.D. Spaulding. 2007. Engineering-economic models for rural corn ethanol production. Institute of Biological Engineering. St. Louis, Missouri, USA. March 2007.
- 96) Li, C. and P. Heinemann. 2006. Artificial neural network based electronic nose system for fruit quality evaluation. NABEC Presentation. Montreal, Canada.
- 97) Li, C. 2006. Artificial neural network-integrated Enose and zNose system for fresh produce defect detection. The 3rd College of Engineering Research Symposium, The Pennsylvania State University, University Park, March 18, 2006.
- 98) Li, C. 2006. Smell the hazard-fruits defects detection using artificial noses. The 21st Annual Graduate Exhibition, The Pennsylvania State University, University Park, March, 2006.
- 99) Li, C. 2006. Smell the hazard-ANN based electronic nose and zNoseTM system for fruit defects detection. The 12th College of Agricultural Sciences, Gamma Sigma Delta Research Expo, The Pennsylvania State University, University Park, March, 2006.
- 100) Li, C. 2005. Using the electronic nose and zNose to evaluate apple quality. The 20th Annual Graduate Exhibition, The Pennsylvania State University, University Park, March 20, 2005.
- 101) Li, C. 2005. The application of the electronic nose and zNose to evaluate apple quality. The 11th College of Agricultural Sciences, Gamma Sigma Delta Research Expo, The Pennsylvania State University, University Park, March 17, 2005.
- 102) Li, C. and P. Heinemann. 2004. Apple quality evaluation using the electronic nose and zNose. Presented at NABEC conference, June 27-30, 2004, University Park, PA.

F. INVITED PRESENTATIONS

a. International

- 1) Robot-assisted and machine learning-driven plant phenomics. International Top-level Forum on Engineering Science and Technology Strategy—Agricultural Sensors and International Conference on Intelligent Agriculture (ICIA2021). Tianjin, China. May 20-22, 2021.
- 2) Robot-assisted and Deep Learning Enabled In-field High Throughput Phenotyping. International Smart Agricultural Forum, Yangling, Shannxi, China. November 21-24, 2019.
- 3) Xu, R., C. Li, and J. Mohammadpour. Development of an Autonomous Ground Robot for Field High Throughput Phenotyping. Biorobotics Conference IFAC. Beijing. July 11-14, 2018.
- 4) Advancing Sensing and Robotics for Plant Phenotyping (Keynote). 2nd Asia-Pacific Plant Phenotyping Conference. Nanjing, China. March 24, 2018.
- 5) Sensing and Robotics in Fruit Bruising Detection and Field-based High Throughput Phenotyping. National Taiwan University, Taipei, Taiwan. November 8, 2016.
- 6) Sensing & Robotics for Agriculture and Food Systems. China Agricultural University, Beijing, China. June 14, 2016.
- 7) Sensing & Robotics for Agriculture and Food Systems. Nanjing Agricultural University, Nanjing, China. June 9, 2016.
- 8) Sensing & Robotics for Agriculture and Food Systems. ZheJiang University, Hangzhou, ZheJiang, China. June 6, 2016.
- 9) Northwest A&F University, Yangling, Shannxi, China. May 30, 2016.
- 10) Sensing & Robotics for Agriculture and Food Systems. Shi-He-Zi University, Shi-He-Zi, XinJiang, China. May 26, 2016
- 11) Development and Application of Berry Impact Recording Device (BIRD) to Measure Impacts Experienced by Blueberries. University of Talca, Talca, Chile. December 16, 2014.
- 12) High Throughput Phenotyping Using Multi-modal Imaging. College of Information and Electrical Engineering, China Agricultural University. Beijing, China. September 19, 2014.
- 13) High Throughput Phenotyping Using Multi-modal Imaging. National Engineering Center for Information Technology in Agriculture (NERCITA). Beijing, China. September 19, 2014.
- 14) Development of Sensing Technologies for Specialty Crops and Fiber. IEEE Robotics and Automation Society Technical Committee on Agricultural Robotics and Automation Webinar (international audience). October 24, 2013.
- 15) Development of a Customized Gas Sensor Array for Onion Storage Disease Detection. College of Information and Electrical Engineering, China Agricultural University. July 10, 2013.
- 16) Development of a Customized Gas Sensor Array for Onion Storage Disease Detection. National Engineering Center for Information Technology in Agriculture (NERCITA). Beijing, China. July 9, 2013.
- 17) Advanced Sensing Technologies for Specialty Crops and Cotton. Shihezi University, Xinjiang, China. October 13, 2012.
- 18) Advanced Sensing Technologies for Onion Postharvest and Cotton Fiber Quality Inspection. Xinjiang Agricultural University, Urumqi, Xinjiang, China. October 22, 2011.
- 19) Advanced Sensing Technologies for Onion Postharvest Quality Inspection. Nanjing Agricultural University, Nanjing, Jiangsu, China. October 27, 2011.
- 20) Sensing and Automation for Specialty Crops. Zhejiang University, Hangzhou, Zhejiang, China. October 28, 2011.
- 21) Develop Sensing Technologies for Specialty Crops. National Engineering Research Center for Information Technology in Agriculture (NERCITA). Beijing, China. November 2, 2011.
- 22) Sensing and Automation for Specialty Crops and Cotton. China Agricultural University, Beijing, China. November 3, 2011.
- 23) Sensor Fusion Models to Integrate Two Gas Sensors for Fruits Quality Measurement. National Engineering Research Center for Information Technology in Agriculture (NERCITA). Beijing, China. December 19, 2007.

- 24) Sensor Fusion Models to Integrate Two Gas Sensors for Fruits Quality Measurement. China Agricultural University. Beijing, China. December 13, 2007.
- 25) Sensor Fusion Approach for Food Quality and Safety Measurement. Nanjing Agricultural University. Nanjing, China. December 11, 2007.

b. National

- 1) Robotic and AI technologies for plant phenotyping. US Soybean Breeders Conference. February 18, 2021.
- 2) Robot-assisted and Deep Learning-enabled In-field High Throughput Plant Phenotyping. Washington State University Digital Agriculture Summit. October 7, 2020.
- 3) Robot-assisted and Deep Learning Enabled In-field High Throughput Phenotyping. US National Plant Breeders Association Conference. Callaway Gardens, Georgia, August 25, 2019.
- 4) 3D Imaging for Cotton Plant Mapping. Plant and Animal Genome Conference. January 14, 2019.
- 5) Advancing Plant Phenomics through Sensing and Robotics Technologies. University of Nebraska Lincoln. March 1, 2018.
- 6) Developing Sensing and Robotics Technologies for Plant Phenomics. Institute of Robotics and Intelligent Machines at George Tech. Atlanta, Georgia. October 25, 2017.
- 7) Scale-Neutral Harvest-Aid System and Sensor Technologies to Improve Harvest Efficiency and Handling of Fresh-Market Highbush Blueberries. Precision Farming Expo. Tri-cities, Washington. January 7, 2016.
- 8) Development and Application of Berry Impact Recording Device (BIRD) to Measure Impacts Experienced by Blueberries. January 25, 2016. Oregon Blueberry Conference, Portland, Oregon.
- 9) Development of Sensing Technologies for Specialty Crops. Georgia Tech Research Institute High Tech Agricultural Technical Seminar. Georgia Institute of Technology, Atlanta, Georgia. October 10, 2014.
- 10) Holistic approach to advance onion postharvest handling efficiency and sustainability—update. National Allium Research Conference. Las Cruces, New Mexico. December 11, 2012.
- 11) Holistic approach to advance onion postharvest handling efficiency and sustainability. National Allium Research Conference. Reno, Nevada. December 8, 2010.

c. Regional and University

- 1) Robot and Machine Learning-enabled Precision Agriculture and Phenomics. UGA Phenomics and Plant Robotics Symposium. Sept 17, 2021.
- 2) From Plant Phenomics to Precision Poultry Farming: an Ag Technologist's Perspective. 2021 Georgia Precision Poultry Farming Conference. May 4, 2021.
- 3) Robotics and Machine Learning in Digital Agriculture. UGA Agriculture Data Science Certificate Program Seminar. March 26, 2021.
- 4) Deep Learning in High Throughput Phenotyping and Postharvest Sensing. UGA Agriculture Data Science Certificate Program Seminar. April 10, 2020.
- 5) Advancing Plant Phenomics through Sensing and Robotics Technologies. Plant Biology Seminar. March 19, 2018.
- 6) Feeding the World—Through Sensing and Robotics Technologies. Institute of Artificial Intelligence. October 20, 2014.
- 7) Feeding the World—Through Sensing and Robotics Technologies. CENGR graduate seminar. October 16, 2014.
- 8) Monte Carlo Multi-Layered (MCML) Simulation of Photon Propagation in Plant Tissues. Center of Computational Physics. March 25, 2014.
- 9) Hyperspectral and 3D imaging as Plant Phenotyping Tools. Center for Applied Genetics Technology, University of Georgia. March 19, 2014.
- 10) Sensing and Automation for Specialty Crops. Horticulture Department Seminar. April 17, 2013.

- 11) Development of Sensing Technologies for Plant Disease Detection. Plant Pathology Department Seminar. March 22, 2013.
- 12) Develop Sensing Technologies for Food and Fiber Systems. CENGR graduate seminar. November 29, 2012.
- 13) Advanced Sensing for Specialty Crops. Nanoscale Science and Engineering Center Seminar. University of Georgia, Athens. April 22, 2011.
- 14) Advanced Sensing for Food and Fiber. Sigma Xi Society. University of Georgia Tifton Campus. March 26, 2009.
- 15) An Interdisciplinary Effort to Advance Onion Postharvest Handling Efficiency and Sustainability. Biological and Agricultural Engineering Department Graduate Seminar. Athens, Georgia. October 1, 2009.

G. RESEARCH GRANTS AND AWARDS (\$5.6M as Principal Investigator and \$15M as PI/co-PI)

Date	Title	Source	Amount	Role
2008	A New Non-Destructive Sensing Method for Vidalia Onion Quality Measurement.	Junior Faculty Research Grant. University of Georgia Research Foundation.	\$5,000	Principal investigator
2008	A Non-Destructive Sensing Method for Vidalia Onion Quality Measurement.	Georgia Fruit and Vegetable Foundation.	\$2,000	Principal investigator
2008-09	Blueberry Shelf Life Prediction and Postharvest Diseases Detection Using the Electronic Nose.	Southern Region Small Fruits Consortium.	\$5,000	Principal investigator
2009	Development of a Rapid Sensing Technology for Detection of Stink Bug Infestation on Cotton Bolls.	Georgia Cotton Commission.	\$17,252	Principal investigator
2008-09	Sensor Fusion Approach for Vidalia Onion Quality Measurement.	Georgia FoodPAC Grant.	\$72,100	Principal investigator
2008-12	Advancing Blueberry Production Efficiency by Enabling Mechanical Harvest, Improving Fruit Quality and Safety, and Managing Emerging Diseases.	USDA NIFA Specialty Crops Research Initiative (SCRI).	\$1,700,000	Co-Principal investigator
2009	An Automatic Sorting System for Internal and External Quality Inspection of Vidalia Onions.	Vidalia Onion Committee.	\$5,740	Principal investigator
2009	A High Resolution Optical Approach for Single Cotton Fiber Quality Characterization.	Cotton Incorporated.	\$28,678	Principal investigator
2010	A Benchmark Study of the UGA Micro Gin and Evaluation of Ginning Strategy on Yarn Quality.	Georgia Cotton Commission.	\$9,300	Principal investigator
2009-13	Advancing Onion Postharvest Handling Efficiency and Sustainability by Multimodal Quality Sensing, Disease Control, and Waste Stream Management.	USDA NIFA Specialty Crops Research Initiative (SCRI).	\$774,581	Principal investigator

2009-10	Sensor Fusion Approach to Integrate Spectral Imaging, X-ray Imaging, and Electronic Nose for Vidalia Onion Quality Measurement.	Georgia Food Industry Partnership Grant.	\$45,000	Principal investigator
2010	A High Resolution Optical Approach for Single Cotton Fiber Quality Characterization.	Cotton Incorporated.	\$35,000	Principal investigator
2009	UGA Research Fellow Grant	Office of Vice President for Research of UGA.	\$2,000	Principal investigator
2008-09	Cotton Insect management and Quality.	USDA Special Grant.	\$41,978	Co-Principal investigator
2011	Categorize and Differentiate Trash Types in Cotton Using Hyper-Spectral Imaging (HSI) Technology.	Georgia Cotton Commission	\$17,835	Principal investigator
2012	Improving Blueberry Mechanical Harvest Efficiency: Quantifying With Blueberry Impact Recording Device (BIRD) and Develop Deceleration Apparatus To Reduce Soft Berries In Machine Harvested Blueberries	USHBC	\$129,100	Co-Principal investigator
2013	Categorize and Differentiate Trash Types in Cotton Using Hyper-Spectral Imaging (HSI) Technology (Renewal).	Georgia Cotton Commission	\$20,000	Principal investigator
2013	Development of Hyper-Spectral Imaging (HSI) Technology to Characterize Foreign Matter in Cotton	Cotton Inc	\$20,000	Principal investigator
2014	Developing Fluorescent Imaging Technology for Cotton Trash Categorization	Georgia Cotton Commission	\$23,350	Principal investigator
2014	Development of Hyper-Spectral Imaging (HSI) Technology to Characterize Foreign Matter in Cotton	Cotton Inc	\$20,000	Principal investigator
2015	Agricultural Sensing and Robotics Initiative—Supplement Fund	College of Engineering, University of Georgia	\$12,500	Principal investigator
2014-16	Agricultural Sensing and Robotics Initiative	College of Engineering, University of Georgia	\$50,000	Project Director
2014-15	Development of Co-Robots to Control Weeds in Organic Food Production	Faculty of Robotics' Core Robotics Research Grant Program University of Georgia	\$9,000	Principal investigator
2014-15	Integrating Mobile Data Acquisition Platform (NI myDAQ) in Sensor and Instrumentation Courses for Engineering Students at the University of Georgia.	The UGA STEM Initiative Small Grants Program	\$6,311	Principal investigator
2012-14	Hyperspectral Imaging for Cotton Foreign Matter Detection and Quantification	National Science Foundation of China	\$33,333	Principal investigator
2014-19	Scale Neutral Harvest Aid System and Sensor Technologies to Improve Harvest Efficiency and Handling of Fresh Market Highbush Blueberries	USDA NIFA Specialty Crop Research Initiative	\$2,375,545	Project Director

2015	Developing Fluorescent Imaging Technology for Cotton Trash Categorization	Georgia Cotton Commission	\$29,800	Principal investigator
2015	Development of Hyper-Spectral Imaging (HSI) Technology to Characterize Foreign Matter in Cotton	Cotton Inc	\$20,000	Principal investigator
2016	Developing Near Infrared Hyperspectral Imaging Technology to Detect Cotton Contamination	Georgia Cotton Commission	\$28,075	Principal investigator
2016	Development of Hyper-Spectral Imaging (HSI) Technology to Characterize Foreign Matter in Cotton	Cotton Inc	\$20,000	Principal investigator
2017-2020	Robot-assisted Field-based High Throughput Plant Phenotyping	NSF National Robotics Initiative (funded through NIFA)	\$954,050	Project Director
2016-2017	BIRD Sensor Application in Cranberry Industry	Ocean Spray Inc.	\$25,000	Co-PI
2016-2017	Research And Extension Initiative for Cranberry And Blueberry: Current and Future Needs	NIFA SCRI Planning grant	\$47,000	Co-PI
2016-2019	Complex Infrastructure Systems Engineering	College of Engineering, University of Georgia	\$50,000	Co-PI
2016-2019	UGA Initiative on Securing Cyber Physical Systems	College of Engineering, University of Georgia	\$50,000	Co-PI
2017-2018	Phenomics and Plant Robotics Initiative	UGA Presidential Interdisciplinary Research Seed Grant	\$114,066	Project Director
2018-2019	Planning Grant: Engineering Research Center for Materials for Agriculture Resource Imaging Analytics at High Resolution (MARIAH)	NSF: Engineering Research Center	\$100,000	Co-PI (UGA lead PI)
2019-2021	GCR: Accelerating Progress Toward Intrinsic Genetic Solutions to Sustainable Agricultural Intensification	NSF: Growing Convergent Research	\$1,503,915	Co-PI
2019-2023	VacciniumCAP: Leveraging genetic and genomic resources to enable development of blueberry and cranberry cultivars with improved fruit quality attributes	USDA NIFA Specialty Crop Research Initiative	\$6,417,340	Co-PI (UGA lead PI)
2019-2021	AI in Resilient Agriculture	UGA Pre-seed grant	\$5,000	PI
2019-2020	Commercialization of Berry Impact Recording Device	Georgia Research Alliance	\$50,000	PI
2019-2020	Leveraging an NSF Planning Grant and Phenomics and Plant Robotics Center towards an Engineering Research Center	CENGR seed grant	20,000	PI
2021-2022	Evaluation and Development of High-Throughput Phenotyping Technologies for Peanut	Georgia Peanut Commission	\$57,461	Co-PI
2021	Development of High-throughput Phenotyping Technologies to Improve	Georgia Cotton Commission	\$41,650	PI

	Cotton			
2022	Cotton Flowering Time High Throughput Phenotyping with an Autonomous Robotic Platform	Georgia Cotton Commission	\$25,000	PI
Total Grant Funds			\$15,018,960	

Current pending grants:

- Li (PI), et al. NIFA. DSFAS-AI: Harnessing phenomics big data for near-real time decision support and maximizing crop yield potential. \$650,000. 01/2022-12/2024.
- Chu, et al. NIFA AFRI. Genetic dissection of yield-related traits enabled by high throughput phenotyping and whole genome sequencing of a peanut MAGIC population. \$499,509. 1/1/2022-12/31/2026.
- Rains, et al. NIFA Farm of the Future. Juxtaposition of the new circular farm economy: energy, automation, intelligence and human capital. \$3.9M. 9/1/2022-8/31/2026.
- Chai, et al. NIFA AFRI. A Mobile Scanning System for Evaluating Animal Welfare in Poultry Houses. \$650,000. 01/2022-12/2024.

H. INSTRUCTION AND EDUCATION

1. RESIDENT INSTRUCTION

- ELEE 4280/6280, Introduction to Robotics Engineering (new course).
- ENGR2170, Electric Circuits.
- ENGR8240/ELEE8240, Instrumentation Programming (new course).
- ENGR4230/6230, Sensors and Transducers.
- ENGR8550: Non-Destructive Characterization of Biological Materials (new course).
- ENGR4980: Smart Sensor Development.
- HONS4960H: Undergraduate student CURO research (8).
- ENGR8990: Wireless Communication and Wireless Recharging for Biosystems.
- ENGR 8990 Special Topics: PIC Microcontroller and LabVIEW Programming.
- ENGR 8990 Special Topics: Bio-imaging and Optical Properties of Bio-materials.
- ENGR 8990 Special Topics: Imaging Spectroscopy.
- Guest lectures:
 - FDST8020 Flavor Chemistry and Evaluation (Food Science and Technology).
 - ENGR4230/6230.

2. STUDENT MENTORING

a. Undergraduate/HS Student mentoring

- Kyle Hunady, Young Dawg Program, 2017-2018.
- Megan Lusher, Bruce E. Dixson Scholarship Recipient, 2015-2016.
- Aaron Patrick: UGA CURO Research Fellow. 2016.
- Delmaries Gonzalez: UGA CURO Summer Research Fellowship. 2014.
- Delmaries Gonzalez: CENGR CURO Assistantship Awards. 2015 Spring.
- Yuri Pedroni Prado (Universidade de Caxias do Sul): Brazilian Scientific Mobility Program. 2014 Spring-Summer.
- Kaya Sumire Abe (Federal Technological University of Paraná): Brazilian Scientific Mobility Program. 2014 Summer.

- Ben McInnes. Georgia Young Scholar (co-mentoring with Dr. Xinzhi Ni at USDA ARS). 2010.
- Tony Barnes. UGA undergraduate student summer research internship. 2009.
- Michael Luo. High school student summer research. 2009.
- Timothy Rutland. Abraham Baldwin Agricultural College student. 2008-2010.

b. Graduate student/postdoc mentoring

Service as major or co-major advisor and Graduate Committee Chair (with graduation date)

Masters students (10)	Doctoral students (14)
Shrinidhi Adke (2021)	Yuxuan Liu (2024) (Co-mentor with Dr. Wang in Mechanical Engineering)
Allen Spain (2021)	Zhengkun Li (2024)
Tsunghan Han (2020)	Daniel Petti (2023)
Jawad Iqbal (2020)	Javier Rodriguez-Sanchez (2023)
Aaron Patrick (2018)	Farah Saeed (2023) (Co-mentor with Dr. Liu in Computer Science)
Jesse Kuzy (2017)	Xueping Ni (2021) (Co-mentor with Dr. Jiang) (Assistant Professor at Zhejiang Industry & Commercial University)
Rui Xu (2014)	Rui Xu (2020) (Research Engineer at UGA)
Tharun Konduru (2013)	Simerjeet Virk (2020) (Co-mentor with Dr. Potter) (Assistant Professor at UGA)
Pengcheng Yu (2011)	Kadeghe Fue (2020) (Co-mentor with Dr. Rains)
Weilin Wang (2011)	Yu Jiang (2019) (Assistant Research Professor at Cornell University)
	Shangpeng Sun (2019) (Assistant Professor at McGill University)
	Mengyun Zhang (2019) (Associate Professor at Shihezi University)
	Weilin Wang (2014) (Senior Research Scientist at Bayer Inc.)
	Haihua Wang (2012) (Associate Professor at China Agricultural University)

Postdoctoral research associates (7):

Dr. Liujun Li (2017-2018) Dr. Shuxiang Fan (2016-2017) Dr. Ruoyu Zhang (2014-2015)
 Dr. Adnan Mustafic (2013-14) Dr. Svyatoslav Chugunov (2013-14) Dr. Ayodeji Adedoyin (2011)
 Dr. Zhifeng Zhang (2008)

Service as Graduate Committee member (with date of graduation)

Masters students (6)	Doctoral students (8)
Himabindu Gazula (2019)	Canicius Joseph Mwitta (2023)
Justice Ruwona (2021)	Anton Franzluebbers (2023)
Adam Wineland (2016)	Andrew Murithi Rukangu (2023)
Michael Zhao (2015)	Jorge Alberto Reyes Pineda (2022)
Richard Andrew Speir (2013)	Syed Zeeshan Rizvi (2017)
Murat Sean McKeown (2012)	Alex Squires (2017)
	Juzhong Tan (2017)
	Anna Watson (2016)

c. Awards received by Dr. Li's graduate students at college, national, and international level:

Student	Year	Name of awards
J. Rodriguez-Sanchez	2021	Phenomics and Plant Robotics Center Graduate Student Poster Competition Award (2 nd Place).
Chenjiao Tan	2021	ASABE ITSC Best Conference Paper Award
J. Rodriguez-Sanchez	2021	Innovative Interdisciplinary Research Award, Graduate School of UGA
X. Ni	2020	ASABE ITSC Best Conference Paper Award
X. Ni	2020	Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOC) Graduate Student Paper Award (2 nd Place)
Y. Jiang	2019	AOC Graduate Student Academic Achievement Award
S. Sun	2019	AOC Graduate Student Paper Award 1 st Place
M. Zhang	2018	ASABE Superior Paper Award
M. Zhang	2018	AOC Graduate Student Paper Award
Y. Jiang/R. Xu/S. Sun	2018	ASABE Student Robotics Competition 2 nd Place (Advanced Category)
S. Sun	2018	ASABE ITSC Best Conference Paper Award
Y. Jiang	2017	ASABE ITSC Best Conference Paper Award
R. Xu	2017	ASABE Rain Bird Engineering Concept of the Year Award
Y. Jiang	2017	Innovative Interdisciplinary Research Award, Graduate School of UGA
R. Xu	2016	Innovative Interdisciplinary Research Award, Graduate School of UGA
R. Xu	2015	ASABE Boyd Scott Graduate Student Research Award (only top three were selected nationwide)
Y. Jiang	2015	AOC Graduate Student Paper Award
Y. Jiang	2015	AOC Graduate Student Proposal Award
Y. Jiang	2015	Beltwide Cotton Conference Graduate Student Research Award
Y. Jiang	2014	Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOC) Graduate Student Paper Award
W. Wang	2014	ASABE IET Best Conference Paper Award
W. Wang	2014	China National Scholarship for Outstanding Self-Funded Foreign Students
T. Konduru	2013	ASABE Boyd Scott Graduate Student Research Award (only top three were selected nationwide)
W. Wang	2013	AOC Student Leadership Award
W. Wang	2013	Brahm Verma Graduate Student Academic Achievement and Leadership Award
W. Wang	2012	AOC Graduate Student Academic Achievement Award
W. Wang	2011	ASABE Boyd Scott Graduate Student Research Award
W. Wang	2011	AOC Graduate Student Paper Award
P. Yu	2011	ASABE Boyd Scott Graduate Student Research Award
P. Yu	2011	AOC Graduate Student Paper Award
W. Wang	2010	AOC Graduate Student Paper Award

3. TEACHING INNOVATION, GRANT, AND DEVELOPMENT

- Integrating Mobile Data Acquisition Platform (NI myDAQ) in Sensor and Instrumentation Courses for Engineering Students at the University of Georgia. PI. UGA STEM Grant (2014-2015, Award: \$6,311).

I. PROFESSIONAL AND CAMPUS SERVICE

1. PROFESSIONAL SERVICE

a. International level:

- Editorial Advisory Board: *Computers and Electronics in Agriculture* (an international journal by Elsevier) (2015-2018)
- Associate Editor: *Information Processing in Agriculture* (an international journal by Elsevier) (since 2014).
- President of Association of Overseas Chinese Agricultural Biological Food Engineers (AOCABFE) (2014-2015).
- Reviewer of AAAS International Science & Technology Partnerships Program. 2015.
- Reviewer of National Science Foundation of China. 2014.
- Reviewer for US-Israel BARD program. 2013.
- Scientific Review Committee and Session Chair of Mechanisation, Precision Horticulture and Robotics Conference of the 29th International Horticultural Congress. Brisbane, Australia. August 18-22, 2014.
- Scientific Review Committee of SPIE Session VII (Sensing for Agriculture and Food Quality and Safety) (2013-present).
- Organizing Committee of SPIE Session (Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping II) (2016-present).

b. National level:

- Invited panelist of ASABE Roundtable 2020: Towards Transforming into Circular Food and Agricultural Systems
- USDA Multistate Project W2009 (Integrated Systems Research and Development in Automation and Sensors for Sustainability of Specialty Crops) – *Secretary* (2011-2012), *Vice Chair* (2012-2013), and *Chair* (2013-2014)
- Panel/Proposal reviewer: USDA NIFA AFRI (2014), SCRI (2011), NSF (2012), NSF (2015), NSF (2018)
- Associate Editor: *Transactions of ASABE* (since 2011) and *Applied Engineering in Agriculture* (since 2011)
- ASABE Information Technology Sensors and Control (ITSC) Division – *Chair* (2017-2018)
- ASABE ITSC 312 Technical Committee – *Chair* (2017-2018)
- ASABE PM-48 Technical Committee – *Chair* (2010-2011)
- ASABE FPE-712 Technical Committee – *Chair* (2010-2011)
- ASABE IET 348, IET 312, and IET 353 Technical Committee – Member (since 2012)
- Georgia Section of ASABE – *Secretary* (2009-2010), *Vice President for Technical Program* (2010-2011)
- UGA Vegetable Team – *Chair* (2010-2011)
- External reviewer (2008): University of Florida Institute of Food and Agricultural Sciences: FAES/CRIS project proposal. September, 2008. Machine enhancement for citrus mechanical harvesting equipment
- Peer reviewer of 12 academic journals

2. CAMPUS SERVICE

- CENGR Honorifics Committee (2021-2022)
- UGA Provost Strategic Cluster Hire on Integrated Precision Agriculture Search Committee (2020-2022)

- UGA Strategic Planning Committee (Research, Innovation, and Entrepreneurship sub-committee) (2018-2019)
- Chair of School of Electrical and Computer Engineering Faculty Search Committee (2017-2018)
- Leader of SRSS research cluster visioning process (2015-2016)
- University Council: College of Engineering Faculty Representative (2015-2018)
- Chair of Promotion and Tenure Review Committee for Dr. Zion Tse (2016)
- Promotion and Tenure Review Committee for Dr. Mable Fok (2016)
- CENGR Graduate Education Advisory Committee (2015-2018)
- CENGR Graduate Admission Committee (2012-2013)
- OVPR Faculty Research Grant Review Committee (2014-2017)
- Dr. Takoi Hamrita Post-tenure review committee (2013)
- First Level Review Committee for Dr. Peter Kner (2014)
- First Level Review Committee for Dr. Ramaraja Ramasamy (2014)
- First Level Review Committee for Dr. Kyle Johnsen (2014)
- Search Committee for Associate Dean for Research (2014)
- Search Committee for Associate Dean for Academic Affairs (2014)
- Search Committee for Georgia Power Professor (2013)
- Search Committee for Electrical Engineering Faculty (2) (2013)
- College of Engineering Excellence Committee (2012)