

Piyush Pandey

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EDUCATION

August 2019 – present	Ph.D. Biological and Agricultural Engineering and Forestry and Environmental Resources Expected graduation: May 2022	NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NC
May 2018 – May 2019	Ph.D. in Electrical and Computer Engineering Transferred to North Carolina State University	UNIVERSITY OF GEORGIA, ATHENS, GA
Jan. 2016 – Dec. 2017	M.S. in Agricultural and Biological Systems Engineering Thesis title: “High Throughput Phenotyping of Sorghum for the Study of Growth Rate, Water Use Efficiency, and Chemical Composition”. Link to thesis.	UNIVERSITY OF NEBRASKA, LINCOLN, NE
Jan 2010 – Dec 2014	B.S. in Mechanical Engineering	TRIBHUVAN UNIVERSITY, KATHMANDU, NEPAL

PUBLICATIONS

JOURNAL PUBLICATIONS

1. Pandey, P., Dakshinamurthy, H.N., & Young, S. (2021). **Frontier: Autonomy in Detection, Actuation, and Planning for Robotic Weeding Systems.** *Transactions of the ASABE*, 64(2), 557-563.
2. Lu, Y., Walker, T. D., Acosta, J. J., Young, S., Pandey, P., Heine, A. J., & Payn, K. G. (2021). **Prediction of Freeze Damage and Minimum Winter Temperature of the Seed Source of Loblolly Pine Seedlings Using Hyperspectral Imaging.** *Forest Science*
3. Liang, Z., Pandey, P., Stoerger, V., Xu, Y., Qiu, Y., Ge, Y., & Schnable, J. C. (2018). **Conventional and hyperspectral time-series imaging of maize lines widely used in field trials.** *Gigascience*, 7(2), gix117. <https://doi.org/10.1093/gigascience/gix117>
4. Pandey, P., Ge, Y., Stoerger, V., & Schnable, J. C. (2017). **High throughput in vivo analysis of plant leaf chemical properties using hyperspectral imaging.** *Frontiers in plant science*, 8, 1348. <https://www.frontiersin.org/articles/10.3389/fpls.2017.01348/full>

CONFERENCE PUBLICATIONS

1. Pandey, P., Payn, K. G., Lu, Y., Heine, A. J., Walker, T. D., & Young, S. (2020). **High Throughput Phenotyping for Fusiform Rust Disease Resistance in Loblolly Pine Using Hyperspectral Imaging.** *In 2020 ASABE Annual International Virtual Meeting (p. 1).* American Society of Agricultural and Biological Engineers. <https://elibrary.asabe.org/abstract.asp?aid=51616>
2. Lu, Y., Payn, K. G., Pandey, P., Acosta, J. J., Heine, A. J., Walker, T. D., & Young, S. (2020).(2020). **Hyperspectral Imaging-Enabled High-Throughput Screening of Loblolly Pine (Pinus taeda) Seedlings for Freeze Tolerance.** *In 2020 ASABE Annual International Virtual Meeting (p. 1).* American Society of Agricultural and Biological Engineers. <https://elibrary.asabe.org/abstract.asp?aid=51561>
3. Ge, Y., Pandey, P., & Bai, G. (2016). **Estimating fresh biomass of maize plants from their RGB images in greenhouse phenotyping.** *In Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping (Vol. 9866, p. 986605).* International Society for Optics and Photonics. SPIE Digital Library

POSTER PRESENTATIONS

1. Pandey, P., Payn, K. G., Lu, Y., A. Juan, Heine, A. J., Walker, T. D., & Young, S. **High-throughput phenotyping of loblolly pine: Analysis of hyperspectral images at the plant organ level for disease resistance** Presented at the North American Plant Phenotyping Network Annual Conference, February, 2021
2. Pandey, P., & Li, C. (2019, February) **Evaluation of 3D reconstruction methods with application to plant phenotyping under field conditions.** Presented at the College of Engineering Research Showcase at the University of Georgia, Feb 22, 2019.
3. Pandey, P., Ge, Y., Stoerger, V., & Schnable, J. C. (2017, April). **High Throughput In vivo Analysis of Plant Leaf Chemical Properties Using Hyperspectral Imaging.** Presented at the University of Nebraska-Lincoln Research Fair, April 4-5, 2017. [Link to poster](#)

TEACHING

Spring 2021	Instructor of Record BAE 200 Computer Methods in Biological Engineering	NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NC
Fall 2020	Teaching Assistant BAE 200 Computer Methods in Biological Engineering	NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NC
Fall 2017	Teaching Assistant BSEN 460/860 Instrumentation and Controls	UNIVERSITY OF NEBRASKA-LINCOLN, LINCOLN, NE

PEER REVIEW

Reviewer	Computers and Electronics in Agriculture	2020
Reviewer	Frontiers in Plant Science	2020
Co-reviewer	The Plant Journal	2020
Co-reviewer	IEEE Robotics and Automation Letters	2020

MEMBERSHIPS

2016-Present	American Society of Agricultural and Biological Engineers	MEMBER
2020-Present	North American Plant Phenotyping Network	MEMBER

CERTIFICATIONS

Certified Remote UAS Drone Pilot under [FAA Part 107](#).