

NIKEE SHRESTHA

Complex Biosystems Program
University of Nebraska
Lincoln, NE

2200 Vine Street, 230E
(405) 385-3186
nshrestha5@huskers.unl.edu

EDUCATION:

PhD in Complex Biosystems (under Dr. James Schnable), Dept. of Agronomy and Horticulture, University of Nebraska, Lincoln (UNL), Fall 2022 - present

Master's in Plant Science (under Dr. Andrew Doust), Dept. of Plant Biology, Ecology and Evolution, Oklahoma State University (OSU), Fall 2019 – May 2022

Bachelor of Science in Agriculture (B.Sc. Ag), Institute of Agriculture and Animal Science (IAAS), Tribhuvan University (TU), 2014-2018

EMPLOYMENT:

Graduate Research Assistant, Complex Biosystems, University of Nebraska, Lincoln, Fall 2022-Present

Supervisor: Dr. James Schnable (schnable@unl.edu)

Projects: Genotype by Environment interaction, Quantitative genetics, Genomic prediction model

- Building genomic prediction model using environmental index and genotype information in Wisconsin diversity panel for predicting flowering time across different environments.
- Future project on image analysis and processing to predict different yield and yield related traits.

Graduate Research Assistant, Department of Plant Biology, Ecology and Evolution, Oklahoma State University, 2019-2022

Supervisor: Dr. Andrew N. Doust (andrew.doust@okstate.edu)

Project: Understanding the genetics base of shattering in pearl millet

- Creation of mapping population using wild and domesticated accessions having different shattering phenotype.
- Generated high density linkage map using SNP markers produced with genotyping-by sequencing approach.
- Performed quantitative trait loci mapping to identify genomic region underlying the shattering in pearl millet and perform comparative genomic analysis for candidate gene identification.

Graduate Teaching Assistant, Department of Plant Biology, Ecology and Evolution, Oklahoma State University, 2019-2022

Supervisor: Dr. Lane Greer (lane.greer@okstate.edu)

Course: Introductory Plant Biology

- Lead a group of TAs for developing the worksheets, pre-lab quizzes, answering keys and grading rubric.
- Work with supervisor to design the format of semester lab course.

Research Intern/Assistant, Agriculture and Botany Division, Nepal Agriculture Research Council, Nepal, 2018-2019

Supervisor: Sr. Scientist Dr. Dhruva B. Thapa (retired) (thapa.dhruva777@gmail.com)

Project: Assist in National Wheat Breeding Unit

- Nursery seed grow-outs, Initial Evaluation Trial (IET), Coordinated Varietal Trial (CVT), and Harvest plus Yield Trial (HPYT).
- Wheat varieties screening against fungal diseases such as yellow rust and stem rust, screening of different generation lines for varietal development, and generation advance through either individual plant selection or bulking method selection.
- Crossing of wheat varieties and assist in hybridization for targeted traits and environments.
- Assist in project done in collaboration with Kansas State university for Elite Spring Wheat Yield Trial in field (ESWYT).

SCHOLARSHIP AND AWARDS:

- **Foundation for food and Agriculture Research (FFAR) fellowship (2022-2025)**
<https://ffar.maps.arcgis.com/apps/Cascade/index.html?appid=d31e21e6d7b748cab84aa14a8e041193>
- **Awarded a research assistantship**, University of Nebraska Lincoln (Fall 2022)
- **Heuermann Recruitment Fellowship (Fall-Spring, 2022)**
- **Awarded a research/teaching assistantship**, OSU.
- **McPherson Travel Award 2020.**
- **Full Scholarship** in the study of B. Sc. Ag. Offered by TU/IAAS.
- Tribhuvan University **Scholarship** during B.Sc. Ag. at the IAAS, provided to the top 12% student of the class.

PUBLICATIONS

Shrestha, N., Hu, H., Shrestha, K., & Doust, N, A. (2023). Pearl millet response to drought: a review. *Frontiers in Plant Science Plant Nutrition (in review)*.

Shrestha, N., Poudel, A., Sharma, S., Parajuli, A., Budhathoki, S., & Shrestha, K. (2018). Correlation Coefficient and Path Analysis of Advance Rice Genotypes in Central Mid-hills of Nepal. *International Journal of Research in Agricultural Sciences*, 5(3), 2348-3997.

Budhathoki, S., Amgain, L. P., Subedi, S., Iqbal, M., **Shrestha, N.**, & Aryal, S. (2018). Assessing growth, productivity and profitability of drought tolerant rice using nutrient expert—rice and other precision fertilizer management practices in Lamjung, Nepal. *Acta Sci. Agric*, 2, 153-158.

PRESENTATION AND PARTICIPATION AT CONFERENCES

- Maize Genetics Conference, 2022- **Shrestha Nikee**, Hodge John, Hu Hao, Peng Qi, Katrien Devos & Doust Andrew. Poster presentation. Understanding the genetic base of shattering in *Cenchrus americanus*.
- Botanical Society of America, annual meeting 2021- **Shrestha Nikee**, Hodge John, Hu Hao, & Doust Andrew. Seminar speaker. Understanding the genetic base of shattering in *Cenchrus americanus*.
- Botanical Society of America, annual meeting 2021- Hodge John, **Shrestha Nikee**, Hu Hao, & Doust Andrew. Seminar speaker. The development of the abscission zone in the inflorescence of *Cenchrus* (Poaceae).
- Three-minute thesis (3MT) presentation 2021- Why do Plants Let Go? – From Phenotype to Genotype.
- IAAS UPA Symposium 2018- **Shrestha Nikee** & Paudel Ankur. Seminar Speaker. Correlation and Variability among Yield and Yield attributes of Advance Rice Genotypes in Rainfed Condition.

- National Conference on Food Science and Technology 2018- Pangen Sanju, **Shrestha Nikee** & Khadka Abhisek. Seminar Speaker. Rice Economy in Nepal.

SKILLS:

- **Computer skills:** R, Python, Linux, MAPMAKER, WinQTL
- **Bioinformatics:** High throughput sequencing analysis (Genomics and Transcriptomics)

ADDITIONAL INVOLVEMENTS:

- **Vice President** of Oklahoma State University Botanical Society (Fall 2020 to Spring 2021)
- **Secretary** of Nepalese Student Association at Oklahoma State University (Fall 2020 to Fall 2021)
- **Graduate and Professional Student Government Association Representative** of Botany Graduate Student Organization (Fall 2020 to Fall 2021)
- **Local Representative** of Young Professionals for Agricultural Development Nepal (2017 to 2019).
- **Board member** at Krishi Campus youth network of Amnesty International Nepal (2017-2018).

REFERENCES:

Dr. James Schnable

Professor, Department of Agronomy and Horticulture
Charles O. Gardner Professor of Maize Quantitative Genetics
University of Nebraska Lincoln

schnable@unl.edu

<http://schnablelab.org>

Dr. Andrew N. Doust

Associate Dean and Professor, College of Art, and Science
Oklahoma State University
201 Life Science East
Stillwater, OK 74078

andrew.doust@okstate.edu

<https://www.doustlab.com/>