

Bivek Bhusal | He/Him/His

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EDUCATION

University of Connecticut, Storrs, CT

Ph.D. Candidate, Plant Science

2019- Present

Remote sensing of crop pest/nutrient stress

Institute of Agriculture and Animal Science, Tribhuvan University, Nepal

2017

B.Sc. Agriculture

TECHNICAL SKILLS

Using drone-based sensors to collect and analyze biotic and abiotic responses from plants.

Using handheld spectroradiometers and analyzing extracted spectral data.

Image processing (ENVI, Agisoft Metashape Pro, Pix4D).

Spatial analysis with ESRI software (ArcGIS Pro, ArcGIS Online).

Experienced with accurate GPS device- Leica Viva GS14 GNSS.

Parametric and non- parametric approaches of data analysis

Executing greenhouse and field experiments, lab rearing of insect colonies.

Programming Skills: R, SAS, Python.

Certification: FAA Part 107 UAS (Remote Pilot) certificate.

Languages: English, Nepali, Hindi.

WORK EXPERIENCE

Advanced Remote Sensing Imaging & Analytics Lab (ARIAL), University of Connecticut

Research intern, June-August 2024.

- Detecting nutrient status in fruit trees through drone-based multispectral imaging.

Department of Plant Science and Landscape Architecture, University of Connecticut

Graduate Research Assistant (and Graduate Student Technician for each summer), since August 2019

- Detecting stress induced by Nitrogen deficiency and Potato Leafhopper infestation in beans using drone-based multispectral imaging and hyperspectral leaf data; August 2019- ongoing.

Department of Ecology and Evolutionary Biology, University of Connecticut

Teaching Assistant, August- December 2023

- Undergraduate laboratory course: Principles of Biology II.

Shelter Nepal and Brihat Agro Farm Pvt. Ltd., Nepal

Agriculture Technical Officer, January 2018 - June 2019

- Supervised and trained technicians in using ArcMap and R-Stat for project documentation and data analysis, project planning and execution, experimental designs and field layouts.
- Trained farmer groups in organic cultivation, integrated pest management techniques, utilization of local resources to create bio pesticides and bio fertilizers, drip irrigation and greenhouse cultivation.

AWARDS AND FELLOWSHIPS

The National Science Foundation Research Traineeship Program- “Team-TERRA fellowship” at the University of Connecticut; \$38,500.

- Worked on interdisciplinary research project- Assessment of Risk from Invasive Insects to the Apple Orchards in Connecticut.
- Received trainings including “Environmental Risk Assessment”, “Stakeholder Engagement”, “Science Communication – Speaking to Public Audience” and “Human Subjects Safety Training for Social/Behavioral Research”.
- Received travel funds for attending multiple conferences.

Clifford R. Burr Memorial Scholarship at the University of Connecticut for the academic years 2019-2020, 2020-2021 and 2023-2024; total \$45,000.

SEMINARS AND CONFERENCES

Entomology 2024: “Empowering Tomorrow with Insect Science”. November 10-13, 2024; Phoenix, AZ.

2024 AWRA, UCOWR, NIWR Joint Water Resources Conference. September 30- October 02, 2024; St. Louis, MO.

2024 IEEE Systems and Technologies for Remote Sensing Applications Through Unmanned Aerial Systems (STRATUS). May 20-22, 2024; Syracuse, NY.

Connecticut GIS Day 2023. Connecticut GIS Network. November 15, 2023. Waterbury, CT.

Entomology 2023: “Insects and Influence: Advancing entomology’s impact on people and policy”. November 5-8, 2023; National Harbor, MD.

2023 Entomological Society of America Eastern Branch Meeting: “Casting a Wider Net: Entomology for Everyone”. March. 18-20, 2023; Providence, RI.

2023 Annual Graduate Student Research Forum. CAHNR, University of Connecticut. April 1, 2023; Storrs, CT.

LEADERSHIP EXPERIENCE

Nepalese Graduate Student’s Association, University of Connecticut, Storrs, CT

President, 2021-2022.

Founder Member and Secretary, 2020-2021.

Technical Students’ Association of Nepal, Tribhuvan University, Nepal

College president- Lamjung Campus, 2015-2016.

National board member, 2016-2017.