Bibek Acharya
3527 SW 20th Ave # 2034, Gainesville, Florida, 32607
Phone: (352) 562 4682 | Email: bibekacharya@ufl.edu
Twitter: https://twitter.com/bibekUF
LinkedIn: https://www.linkedin.com/in/bbkacharya/
Website: https://www.bibek365.com/

EDUCATION

University of Florida, College of Agriculture and Life Sciences Anticipated Graduation: May 2024
Degree: **Doctor of Philosophy**, Major: Agricultural and Biological Engineering

Ph.D. Dissertation: Assessing Nitrogen Transport in a Rotational Production System: Monitoring and Modeling for Water Quality Management

University of Wyoming, College of Agriculture and Natural Resources August 2018–August 2020
Degree: **Master of Science**, Major: Plant Sciences

M.S. Thesis: Quantification and Mapping of Crop Evapotranspiration using Remote Sensing-based Surface Energy Balance Models

Tribhuvan University, Institute of Agriculture and Animal Sciences August 2013–August 2017
Degree: **Bachelor of Science**, Major: Agriculture

B.S. Project: Nitrogen level and irrigation interval on mitigating Stemphylium blight and downy mildew in onion

PROFESSIONAL EXPERIENCE

University of Florida Gainesville, Florida
Graduate Assistant August 2020–May 2024

- Executed crop growth and hydrological models such as DSSAT, HYDRUS and SWAT as well as machine learning models through python programming to solve water quality issues in North-Florida.
- Coordinated in installation of irrigation system, soil moisture sensor, lysimeter and performed lysimeter sampling, soil sampling, plant tissue sampling, soil moisture monitoring and plant canopy monitoring as part of precision water and nutrient management under the supervision of Dr. Vivek Sharma.
- Trained visiting scholars at the University of Florida and students from the Punjab Agricultural University in India on quantifying crop evapotranspiration using Landsat images.

University of Wyoming Powell, Wyoming
Graduate Assistant July 2018–August 2020

- Executed remote sensing-based evapotranspiration models such as METRIC, SEBAL, SEBS, and S-SEBI through ERDAS Imagine and ArcGIS to quantify regional to field level crop evapotranspiration in Big Horn Basin, Wyoming.

- Coordinated in various extension programs, interacted with, and worked alongside growers, extension specialists, and educators hosted at Powell and Lingle, Wyoming.

AWARDS AND RECOGNITIONS

- Awarded **2023 Florida Stormwater Association Educational Foundation (FSAEF) Scholarship** by the Florida Stormwater Association (FSA)

- Awarded **2023 Sanford N. Young Scholarship** by the Florida Section American Water Resources Association (AWRA Florida)

- Awarded **2023 ASABE Blue Ribbon award** for promoting excellence in informational materials outside of the traditional classroom setting. The publication awarded was "*Methods to Quantify In-Field Nutrient Leaching".* https://doi.org/10.32473/edis-ae581-2022

- Awarded **top-up fellowship** for academic year 2023-2024 by the University of Florida Agricultural and Biological Engineering Department.

- Awarded **complimentary conference registration and hotel cost** (over a $585 value) by the Florida Section American Water Resources Association (AWRA Florida) to attend 2023 AWRA Florida annual meeting held in Key West, FL.

- Awarded University of Florida **Water Institute Travel Award Summer 2023** ($1000) to present the research findings at the 2023 American Society of Agricultural and Biological engineers (ASABE) Annual International Meeting held at Omaha, Nebraska.

- Awarded University of Florida **Institute of Food and Agriculture Science travel grant** ($250) to present the research findings at the 2023 American Society of Agricultural and Biological engineers (ASABE) Annual International Meeting held at Omaha, Nebraska.

- Awarded University of Florida **Graduate Student Council travel grant** ($350) to present the research findings at the 2023 American Society of Agricultural and Biological engineers (ASABE) Annual International Meeting held at Omaha, Nebraska.

- Awarded **complimentary conference registration and hotel cost** (over a $650 value) by the Florida Association of Water Quality Control (FAWQC) for student poster presentation in 2023 FAWQC annual conference held in Naples, FL.

- Awarded **McNair Bostick Scholarship** for the academic year 2023 at the University of Florida

- Awarded **Provost annual top-up funding** for the academic year 2022-2023 at the University of Florida

- Awarded **Grinter Fellowship** for Fall 2020 and Spring 2021 term at the University of Florida.

- Awarded **Brand of Excellence - Y Cross Ranch Graduate Scholarship** for academic year 2018-2019 and 2019-2020 for M.S. in Plant Sciences at the University of Wyoming.

- Awarded **Irrigation Association's E3 Winner grant** to attend Irrigation Show and Education Conference at Long Beach, California, USA. December 2018.

- Awarded four-year undergraduate **merit scholarship** by Institute of Agriculture and Animal Sciences, Tribhuvan University, Nepal. 2013-2017.

PUBLICATIONS

- Acharya, B., Sharma, V. **(2023**). Modeling Nutrient Leaching - Field to Regional Scale Estimation: A Review (**Under review**)

- Acharya, B., Sharma, V., Barrett, C., Sindhu, S.S., Zotarelli, L., Dukes, M. **(2022**). Methods to Quantify in-field Nutrient Leaching: AE581/AE581, 12/2022. EDIS 2022 (6). https://doi.org/10.32473/edis-ae581-2022

- Acharya, B., Sharma, V. **(2021**). Comparison of Satellite Driven Surface Energy Balance Models in Estimating Crop Evapotranspiration in Semi-Arid to Arid Inter-Mountain Region. Remote Sens. 13, 1822. https://doi.org/10.3390/rs13091822

- Acharya, B., Sharma, V., Heitholt, J., Tekiela, D., Nippgen, F. (**2020**). Quantification and Mapping of Satellite Driven Surface Energy Balance Fluxes in Semi-Arid to Arid Inter-Mountain Region. *Remote Sens. 12*, 4019. https://doi.org/10.3390/rs12244019

- Acharya, B., and Shrestha, R.K. (**2018**). Nitrogen level and irrigation interval on mitigating Stemphylium blight and downy mildew in onion. *International Journal of Applied Science and Biotechnology. 6(*1) 17-22. https://doi.org/10.3126/ijasbt.v6i1.18795

SELECTED ABSTRACTS AND PRESENTATIONS

- Acharya, B., and Sharma, V. (**2023)**. Rotational Production for Agricultural Best Management Practice (BMP). An oral presentation at the American Society of Agriculture and Biological Engineers - Annual international meeting (ASABE - AIM).

- Acharya, B., and Sharma, V. (**2023)**. Simulating Nitrogen and Water Dynamics in a Rotational Production System. A poster presentation at the American Society of Agriculture and Biological Engineers - Annual international meeting (ASABE - AIM).

- Prasanna, V., Morrow, M., Acharya, B., Voddevolu, U.B.P., Sharma, V. **(2023**). Development of Integrated Precision Irrigation and Nitrogen Management Strategies for Potatoes. An oral presentation at the American Society of Agriculture and Biological Engineers - Annual international meeting (ASABE - AIM).

- Acharya, B., and Sharma, V. (**2023)**. Comparing the Effectiveness of Four Different Rotational Production Systems on Nitrate Leaching in Sandy Soils of Suwannee River Basin. A poster presentation at the Florida Association for Water Quality Control (FAWQC).

- Acharya, B., and Sharma, V. (**2023)**. Rotational Production for Agricultural Best Management Practice (BMP). An oral presentation at the Florida Section American Society of Agriculture and Biological Engineers (FL-ASABE).

- Acharya, B., and Sharma, V. (**2023)**. Simulating Nitrogen and Water Dynamics in a Rotational Production System. An oral presentation at the Florida Section American Society of Agriculture and Biological Engineers (FL-ASABE).

- Acharya, B., and Sharma, V. (**2023)**. Simulating Nitrogen and Water Dynamics in a Rotational Production System. A poster presentation at Agricultural and Biological Engineering Department Poster Symposium, University of Florida.

- Prasanna, V., Morrow, M., Acharya, B., Voddevolu, U.B.P., Sharma, V. **(2023**). Development of Integrated Precision Irrigation and Nitrogen Management Strategies for Potatoes. A poster presentation at School of Natural Resources and Environment Poster Symposium, University of Florida.

- Acharya, B., and Sharma, V. (**2022)**. Simulating Nitrogen and Water Dynamics in a Rotational Production System. A poster presentation at American Society of Civil Engineers- Environmental and Water Resource Institute (ASCE-EWRI).

- Acharya, B., and Sharma, V. (**2022)**. Simulating Nitrogen and Water Dynamics in a Rotational Production System. An Oral presentation at Florida section of American Society of Agricultural and Biological Engineers (FL-ASABE).

- Acharya, B. (**2021**). Comparing the Effectiveness of Crop Rotation on Nitrate Leaching in Sandy Soils of Northern Florida. A 3-minute Thesis competition at Agricultural and Biological Engineering Department, University of Florida.

- Acharya, B., and Sharma, V. (**2020)**. Quantification and Mapping of Crop Evapotranspiration using Remote Sensing Based Surface Energy Balance Models in the Inter Mountain Terrain. A poster presentation at Agricultural and Biological Engineering Department Virtual Poster Symposium, University of Florida.

- Acharya, B., and Sharma, V. (**2020**). Quantification and Mapping of Surface Energy Balance Fluxes using METRIC algorithm in the Semi-arid to Arid region of Wyoming. A poster presentation at American Society of Agricultural and Biological engineers (ASABE), Virtual and On Demand.

- Acharya, B., and Sharma, V. (**2020**). Comparison of Different Satellite-based Image Processing Models on Estimating Surface Energy Balance Fluxes in Semi-arid to Arid Region of Wyoming. An oral presentation at American Society of Agricultural and Biological engineers (ASABE), Virtual and On Demand.

- Acharya, B., and Sharma, V. (**2019**). Quantification of Actual Crop Evapotranspiration using Satellite Remote Sensing in Southeast Wyoming and Nebraska Panhandle. A poster presentation at Sustainable Agricultural Research and Extension Center (SAREC), Lingle, WY.

- Acharya, B., and Sharma, V. (**2019**). Quantification of Actual Crop Evapotranspiration using Satellite Remote Sensing in Big-Horn Basin of Wyoming. Powell Research and Extension Center (PREC), Powell, WY.

- Acharya, B. (**2017**). Nitrogen level and irrigation interval on mitigating Stemphylium blight and downy mildew in onion. An oral presentation at International Conference on Mountains in the Changing World (MoChWo) in Kathmandu, Nepal.

- Acharya, B. **(2017**). Nitrogen level and irrigation interval on mitigating Stemphylium blight and downy mildew in onion. 4th Symposium on Undergraduate Practicum Assessment, Lamjung, Nepal.

SKILLS

- **Programming Language:** Python and R
- **Hydrological and Crop Growth Simulation Models:** DSSAT, HYDRUS, SWAT, WAVE
- **Version Control**: GitHub
- **Geospatial software**: ERDAS IMAGINE, ENVI, ArcGIS
- **Statistical software:** R, JMP Pro, SPSS
- **Agriculture Measurements:** Lysimeter sampling, Soil sampling, Plant Tissue Sampling, soil moisture monitoring, Plant Canopy monitoring, Tempe cells and Pressure plate apparatus, infiltrometer
- **Farm equipment:** irrigation system

PROFESSIONAL AFFILIATIONS

- American Society of Agronomy; 2019 to present.
- Crop Science Society of America; 2019 to present.
- Soil Science Society of America; 2019 to present.
- American Water Resources Association, 2023
- American Society of Agricultural and Biological Engineers; 2019 to present.
- American Water Works Association; 2020 to present.
- ABE Graduate Student Organization, University of Florida; 2020 to present.
- Environmental and Water Resource Institute; 2021 to present.
- Nepalese Agricultural Professional of Americas; 2021 to present.

REFERENCE

Dr. Vivek Sharma
Assistant Professor, Department of Agricultural and Biological Engineering
University of Florida
P.O. Box 110570
Gainesville, FL 32611
402-419-1687
vsharma1@ufl.edu