Bibek Acharya

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SUMMARY

Passionate researcher in the field of agricultural engineering. Primary focus on water management employing a multi-disciplinary approach of field research, process-based modeling, remote sensing, and machine learning techniques.

EDUCATION

University of Florida, College of Agriculture and Life Sciences — August 2020–May 2024
Degree: Doctor of Philosophy, Major: Agricultural and Biological Engineering

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 specialist, and educators conducted at Powell and Lingle, Wyoming.

SKILLS

Python, ERDAS IMAGINE, ENVI, ArcGIS, QGIS, DSSAT, HYDRUS, SWAT, WAVE, GitHub, R, JMP Pro, and SPSS

SELECTED AWARDS

- 2023 American Water Resources Association Sanford N. Young Scholarship
- 2023 American Society of Agriculture and Biological Engineers Blue Ribbon award
- 2023 University of Florida McNair Bostick Scholarship
- 2023 University of Florida Water Institute Travel Award
- 2020 University of Florida Grinter Fellowship
- 2018 Irrigation Association E3 learner Education and Travel Award

SELECTED PUBLICATIONS

- 2022: Methods to Quantify in-field Nutrient Leaching. https://doi.org/10.32473/edis-ae581-2022
- 2021: Comparison of Satellite Driven Surface Energy Balance Models in Estimating Crop Evapotranspiration in Semi-Arid to Arid Inter-Mountain Region. https://doi.org/10.3390/rs13091822

SELECTED CONFERENCE TALKS

- 2023: American Society of Agriculture and Biological Engineers (ASABE)
- 2022: American Society of Civil Engineers- Environmental and Water Resource Institute (ASCE-EWRI)

PROJECTS

- Assessing Nitrogen Transport in a Rotational Production System: Monitoring and Modeling for Water Quality Management: PhD. Dissertation
- Quantification and Mapping of Crop Evapotranspiration using Remote Sensing-based Surface Energy Balance Models: M.S. Thesis