Ripendra Awal
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A. Education/Training

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Kyoto University, Japan	Ph.D.	2008	Civil & Earth Resources Eng.
Tribhuvan University, Nepal	M.Sc.	2003	Water Resources Engineering
Tribhuvan University, Nepal	B.E.	1997	Civil Engineering

B. Research and Professional Experience

- 2020 - Present, Associate Professor, College of Agriculture and Human Sciences, PVAMU
- 2018 - 2020, Interim System Leader: Natural Resources and Environmental Systems, PVAMU
- 2013 - Present, Research Scientist, Prairie View A&M University
- 2011 - 2013, Assistant Researcher, Natural Resources and Env. Management, Univ. of Hawaii, Manoa
- 2009 - 2011, JSPS Postdoctoral Research Fellow, Kyoto University, Japan
- 2008 - 2009, Research Associate, Disaster Prevention Research Institute (DPRI), Kyoto University
- 2003 - 2005, Hydropower Engineer, Nepal Electricity Authority, Nepal
- 1997 - 2003, Site/Project Engineer, Mahalaxmi Construction Concern Pvt. Ltd., Nepal

C. Student Training and Teaching/Co-Teaching

- AGRI 2360 Environmental Soil Science (Fall 2021: AGRI 2360P01 & AGRI 2360P02 and Fall 2022: AGRI 2360P03 & AGRI 2360P04)
- AGRI 2363 Forage and Pasture Management (Spring 2022 and Spring 2023: AGRI 2363P01 & AGRI 2363P02)
- AGHR 4399 Independent Study (AGHR 4413-P01: Special Topics: Rising Technologies and Predictive Analytics for a Sustainable Water-Energy-Food Nexus, Summer 2021)
- AGRO 3993: Independent Study (Soil Morphology and Classification, Spring 2021)
- AGRO 2603 Environmental Soil Science (Fall 2020: AGRO 2603Z01 & AGRO 2603Z02)
- 2019-2023 NSF INFEWS Scholar program: Innovation at the Nexus of Food-Energy-Water System led by University of Texas – Austin (Ongoing)
- 2016-2018 & 2019-2023 Integrated High Impact Extension, Research, and Education Program for Undergraduate Students in Water Quality, TAMU-PVAMU REEU
- NREM600: Evaluation of Natural Resources Management (Fall 2011, Fall 2012)
- NREM660/CEE 625: Hydrologic Process in Soils (Fall 2012), NREM662: Watershed Hydrology (Fall 2011)

D. Training courses

- *Ruth J. Simmons Leadership Symposium*, Nov. 23, 2019, PVAMU Northwest Center, Houston, TX.
- *TACC (Texas Advanced Computing Center) Computational Science in the Cloud Institute 2017*, July 24 – 28, 2017, the University of Texas at Austin, Texas.
- *METRIC (Mapping EvapoTranspiration at high Resolution with Internalized Calibration) Evapotranspiration Workshop*, August 22-25, 2016, UC Davis, CA.
- *TACC (Texas Advanced Computing Center) Summer Supercomputing Institute (Scientific Visualization and Data Analysis)*, August 1 – 5, 2016, University of Texas at Austin, Texas.
- *DSSAT 2016 International Training Program: Assessing Crop Production, Nutrient Management, Climatic Risk and Environmental Sustainability with Simulation Models,* May 16 – 21, 2016 at Griffin, Georgia, USA
- IHP Nagoya Training Course in Asia and the Pacific Region on "Water Resources and Water-Related Disasters under Climate Change - Prediction, Impact Assessment and Adaptation" - 29th November to 12th December, 2009 at Kyoto University and other Institutes under the auspices of UNESCO Office, Jakarta.

E. Honors and Awards

- Excellence in Research Award, 2021, Faculty Senate, PVAMU.
- Irrigation E3 (Leader) Award, 2020, Irrigation Association, USA.
- Outstanding Researcher Award, 2019, Office of Research, Innovation, and Sponsored Programs.
- Research Week Creative Activities Display - 3rd Place STEM, 2019, PVAMU.

- 2018 Outstanding Researcher Award, College of Agriculture and Human Sciences, PVAMU
- JSPS Postdoctoral Fellowship for Foreign Researchers, 2009-2011
- Young Researchers Award-2009, Int. Symp. on Prediction and Simulation Methods for Geohazard Mitigation
- Hydraulic Eng. Best Paper Award -2009, Ann. J. of Hydraulic Eng., Japan Society of Civil Engineers (JSCE).
- Excellent Research Presentation Award -2008, 27th Ann. Conf. of Japan Society for Natural Disaster Science.

E. Funded Research (Active)

- 2022-2023: Predicting Crop Yield of Major Crops Using AI Techniques in Northern High Plains, Texas, Faculty RISE Graduate Research Award, PVAMU (PI)
- 2022-2025: AI-based Program for Advancing Research, Education, and Extension Activities in Precision Agriculture at PVAMU, NIFA/1890/CBG (Co-PI).
- 2021-2024: GetAgSmart: Building Capacity in Smart Agricultural Technologies for Underserved Communities, NIFA/AFRI EWD (Co-PI)
- 2020-2023: Zero-Waste Poultry Processing with Sequential Membrane Separation and Anaerobic Digestion, NIFA/1890/CBG (Co-PI).
- 2019-2024: CREST Center for Energy & Environmental Sustainability, NSF (Senior Personnel).
- 2019-2023: Integrated High Impact Extension, Research, and Education Program for Undergraduate Students in Water Quality, Research and Extension Experiences for Undergraduates (REEU), NIFA (Co-PI).
- 2019-2023: An Integrated Approach to Study and Disseminate the Impact of Climate Change on Agriculture and Water Quality, NIFA/1890/CBG (Co-PI).
- 2018-2023: NRT-INFEWS: Graduate Student Education: Reducing Energy Barriers for Novel Water Supply Use in Sustainable Agriculture, NSF (Senior Personnel).

F. Professional Service

- ***Review Panel Member:*** Earth Science Applications: Disaster Risk Reduction and Response, NASA
- ***Review Panel Chair:*** NP 211 Panel 6. Computational Tool Development (2016) of the USDA, ARS 211 Water Availability and Watershed Management National Program

G. Selected Publications

- Melaku, N.D., Fares, A., and Awal, R.: Exploring the unprecedented impact of winter storm Uri on power outage, air quality, and water system in Texas, USA, *Sustainability* 2023, 15(5), 4173.
- Brody, S., Blessing, R., Ross, A., Fares, A., Awal, R., Murphy, R.R., Juan, A., Talchabhadel, R., Rhodes, E.C., Adams, J., Teleki, K., and Clearfield, E. (2022). Navasota River Flooding Project: Report Findings & Recommendations, Institute for a Disaster Resilient Texas (IDRT), Texas A&M University.
- Awal, R., Rahman, A., Fares, A., and Habibi, H.: Calibration and Evaluation of Empirical Methods to Estimate Reference Crop Evapotranspiration in West Texas, *Water* 2022, Volume 14, Issue 19, 3032.
- Veettil, A., Fares, A., and Awal, R.: Winter Storm Uri and Temporary Drought Relief in the Western Climate Divisions of Texas, *Science of the Total Environment*, 19 April 2022, 155336
- Cooper, C.M., Troutman, J.P., Awal, R., Habibi, H., and Fares, A.: Climate change-induced variations in blue and green water usage in U.S. urban agriculture, *Journal of Cleaner Production,* Volume 348, 10 May 2022, 131326.
- Awal, R., Elhassan, A., Abbas, F., Fares, A., Bayabil, H.K., Ray, R.L., and Woldesenbet, S.: Patterns of nutrient dynamics in the root zone of collard greens grown under different organic amendment types and rates*, Sustainability* 2021, *13*, 6857.
- Habibi, H., Awal, R., Fares, A., and Temimi, M.: Performance of Multi-Radar Multi-Sensor (MRMS) product in monitoring precipitation under extreme events in Harris County, Texas, *Journal of Hydrology*, 2021.
- Awal, R., Fares, A., and Habibi, H.: Irrigation Scheduling Tools: IrrigWise and IrrigWise_PRISM for Agricultural Crops and Urban Landscapes, *6th Decennial National Irrigation Symposium*, Dec. 6-8, 2021, San Diego, California 2020-050.
- Awal, R., Habibi, H., Fares, A., and Deb, S.: Estimating Reference Crop Evapotranspiration under Limited Climate Data in West Texas, *Journal of Hydrology: Regional Studies*, 2020, 28, 100677.
- Habibi, H., Awal, R., Fares, A., and Ghahremannejad, M.: COVID-19 and the Improvement of the Global Air Quality: The Bright Side of a Pandemic. *Atmosphere* 2020, 11, 1279.
- Ahmed, A.A., Omari, S.A., Awal, R., Fares, A., and Chouikha, M.: A distributed system for supporting smart irrigation using Internet of Things technology, *Engineering Reports*, 2020.
- Ray, R.L., Griffin, R.W., Fares, A., Elhassan, A., Awal, R., Woldesenbet, S., and Risch, E.: Soil CO_2 emissions from an experimental research farm: Effects of organic amendments, temperature, and rainfall, *Scientific Reports*, 2020, 10, 5849.

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