Sushil Kumar Himanshu, Ph.D.

Assistant Professor, Department of Food, Agriculture and Natural Resources
School of Environment, Resources and Development
Asian Institute of Technology (AIT), Pathum Thani, Thailand
Phone: +(66) 2524-5480 (Off.); +(66) 097-295-6188 (Mob.)
Email: sushil-kumar@ait.ac.th; sushilkumarhimanhsu@gmail.com
Website: https://skhimanshu.com/

EDUCATION

Ph.D. (Water Resources Development & Management) July 2013 – December 2017
Indian Institute of Technology (https://www.iitr.ac.in/), Roorkee, India
Overall Grade: First Class, CGPA 8.60/10.00
Dissertation: Evaluation of Satellite-Based Precipitation Estimates for Hydrological Modelling

M. Tech. (Hydrology) July 2010 – June 2012
Indian Institute of Technology (https://www.iitr.ac.in/), Roorkee, India
Overall Grade: First Class, CGPA 8.15/10.00
Thesis: Hydrological Reappraisal for Vishnugad-Pipalkoti Hydro-Electric Project

B. Tech. (Agricultural Engineering) July 2006 – June 2010
Sam Higginbottom University of Agriculture, Technology and Sciences (https://shuats.edu.in/), Prayagraj, India
Overall Grade: First Class, CGPA 9.60/10.00
Thesis: Development of Software for Heat Load Calculations in Cold Storage Using Visual Basics

POSITIONS HELD

Assistant Professor and Chair, Agricultural Systems and Engineering September 2021–Present
Asian Institute of Technology (https://www.ait.ac.th/), Thailand

Teach graduate-level courses at Agricultural Systems and Engineering Academic Program; supervise Master and Doctoral students as a Chair/Co-Chair/Committee Member; conduct research and outreach activities

Post-Doctoral Research Associate September 2018–August 2021
Texas A&M AgriLife Research, Texas A&M University System
(https://vernon.tamu.edu/), Vernon, Texas, USA

Conducted research on the development and evaluation of strategies for enhancing crop water productivity using ground- and UAV-based measurement platforms and crop modeling; provided mentorship and hands-on training on crop simulation modeling to Master and Doctoral students; grant writing

Research Scientist December 2017–August 2018
National Remote Sensing Center, Indian Space Research Organization
(https://www.isro.gov.in/), Hyderabad, India

Conducted research on the operationalization of national-level hydrological modeling framework for in-season hydrological water balance components at daily/weekly/fortnightly time steps

Assistant Professor July 2012–July 2013
Graphic Era University (https://www.geu.ac.in/), Dehradun, India

Taught undergraduate-level courses at the Department of Civil Engineering; supervised undergraduate students as Chair/Co-Chair/Committee Member

SPECIAL HONORS AND AWARDS

Young Researcher Award 2024 May 2024

Awarded by the Asian Association for Agricultural Engineering in collaboration with the Thai Society of Agricultural Engineering.

Distinguished Alumni April 2022

Invited as 'Distinguished Alumni' to deliver a talk on 'Career Planning for Post-graduate Researchers' organized by the Department of Water Resources Development & Management, Indian Institute of Technology Roorkee, India [13 April 2022]

Outstanding Reviewer Award June 2020

American Society of Agricultural and Biological Engineers (ASABE) for the year 2019-2020

Best Water Resources Student Award-2018 March 2019

For outstanding Ph.D. research work, jointly by the Indian Water Resources Society (IWRS) and Indian Institute of Technology Roorkee, India

International Scholar July 2018

For a research proposal on 'Planning and Development of Climate Resilient Water Sensitive Urban Designs: A Case Study of Hyderabad Metropolitan City' under 'Scheme for Promotion of Academic and Research Collaboration (SPARC), Govt. of India'

International Travel Award June 2017

For presenting my Ph.D. research work at EWRI, ASCE Conference-2017, Sacramento, USA by 'Science and Engineering Research Board, Govt. of India'

Bergen Summer Research School-2016 Award June 2016

For attending the course on 'Modelling the complexities of water, climate, and society' at the University of Bergen, Norway, under the campaign 'Water, Climate and Society'

Alumni Funded: Foreign Travel Grant June 2015

For presenting research work at the International Conference on Structural, Architectural and Civil Engineering, Dubai, UAE by 'The Alumni Association, Indian Institute of Technology Roorkee, India'

Ministry of Human Resource Development (MHRD) Fellowship 2013-2017

To pursue a Ph.D. at the Department of Water Resources Development & Management, Indian Institute of Technology Roorkee, India

Councillor and Member, Student Affairs Council, Indian Institute of Technology Roorkee, India 2011-2012 & 2014-2015

Elected and represented the Coordinating Committee of Hostels and Student Affairs Council

Ministry of Human Resource Development (MHRD) Fellowship 2010-2012

To pursue M. Tech. at the Department of Hydrology, Indian Institute of Technology Roorkee, India

National Talent Scholarship 2006-2010

For pursuing B. Tech. (Agricultural Engineering) at the SHUATS, Prayagraj, by the 'Indian Council of Agricultural Research (ICAR)'

PARTICIPATION IN WORKSHOPS, SHORT COURSES, ETC.

11-15 June 2024 Duration: 5 Days
International Faculty Development Workshop
Organized by Dr. D. Y. Patil Institute of Technology, Pune, India

1-2 August 2022 Duration: 2 Days
Workshop on 'Implementation of Participative Teaching Methods and Digital Tools in Higher Education Teaching'
Organized under the INCREASE project (Erasmus Plus- EU funded) by AIT, Thailand

18 February 2022 Duration: 1 Day
Natural Farming & Water Conservation
35th Water Talk, organized by the Dept. of Water Resources, River Development and Ganga Rejuvenation, Govt. of India

10-18 July 2021 Duration: 9 Days
Workshop on 'Python'
Organized by the Society of Young Agriculture and Hydrology Scholars of India (SYAHI)

15 January 2021 Duration: 1 Day
Efficient Use of Water in Agriculture for Water Security
21st Water Talk, organized by the Dept. of Water Resources, River Development and Ganga Rejuvenation, Govt. of India

1 February 2019 Duration: 1 Day
Workshop on 'Flood Management under Changing Climate'
Organized by the Indian Water Resources Society, India

26-27 November 2016 Duration: 2 Days
Workshop on 'Challenges in Irrigation Management for Food Security'
Organized by the Indian Water Resources Society, India

13-24 June 2016 Duration: 2 Weeks
Summer School on 'Water, Climate and Society'
Organized by the University of Bergen, Norway

27 February 2015 Duration: 1 Day
Workshop on 'Use of Web of Science for Research'
Organized by the Indian Institute of Technology Roorkee, India

29 October 2012- 2 November 2012 Duration: 5 Days
Workshop on 'Advanced soft computing techniques in Hydrology and its applications'
Organized by the National Institute of Hydrology and Indian Association of Hydrologists

7-8 September 2009 Duration: 2 Days
Workshop on 'Water Quality Research to evaluate the effects of Agricultural Practices utilized in the United States and India'
Organized by the SHUATS, Prayagraj in association with the United States Department of Agriculture (USDA)

RESEARCH INTERESTS

- Precision Farming
- Climate Resilient Agricultural Systems
- Smart Irrigation Strategies and Decision Support Systems
- Remote Sensing, GIS, Drones, and IoT Applications in Agriculture
- Big Data Analytics and AI/ML Applications in Agriculture
- Hydroponic and Vertical Farming Production Systems
- Agro-meteorological Forecasts and Advisories Services
- Cropping System Modelling

RESEARCH PUBLICATIONS

(Google Scholar citations: 1845; h-index: 22; i10-index: 41 as of March 9, 2025)
(Scopus citations: 1154; total documents: 74; h-index: 17 as of March 9, 2025)
Books and Monographs: 4
Refereed Journal Articles: 67 (+14 in review)
Book Chapters: 12
Conference/workshop Papers: 56 (9 full-length/proceedings papers and 47 abstracts/posters)
Development Project Reports: 5; News in Mass Media (newspaper, TV, major websites, etc.): 14
Invited Talks/Presentations/Guest Lectures: 11

I. Books and Monographs (4)

1) **Himanshu SK**, Kumar H, Gupta PK, Palmate SS. (2025). Precision Technologies for Digital Agriculture: IoT, Big Data, Crop Modeling, and AI for Agricultural Excellence. Elsevier, Amsterdam, Netherlands. ISBN: 9780443405136 [In Press]
2) Gupta S, **Himanshu SK,** Gupta PK**.** (2024). Advances in Agri-Tech Approaches for Nutrients and Irrigation Water Management. CRC Press, Tailor and Francis, Boca Raton, FL, USA. ISBN: 9781032450230. (http://doi.org/10.1201/9781003441175)
3) Garg MC, Rajput VD, Minkina T, **Himanshu SK**. (2024). Nano-solutions for Sustainable Water and Wastewater Management – From Monitoring to Treatment. Springer Nature, Switzerland AG. ISBN: 9783031827938. (https://link.springer.com/book/9783031827938)
4) Gupta PK, Yadav B, **Himanshu SK.** (2022). Advances in Remediation Techniques for Polluted Soils and Groundwater. Elsevier, Amsterdam, Netherlands. ISBN: 9780128238448. (https://doi.org/10.1016/C2020-0-00651-1)

II. Refereed Journal Articles

Published (66)

2025

1) Gade SA, Madolli MJ, García-Caparrósc P, Ullah H, Cha-um S, Datta A, **Himanshua SK***. (2025). Advancements in UAV remote sensing for agricultural yield estimation: a systematic comprehensive

review of platforms, sensors, and data analytics. *Remote Sensing Applications: Society and Environment*, 37, 101418, https://doi.org/10.1016/j.rsase.2024.101418. Publisher: Elsevier [Impact Factor: 3.8]

2) Rahman A, Farhad Z, Rahman MS, **Himanshu SK**, Shrestha RP, Datta A. (2025). Exploring small-scale farmers' agricultural production and adaptation strategies under soil salinity impacts in coastal areas of Bangladesh. *Environmental Development, 54, 101123,* https://doi.org/10.1016/j.envdev.2024.101123. Publisher: Elsevier [Impact Factor: 4.7]

3) Madolli MJ, Kanannavar PS, Gade SA, Datta A, **Himanshu SK***. (2025). Assessing the effects of topographical variations on crop yield, soil water, and water productivity in rainfed sorghum production systems. *Water Conservation Science and Engineering*, 10, 21. https://doi.org/10.1007/s41101-025-00345-4. Publisher: Springer [Impact Factor: 1.3]

4) Udpuay S, Ullah H, **Himanshu SK**, García-Caparrós P, Praseartkul P, Tisarum R, Cha-um S, Datta A. (2025). Morpho-physiological and yield responses of okra to exogenous application of silicon and plant growth regulators under drought stress. *Journal of Soil Science and Plant Nutrition, https://doi.org/10.1007/s42729-025-02274-6*. Publisher: Springer [Impact Factor: 3.4]

5) Su Q, Ale S, **Himanshu SK**, Singh J, Singh VP (2025). Calibration and bias correction of the seasonal weather forecasts of the North American Multi-Model Ensemble (NMME) for regional crop modeling and irrigation management. *The Journal of Agricultural Science*, https://doi.org/10.1017/S0021859625000139. Publisher: Cambridge University Press [Impact Factor: 2.0]

2024

6) Vilavan S, Das D, Ullah H, Ahmed SF, Cha-um S, Datta A, **Himanshu SK***. (2024). Simulating the climate change impacts and potential adaptation strategies for rice production in the lower Chao Phraya Basin. *Environmental Monitoring and Assessment*, 196, 1192, https://doi.org/10.1007/s10661-024-13362-y. Publisher: Springer [Impact Factor: 3.0]

7) Ejigu D, Pushpalatha R, Jayaprakash SK, Gangadharan B, **Himanshu SK**, Gopakumar S. (2024). Integrated fertilizers for sustainable wheat production to improve food security—a comprehensive review. *Journal of Plant Nutrition and Soil Science*, https://doi.org/10.1002/jpln.202400213. Publisher: Wiley [Impact Factor: 2.6]

8) Ahmed SF, Ullah H, Chowdhury R, Bony ZF, **Himanshu SK**, Attia A, Cha-um S, Datta A. (2024). Natural adaptations, tolerance mechanisms, and management concepts of crop plants against salt stress: a critical review. *Advances in Agronomy,* 187, 213-309, https://doi.org/10.1016/bs.agron.2024.05.004. Publisher: Elsevier [Impact Factor: 6.9]

9) Rahman MS, Zulfiqar F, Ullah H, **Himanshu SK**, Rahman M, Datta A. (2024). Does the adoption of homestead gardening increase dietary diversity in climate-vulnerable coastal areas? Evidence from Bangladesh. *Asia-Pacific Journal of Regional Science,* 8, 859-878, https://doi.org/10.1007/s41685-024-00347-5. Publisher: Springer [Impact Factor: 1.9]

10) Khalequzzaman, Ullah H, **Himanshu SK**, García-Caparrós P, Praseartkul P, Tisarum R, Cha-um S, Datta A. (2024). Exogenous silicon and salicylic acid applications enhance growth, yield, and physiological traits of cotton plants under drought stress. *Journal of Soil Science and Plant Nutrition*, 24, 5947–5960, https://doi.org/10.1007/s42729-024-01952-1. Publisher: Springer [Impact Factor: 3.4]

11) Nguyen HM, Babel MS, Tangdamrongsub N, **Himanshu SK**, Hamel P, Park E, Loc HH. (2024). Nature-based solutions for improving food security: A systematic global review. *Heliyon*, 10(16), e36082, https://doi.org/10.1016/j.heliyon.2024.e36082. Publisher: Elsevier [Impact Factor: 3.4]

12) Biswas A, Ullah H, **Himanshu SK**, García-Caparrós P, Chungloo D, Praseartkul P, Tisarum R, Cha-um S, Datta A. (2024). Morpho-physio-biochemical responses of sweet basil plants to integrated application of silicon and salicylic acid under water supply restrictions. *Silicon*, 16, 5841–5854https://doi.org/10.1007/s12633-024-03123-4. Publisher: Springer [Impact Factor: 2.8]

13) Tisarum R, Theerawitaya C, Praseartkul P, Chungloo D, Ullah H, **Himanshu SK**, Datta A, Cha-umm S. (2024). Screening cotton genotypes for their drought tolerance ability based on the expression level of dehydration-responsive element-binding protein and proline biosynthesis-related genes and morpho-physio-biochemical responses. *Protoplasma*, 261, 783–798, https://doi.org/10.1007/s00709-024-01935-0. Publisher: Springer [Impact Factor: 2.5]

14) Udpuay S, Ullah H, **Himanshu SK**, Tisarum R, Praseartkul P, Cha-um S, Datta A. (2024). Effects of microbial biofertilizer on growth, physio-biochemical traits, fruit yield, and water productivity of okra under drought stress. *Biocatalysis and Agricultural Biotechnology*, 58, 103125, https://doi.org/10.1016/j.bcab.2024.103125. Publisher: Elsevier [Impact Factor: 3.4]

15) Khalequzzaman, Ullah H, Himanshu SK, García-Caparrós P, Tisarum R, Praseartkul P, Cha-Um S, Datta, A. (2024). Growth, yield, and fiber quality of cotton plants under drought stress are positively affected by seed priming with potassium nitrate. *Journal of Plant Nutrition*, 47(19), 3646-3664, https://doi.org/10.1080/01904167.2024.2380784. Publisher: Taylor and Francis [Impact Factor: 1.6]

16) Udpuay S, Ullah H, **Himanshu SK**, Tisarum R, Cha-um S, Datta A. (2024). Drought tolerance screening of okra genotypes in relation to growth and physio-biochemical traits at the early seedling stage. *Genetic Resources and Crop Evolution*. 71, 1271–1290, https://doi.org/10.1007/s10722-023-01689-3. Publisher: Springer [Impact Factor: 1.6]

17) Chungloo D, Tisarum R, Pinruan U, Sotesaritkul T, Saimi K, Praseartkul P, **Himanshu SK**, Datta A, Cha-um S. (2024). Alleviation of water-deficit stress in turmeric plant (*Curcuma longa L.*) using phosphate solubilizing rhizo-microbes inoculation. *3 Biotech*, 14(3), 69, https://doi.org/10.1007/s13205-024-03922-x. Publisher: Springer [Impact Factor: 2.0]

18) Ahmed M, Ullah H, **Himanshu SK**, García-Caparrós P, Tisarum R, Cha-um S, Datta A. (2024). *Ascophyllum nodosum* seaweed extract and potassium alleviate drought damage in tomato by improving plant water relations, photosynthetic performance, and stomatal function. *Journal of Applied Phycology*, 36, 2255–2268, https://doi.org/10.1007/s10811-024-03266-2. Publisher: Springer [Impact Factor: 2.8]

19) Alam A, Ullah U, **Himanshu SK**, Tisarum R, Praseartkul P, Cha-um S, Datta A. (2024). Effect of Silicon Application Method on Morpho-Physio-Biochemical Traits of Cucumber Plants under Drought Stress. *Silicon*,16, 4867–4881, https://doi.org/10.1007/s12633-024-03058-w. Publisher: Springer [Impact Factor: 2.8]

2023

20) **Himanshu SK**, Ale S, Bell J, Fan Y, Samanta S, Bordovsky J, Gitz D, Brauer D. (2023). Evaluation of growth-stage-based variable deficit irrigation strategies for cotton production in the Texas High Plains. *Agricultural Water Management,* 280, 108222, https://doi.org/10.1016/j.agwat.2023.108222. Publisher: Elsevier [Impact Factor: 5.9]

21) **Himanshu SK***, Pandey A, Madolli M, Palmate S, Kumar A, Patidar N, Yadav B. (2023). An ensemble hydrologic modeling system for runoff and evapotranspiration evaluation over an agricultural watershed.

* Corresponding author

Journal of the Indian Society of Remote Sensing, 51, 177-196, https://doi.org/10.1007/s12524-022-01634-4. Publisher: Springer [Impact Factor: 2.2]

22) **Himanshu SK***, Pandey, A, Karki K, Pandey RP, Palmate SS, Datta, A. (2023). Assessing the applicability of Variable Infiltration Capacity (VIC) Model and Remote Sensing Products for Water Balance Study of a River Basin. *Journal of the Indian Society of Remote Sensing*. 51, 2323-2341, https://doi.org/10.1007/s12524-023-01768-z. Publisher: Springer [Impact Factor: 2.2]

23) Boote KJ, Hoogenboom G, Ale S, Adams C, Shrestha R, Mvyuekure RF, **Himanshu SK**, Grover K, Angadi S. (2023). Adapting the CROPGRO model to simulate growth and production of guar, *Cyamopsis tetragonoloba* L, an industrial legume crop. *Industrial Crops and Products*, 197, 116596, https://doi.org/10.1016/j.indcrop.2023.116596. Publisher: Elsevier [Impact Factor: 5.6]

24) Ullah H, Ahmed SF, Santiago-Arenasb R, **Himanshu SK**, Mansour E, Cha-um S, Datta A. (2023). Tolerance mechanism and management concepts of iron toxicity in rice: A critical review. *Advances in Agronomy*, 177, 215-257, https://doi.org/10.1016/bs.agron.2022.10.001. Publisher: Elsevier [Impact Factor: 6.9]

25) Praseartkul P, Taota K, Pipatsitee P, Tisarum R, Sakulleerungroj K, Sotesaritkul T, **Himanshu SK**, Datta A, Cha-um S. (2023). Unmanned aerial vehicle-based vegetation monitoring of aboveground and belowground traits of the turmeric plant (*Curcuma longa* L.). *International Journal of Environmental Science and Technology*, 20, 8673–8686, https://doi.org/10.1007/s13762-022-04545-6. Publisher: Springer [Impact Factor: 3.0]

26) Bawa A, Samanta S, **Himanshu SK**, Kim J, Singh J, Ale S, Chang A, Jung J, DeLaune P, Bordovsky J, Barnes E. (2023). A support vector machine and image processing-based approach for counting cotton bolls and estimating lint yield from UAV imagery. *Smart Agricultural Technology*, 3, 100140, https://doi.org/10.1016/j.atech.2022.100140. Publisher: Elsevier. [Impact Factor: 6.3]

27) Khalequzzaman, Ullah H, Islam N, **Himanshu SK**, Tisarum R, Cha-um S, Datta A. (2023). Seed Priming Improves Germination, Yield, and Water Productivity of Cotton Under Drought Stress. *Journal of Soil Science and Plant Nutrition*, 23, 2418–2432, https://doi.org/10.1007/s42729-023-01196-5. Publisher: Springer [Impact Factor: 3.4]

28) Alam A, Ullah H, **Himanshu SK**, Praseartkul P, Tisarum R, Cha-Um S, Datta A. (2023). Seed Priming and Foliar Application of Salicylic Acid is Equally Beneficial in Mitigating Drought Stress in Cucumber. *Journal of Soil Science and Plant Nutrition,* 23, 6299-6316, https://doi.org/10.1007/s42729-023-01485-z. Publisher: Springer [Impact Factor: 3.4]

29) Rahman MS, Zulfiqar F, Ullah H, **Himanshu SK**, Datta A. (2023). Farmers' perceptions, determinants of adoption, and impact on food security: Case of climate change adaptation strategies in coastal Bangladesh. *Climate Policy, 23(10), 1257–1270,* https://doi.org/10.1080/14693062.2023.2212638. Publisher: Taylor & Francis [Impact Factor: 5.3]

30) Kitayama M, Tisarum R, Samphumphuang T, Cha-um K, Takagaki M, **Himanshu SK**, Cha-um S. (2023). Promotion of mineral contents and antioxidant compounds in water spinach using foliar paclobutrazol and salt elicitors. *Journal of Soil Science and Plant Nutrition*, 23, 275-289, https://doi.org/10.1007/s42729-022-00885-x. Publisher: Springer [Impact Factor: 3.4]

31) Rahman MS, Zulfiqar F, Ullah H, **Himanshu SK**, Datta A. (2023). Status and drivers of food security in climate-affected coastal areas of Bangladesh: A comparison between the exposed and interior coasts. *International Journal of Sustainable Development & World Ecology*, 30(1), 81-94, https://doi.org/10.1080/13504509.2022.2123409. Publisher: Taylor & Francis [Impact Factor: 6.5]

32) Islam AT, Ullah H, **Himanshu SK**, Tisarum R, Cha-um S, Datta, A. (2023). The interactive effects of silicon and arbuscular mycorrhizal fungi on growth, physio-biochemical traits, and cob yield of baby corn plants under salt stress. *Silicon* 15, 4457-4471, https://doi.org/10.1007/s12633-023-02363-0. Publisher: Springer [Impact Factor: 2.8]

33) Alam A, Ullah H, **Himanshu SK**, Tisarum R, Cha-Um S, Datta A. (2023). Seed priming enhances germination and morphological, physio-biochemical, and yield traits of cucumber under water-deficit stress. *Journal of Soil Science and Plant Nutrition*, 23, 3961-3978, https://doi.org/10.1007/s42729-023-01314-3. Publisher: Springer [Impact Factor: 3.4]

34) Chakma R, Ullah H, Sonprom J, Biswas A, **Himanshu SK**, Datta A. (2023). Effects of silicon and organic manure on growth, fruit yield, and quality of grape tomato under water-deficit stress. *Silicon*, 15, 763-774, https://doi.org/10.1007/s12633-022-02043-5. Publisher: Springer [Impact Factor: 2.8]

35) Dayal D, Pandey A, Gupta PK, **Himanshu SK**. (2023). Multi-criteria evaluation of satellite-based precipitation estimates over agro-climatic zones of India. *Atmospheric Research*, 292, 106879, https://doi.org/10.1016/j.atmosres.2023.106879. Publisher: Elsevier [Impact Factor: 4.5]

36) Ale S, Su Q, Singh J, **Himanshu SK**, Fan Y, Stoker B, Gonzalez E, Sapkota B, Adams C, Biggers K, Kimura E, Wall J. (2023). Development and Evaluation of a Decision Support Mobile Application for Cotton Irrigation Management. *Smart Agricultural Technology*, 5, 100270, https://doi.org/10.1016/j.atech.2023.100270. Publisher: Elsevier [Impact Factor: 6.3]

37) Ahmed SF, Biswas A, Ullah H, **Himanshu SK**, Tisarum R, Cha-um S, Datta A. (2023). Interactive effects of silicon and potassium on photosynthesis and physio-biochemical traits of rice (*Oryza sativa* L.) leaf mesophyll under ferrous iron toxicity. *Plant Stress,* 10, 100203, https://doi.org/10.1016/j.stress.2023.100203. Publisher: Elsevier [Impact Factor: 6.8]

38) Chungloo D, Tisarum R, Sotesaritkul T, Praseartkul P, **Himanshu SK**, Datta A, Cha-um S. (2023). Exogenous foliar application of methyl jasmonate alleviates water-deficit stress in *Andrographis paniculata*. *Journal of Soil Science and Plant Nutrition*, 23, 5468-5481, https://doi.org/10.1007/s42729-023-01414-0. Publisher: Springer [Impact Factor: 3.4]

2022

39) **Himanshu SK**, Ale S, Singh J, DeLaune P, Barnes E. (2022). Assessing the effects of a winter wheat cover crop on soil water use, cotton yield, and soil organic carbon in no-till cotton production systems. *Transactions of the ASABE*, 65(5): 1163-1177, https://doi.org/10.13031/ja.15181. Publisher: American Society of Agricultural and Biological Engineers [Impact Factor: 1.5]

40) Mauget S, **Himanshu SK**, Goebel TS, Ale S, Payton P, Lewis K, Baumhardt RL. (2022). Modeling management of continuous dryland cotton with an intervening winter wheat cover crop in a semiarid climate. *Frontiers in Sustainable Food Systems*, 6, 1043647, https://doi.org/10.3389/fsufs.2022.1043647. Publisher: Elsevier [Impact Factor: 3.7]

41) Singh J, Ale S, DeLaune P, **Himanshu SK**, Barnes E. (2022). Modeling the impacts of cover crops and no-tillage on soil health and cotton yield in an irrigated cropping system of the Texas Rolling Plains. *Field Crops Research*, 287, 108661, https://doi.org/10.1016/j.fcr.2022.108661. Publisher: Elsevier [Impact Factor: 5.6]

42) Das D, Ullah H, **Himanshu SK**, Tisarum R, Cha-um S, Datta A. (2023). Arbuscular mycorrhizal fungi inoculation and phosphorus application improve growth, physiological traits, and grain yield of rice under

alternate wetting and drying irrigation. *Journal of Plant Physiology*, 278, 153829, https://doi.org/10.1016/j.jplph.2022.153829. Publisher: Elsevier [Impact Factor: 4.0]

43) Ale S, Su Q, Singh J, **Himanshu SK**, Fan Y, Stoker B, Gonzalez E, Sapkota B, Adams C, Biggers K, Kimura E, Wall J. (2022). A Mobile App for Cotton Irrigation Management. *Resource Magazine: Engineering and Technology for Sustainable World*, 29(4), 6-8. Publisher: American Society of Agricultural and Biological Engineers.

44) Fan Y, **Himanshu SK**, Ale S, DeLaune PB, Zhang T, Park SC, Colaizzi PD, Evett SR, Baumhardt RL. (2022). The synergy between water conservation and economic profitability of adopting alternative irrigation systems for cotton production in the Texas High Plains. *Agricultural Water Management*, 262, 107386, https://doi.org/10.1016/j.agwat.2021.107386. Publisher: Elsevier [Impact Factor: 5.9]

45) Madolli MJ, **Himanshu SK***, Patro ER, Michele CD. (2022). Past, present and future perspectives of seasonal prediction of Indian summer monsoon rainfall: a review. *Asia-Pacific Journal of Atmospheric Sciences*, 58, 591–615, https://doi.org/10.1007/s13143-022-00273-6. Publisher: Springer [Impact Factor: 2.2]

46) Islam, ATMT, Ullah H, **Himanshu SK**, Tisarum R, Cha-um S, and Datta A. (2022). Effect of salicylic acid seed priming on morpho-physiological responses and yield of baby corn under salt stress. *Scientia Horticulturae*, 304, 111304, https://doi.org/10.1016/j.scienta.2022.111304. Publisher: Elsevier [Impact Factor: 3.9]

2021

47) **Himanshu SK**, Fan Y, Ale S, Bordovsky J. (2021). Simulated efficient growth-stage-based deficit irrigation strategies for maximizing cotton yield, crop water productivity and net returns. *Agricultural Water Management*, 250, 106840, https://doi.org/10.1016/j.agwat.2021.106840. Publisher: Elsevier [Impact Factor: 5.9]

48) **Himanshu SK**, Ale S, Bordovsky J, Kim J, Samanta S, Omani N, Barnes E. (2021). Assessing the impacts of irrigation termination periods on cotton productivity under strategic deficit irrigation regimes. *Scientific Reports*, 11, 20102, https://doi.org/10.1038/s41598-021-99472-w. Publisher: Nature [Impact Factor: 3.8]

49) Mauget S, **Himanshu SK**, Goebel T, Ale S, Gitz D, Lascano R. (2021). Soil and soil organic carbon effects on simulated Southern High Plains dryland cotton production. *Soil and Tillage Research*, 212, 105040, https://doi.org/10.1016/j.still.2021.105040. Publisher: Elsevier [Impact Factor: 6.1]

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3) Natarajan S, Shanmugam M, Shrestha S, Babel MS, Loc HH, **Himanshu SK**. Evaluating extreme precipitation and streamflow characteristics with novel bias adjusted APHRODITE precipitation gridded datasets: A case in Malwathu Oya River Basin in Sri Lanka. *Climate Dynamics*. Publisher: Springer [Impact Factor: 3.8]

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5) Fan Y, **Himanshu SK**. (2022). Farm management practices for water quality improvement: economic risk analysis of winter wheat production in the Southern High Plains. In PK Gupta, B Yadav, SK Himanshu (Eds.), *Advances in Remediation Techniques for Polluted Soils and Groundwater*, pp. 49-66. Elsevier, Amsterdam, Netherland, https://doi.org/10.1016/B978-0-12-823830-1.00004-3

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IV. Papers in Refereed Conference Proceedings (6)

1) Ale S, **Himanshu SK**, Samanta S, Singh B, Francis SMR. (2023). Enhancing crop water productivity through crop-growth-stage-based variable deficit irrigation strategies. 25th International Congress of ICID (International Commission on Irrigation and Drainage), Visakhapatnam, India [1-8 November]

2) **Himanshu SK**, Ale S, Bordovsky J, Barnes E. (2019). Assessment of deficit irrigation strategies for cotton production in the Texas High Plains. In proceeding of the *Beltwide Cotton Conference-2019*, pp. 536-542, New Orleans, LA, USA [8-10 January]

3) Ale S, **Himanshu SK**, Omani N, Bordovsky J, Thorp K, Barnes E. (2019). Determining ideal irrigation termination dates under deficit irrigation strategies. In proceeding of the *Beltwide Cotton Conference-2019*, pp. 552-558, New Orleans, LA, USA [8-10 January]

4) **Himanshu SK**, Pandey A, Dayal D. (2018). Evaluation of satellite-based precipitation estimates over an agricultural watershed of India. In proceeding of the *World Environmental and Water Resources Congress 2018*: Watershed Management, Irrigation and Drainage, and Water Resources Planning and Management, American Society of Civil Engineers, pp. 308-320, Minneapolis, Minnesota, USA, https://doi.org/10.1061/9780784481400.028 [03-07 June]
5) Dayal D, Pandey A, **Himanshu SK**, Palmate SS. (2018). Long-term historic changes of precipitation and aridity index over an Indian river basin. In proceeding of the *World Environmental and Water Resources Congress 2018*: Groundwater, Sustainability, and Hydro-Climate/Climate Change, American Society of Civil Engineers, pp. 262-272, Minneapolis, Minnesota, USA, https://doi.org/10.1061/9780784481417.026 [03-07 June]
6) **Himanshu SK**, Pandey A, and Palmate SS. (2015). Derivation of Nash model parameters from geo-morphological instantaneous unit hydrograph for a Himalayan River using ASTER DEM. In proceeding of the *International Conference on Structural Architectural and Civil Engineering*, pp. 234-239, Dubai, UAE [21-22 November]

V. Papers in Workshops (3)

1) **Himanshu SK**, Ale S, Bell J, Mvuyekure R, Samanta S, Singh B, Kpthari K, Fan Y, Bordovsky J, Gitz D, Lascano R, Brauer D. (2023). Simulated efficient growth stage-based variable deficit irrigation strategies for cotton and grain sorghum production. Ogallala Aquifer Workshop, Canyon, TX, USA [4-5 April]
2) Ale S, **Himanshu SK**. (2019). Climate Resilient Water Sensitive Urban Design: Concept and Examples. Workshop on Climate Change and Urbanization: Building Resilience in the Urban Water Sector. Osmania University, Hyderabad, India [16-17 December]
3) Ale S, **Himanshu SK**. (2019). Climate Change Data Download and Processing. Workshop on Climate Change and Urbanization: Building Resilience in the Urban Water Sector. Osmania University, Hyderabad, India [16-17 December]

VI. Abstracts (47)

1) Wangmo C, Tangwongkit P, Gade SA, Madolli MJ, **Himanshu SK**. (2024). Deep Learning and Drone Imagery-Based Automated Recognition of Coffee Plant Varieties. *International Agricultural Engineering Conference*, Bangkok, Thailand [22-24 May 2024]
2) Madolli MJ, Haikel SH, Gade SA, Datta A, **Himanshu SK**. (2024). Interannual Rainfall Variability and its Relationships with El Niño Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) in Thailand. *International Agricultural Engineering Conference*, Bangkok, Thailand [22-24 May 2024]
3) Madolli MJ, Haikel SH, Gade SA, Datta A, **Himanshu SK**. (2024). Temperature Variability and its Relationships with the Indian Ocean Dipole (IOD) in Thailand. *International Agricultural Engineering Conference*, Bangkok, Thailand [22-24 May 2024]
4) Ale S, Su S, Samanta S, Sapkota BR, Singh J, **Himanshu SK**, Fan Y, Adams C, Biggers K, Kimura E. (2024). Crop Model, Sensor, and Machine Learning-based Approaches for Irrigation Decision Support. *ASA, CSSA, SSSA International Annual Meeting: AI Innovations for A Changing Climate*, San Antonio, Texas, USA [10-13 November 2024]
5) Ale S, **Himanshu SK**, Samanta S, Singh B. (2024). Evaluating Crop-Growth-Stage-Based Variable Deficit Irrigation Strategies for Enhancing Crop Water Productivity of Cotton. *Beltwide Cotton Conference-2024*, Fort Worth, TX, USA [3-5 January]

6) Gupta PK, Surinaidu L, **Himanshu SK**, Naaz F. (2024). Fate and Mobility of Hazardous Pollutants in the Subsurface. Goldschmidt 2024 conference, Chicago, IL, USA [18-23 August 2024]

7) Ale S, **Himanshu SK**, Samanta S, Bordovsky J. (2023). Evaluation of Efficient Irrigation Strategies for Cotton Production in the Texas High Plains. *The 57th ISAE Annual Convention on Agri-Food Systems' Transformation through Engineering Innovations*, UAS Raichur, Karnataka, India [6-8 November 2023]

8) Ale S, **Himanshu SK**, Singh B, Samanta S, Mvuyekure RFS, Kothari K, Bordovsky J. (2023). Simulated Growth-Stage-based Variable Deficit Irrigation Strategies for Increasing Irrigation Water Use Efficiency of Grain Sorghum. *International Symposium on Engineering Interventions for Making Millets a Global food,* UAS Raichur, Karnataka, India [6-8 November 2023]

9) Singh H, Singh B, Ale S, **Himanshu SK**, DeLaune P, Mohtar R. (2023). Simulated effects of winter wheat termination date on cotton production systems in the Texas Rolling Plains. *ASABE's Annual International Meeting*, Omaha, USA [9-12 July]

10) Ale S, Samanta S, Singh J, **Himanshu SK**, DeLaune P, Morgan C. Enhancing Resiliency of Rainfed Crop Production Systems through the Adoption of Regenerative Agricultural Practices. *ASABE's Annual International Meeting*, Omaha, USA [9-12 July]

11) **Himanshu SK**, Ale S, Bell J, Fan Y, Bordovsky J, Gitz D, Brauer D. (2022). Simulating efficient crop-growth-stage-based variable deficit irrigation strategies for sustaining cotton production in the Texas High Plains. *Beltwide Cotton Conference-2021*, San Antonio, TX, USA [4-6 January]

12) Boote KJ, Hoogenboom G, Ale S, Shrestha R, Mvyuekure RF, Grover K, Angadi S, **Himanshu SK**, Adams C. (2022). Adapting the CROPGRO model to simulate growth and production of guar, Cyamopsis tetragonoloba L, an industrial legume crop. *ASA, CSSA, SSSA International Annual Meeting*, Baltimore, Maryland, USA [6-9 November]

13) Ale S, Samanta S, **Himanshu SK**, DeLaune P, Morgan C. (2022). Simulated Field- and Watershed-Scale Effects of Conservation Practices on Soil Health and Water Conservation in Semi-Arid Rainfed Crop Production Systems. International Conference on "*Reimagining Rainfed Agro-ecosystems-Challenges & Opportunities (ICRA-2022)*" Hyderabad, India [22-24 November]

14) Bawa A, Samanta S, **Himanshu SK**, Kim J, Singh J, Ale S, Chang A, Jung J, DeLaune P, Bordovsky J, Barnes E. (2022). Support vector machine and image processing based cotton boll counting approach from UAV Imagery. *Beltwide Cotton Conference-2021*, San Antonio, TX, USA [4-6 January]

15) Fan Y, **Himanshu SK**, Ale S, Bordovsky J, Park SC. (2022). Long-term economic feasibility of crop growth stage-based deficit irrigation strategies for cotton production in the Southern High Plains of Texas. *2022 SAEA Annual Meeting*, New Orleans, USA [12-15 February]

16) Ale S, Su Q, Singh J, **Himanshu SK**, Fan Y, Stoker B, Gonzalec E, Sapkota B, Adams C, Biggers K, Kimura E, Wall J. (2021). idCROP: An irrigation decision support system for conserving resources and optimizing cotton production. *ASA, CSSA, SSSA International Annual Meeting*, Salt Lake City, UT, USA [7-10 November]

17) Singh J, Ale S, DeLaune PB, **Himanshu SK**, Barnes E. (2021). Simulated effects of winter cover crops on Southern Great Plains cotton production. *ASA, CSSA, SSSA International Annual Meeting*, Salt Lake City, UT, USA [7-10 November]

18) **Himanshu SK**, Ale S, Singh J, DeLaune P, Barnes E. (2021). Evaluation of the effects of winter wheat cover crop on soil health in cotton production systems of the Texas Rolling Plains. *Virtual Beltwide Cotton Conference-2021* [5-7January]

19) Ale S, **Himanshu SK**, Samanta S, Chang A, Kim J, Bordovsky J, Jung J, Barnes, E. (2021). Validation of UAV estimates of canopy height and boll count with manual measurements for two cotton cultivars. *Virtual Beltwide Cotton Conference-2021* [5-7January]

20) Fan Y, **Himanshu SK**, Ale S, Bordovsky J, Park SC. (2021). Growth stage-based deficit irrigation strategies to improve profitability of cotton production in the Southern High Plains of Texas. *ASA Southern Regional Branch Virtual Meeting-2021* [30 January]

21) Fan Y, **Himanshu SK**, Ale S, Bordovsky JP, Park SC. (2021). Economic risk analysis of growth stage-based deficit irrigation strategies: simulated trends from Texas cotton production. *ASA Southern Regional Branch Virtual Meeting-2021* [30 January]

22) **Himanshu SK**, Ale S, DeLaune P, Singh J, Barnes E. (2021). Evaluating soil health benefits of winter wheat cover crop in cotton production systems. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

23) **Himanshu SK**, Ale S, Bell J, Fan Y, Bordovsky J, Gitz D, Brauer D. (2021). Evaluation of efficient crop-growth-stage-based deficit irrigation strategies for cotton production in the Texas High Plains. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

24) Fan Y, **Himanshu SK**, Ale S, Bordovsky J, Park SC. (2021). Long-term economic feasibility of crop growth stage-based deficit irrigation strategies for cotton production in the Southern High Plains of Texas. *2021 UCOWR/NIWR Annual Water Resources Conference (Virtual)* [8-10 June]

25) Samanta S, **Himanshu SK**, Chang A, Zhang T, Singh J, Ale S, DeLaune P, Jung J, Morgan CSL, Barnes E. (2021). Evaluation of the impacts of tillage and winter cover crops on soil water availability for and yield of cotton using UAV-acquired data. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

26) Singh J, Ale S, DeLaune PB, **Himanshu SK**, Barnes E. (2021). Modeling the impacts of cover crops on soil water availability, soil health and cotton yield in the Texas Rolling Plains. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

27) Singh J, Ale S, Kimura E, **Himanshu SK**, Su Q, Adams C. (2021). Determination of DSSAT-CSM-CROPGRO-Cotton model cultivar coefficients from cotton variety trial data for regional-scale crop yield prediction. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

28) Su Q, Ale S, **Himanshu SK**, Singh J. (2021). Improving the reliability of monthly and seasonal weather forecasts of the North American Multi-Model Ensemble (NMME) for regional crop modeling. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

29) Su Q, Ale S, Adams C, Singh J, **Himanshu SK**. (2021). Comparison of four theoretical crop water stress index models in irrigation scheduling of cotton. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

30) Mvuyekure RFS, Ale S, Shrestha R, Adams C, **Himanshu SK**, Boote K, Trostle C, Hoogenboom G. (2021). Determination of optimal planting dates and assessing climate variability impacts on guar production in the Texas Rolling Plains and High Plains. *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

31) Ale S, Su Q, Singh J, **Himanshu SK**, Fan Y, Stoker B, Gonzalec E, Adams C, Biggers K, Kimura E, Wall J. (2021). An irrigation decision support system for conserving resources and optimizing cotton production (idCROP). *ASABE's Annual Virtual International Meeting*, USA [11-14 July]

32) **Himanshu SK**, Samanta S, Chang A, Kim J, Ale S, Bordovsky J, Jung J, Barnes E. (2020). A comparison of UAV-derived and manually-measured cotton phenological dataset under different irrigation strategies. *ASA, CSSA and SSSA International Annual Virtual Meetings* [9-13 November]

33) **Himanshu SK**, Ale S, Bordovsky J, Kim J, Samanta S, Omani N, Barnes E. (2020). Evaluating the effects of irrigation termination on productivity of cotton under deficit irrigation strategies. *ASA, CSSA and SSSA International Annual Virtual Meetings* [9-13 November]

34) Ale S, **Himanshu SK**, Mauget S, Hudson D, Goebel T, Liu B, Baumhardt R, Bordovsky J, Brauer D, Lascano R, Gitz D. (2020). Simulated effects of changes in selected soil physical and chemical properties associated with soil health on dryland cotton production. *ASA, CSSA and SSSA International Annual Virtual Meetings* [9-13 November]

35) **Himanshu SK**, Fan Y, Ale S, Bodovsky JP. (2020). Simulated crop-growth-stage-based deficit irrigation strategies for cotton for increasing water productivity and net returns. *Beltwide Cotton Conference-2020*, Austin, TX, USA [8-10 January]

36) **Himanshu SK**, Samanta S, Chang A, Kim J, Ale S, Bordovsky J, Jung J, Barnes E. (2020). Comparative validation of UAV-collected cotton phenological dataset with manual measurements under different irrigation treatments. *ASABE's Annual Virtual International Meeting*, USA [13-15 July]

37) **Himanshu SK**, Fan Y, Ale S, Bordovsky J. (2020). Modeling water productivity and net returns of crop-growth-stage-based deficit irrigation strategies for cotton*, ASABE's Annual Virtual International Meeting*, USA, July 13-15.

38) Ale S, **Himanshu SK**, Mauget S, Hudson D, Goebel TS, Liu B, Baumhardt RL, Bordovsky J, Brauer DK, Lascano RJ, Gitz, DC. (2020). Potential dryland cotton yield increases from management of selected soil physical and chemical properties associated with soil health. *ASABE's Annual Virtual International Meeting*, USA [13-15 July]

39) **Himanshu SK**, Ale S, Bodovsky JP, Darapuneni M. (2019). Evaluation of deficit irrigation scheduling strategies for cotton to cope with declining water availability in the Southern High Plains. *ASABE's Annual International Meeting*, Boston, MA, USA [13-15 July]

40) **Himanshu SK**, Ale S, Omani N, Bodovsky J, Thorp K, Barnes E. (2019). Evaluation of irrigation termination effects on cotton yield and water use efficiency under deficit irrigation strategies in the Texas High Plains. *ASABE's Annual International Meeting*, Boston, MA, USA [13-15 July]

41) Ale S, **Himanshu SK**, Omani N, Bordovsky J, Thorp K, Barnes E. (2019). A modeling approach to determine ideal irrigation termination periods for cotton. *ASA, CSSA and SSSA International Annual Meetings*, San Antonio, Texas, USA [10-13 November]

42) **Himanshu SK**, Pandey A, Dayal D. (2018). Assessment of satellite-based precipitation estimates over agriculture based Indian watershed. *International Conference on Sustainable Technologies for Intelligent Water Management*, Indian Institute of Technology Roorkee, India [16-19 February]

43) Ale S, Omani N, **Himanshu SK**, DeLaune P. (2018). Effect of winter wheat cover crop termination date on soil water availability and yield of cotton in the Texas Rolling Plains, *ASABE Annual Meeting* Paper No. 1801053, Detroit, Michigan, USA [29 July – 1 August]

44) Ale S, **Himanshu SK**, Omani N, Bordovsky J, Thorp K, Barnes E. (2018). Simulated strategies for efficient use of irrigation water for cotton production in the Texas High Plains. *ASABE Global Water Security Conference for Agriculture and Natural Resources*, Hyderabad, India [3-7 October]

45) Pandey A, Dayal D, Palmate SS, Mishra SK, **Himanshu SK**, Pandey RP. (2018). Long-term historic changes in temperature and potential evapotranspiration over Betwa river basin. *International*

Conference on Sustainable Technologies for Intelligent Water Management, Indian Institute of Technology Roorkee, India [16-19 February]

46) **Himanshu SK**, Pandey A. (2017). Evaluation of TRMM-based multi-satellite precipitation analysis (TMPA) for suspended sediment load simulation over a Southwest Indian watershed. *World Environmental & Water Resources Congress, EWRI-ASCE*, Sacramento, California, USA [21–25 May]

47) Palmate SS, Pandey A, Suryavanshi S, **Himanshu SK**. (2016). Relationship between Climate Variability and Runoff in the Betwa River Basin. *International Conference on Climate Change and Rural Development*, Aurangabad, India [21-23 January]

VII. Development Project Reports (5)

1) Ale S, **Himanshu SK**, Bell J, Fan Y, Bordovsky J, Gitz D. (2022). Evaluation of Efficient Crop-Growth-Stage-based Deficit Irrigation Strategies for Cotton and Grain Sorghum Production in the Texas High Plains. Final Project Report submitted to Ogallala Aquifer Program (OAP), United States Department of Agriculture (USDA), USA (OAP agreement 58-3090-0-012) [November 2022]

2) Ale S, DeLaune PB, **Himanshu SK**. (2021). Evaluation of soil health benefits of cover crops in cotton production systems of the Texas Rolling Plains. Final Project Report submitted to Cotton Incorporated, USA [January 2021]

3) Ale S, Bordovsky J, Thorp K, **Himanshu SK**. (2020). Determining optimum irrigation termination periods for cotton production in the Texas High Plains using the DSSAT cropping system model (Renewal 2). Final Project Report submitted to Cotton Incorporated, USA [January 2020]

4) Ale S, Bordovsky J, Thorp K, **Himanshu SK**. (2019). Determining optimum irrigation termination periods for cotton production in the Texas High Plains using the DSSAT cropping system model. Final Project Report submitted to Cotton Incorporated, USA [January 2019]

5) Goel NK, Arya DS, **Himanshu SK**. (2016). Review of hydrological and power potential studies for Vishnugad Pipalkoti hydro-electric project. Final Project Report submitted to the THDC India Limited, Govt. of India [February 2016]

VIII. News in mass media (newspaper, TV, major websites, etc.) (14)

1) AIT Newsletter, coverage on organizing a workshop on regenerative agriculture. (https://ait.ac.th/2024/12/workshop-equips-farming-communities-with-regenerative-agriculture-tools-for-sustainable-rice-production/)

2) AIT Newsletter, coverage on leading climate-smart agriculture initiatives in Thailand and Vietnam through ADB support. (https://ait.ac.th/2024/07/ait-faculty-leads-climate-smart-agriculture-initiative-in-thailand-and-vietnam/)

3) AIT Newsletter, coverage on serving as a panelist in the 6th Greater Mekong Subregion (GMS) Environment Ministers' Meeting (EMM-6) in Phnom Penh, Cambodia. (https://ait.ac.th/2024/09/ait-serd-participated-in-the-6th-greater-mekong-subregion-gms-environment-ministers-meeting-emm-6-in-phnom-penh-cambodia/)

4) AIT Newsletter, coverage on carrying out research on the effect of plant growth regulators on cherry tomatoes in a hydroponic system. (https://ait.ac.th/2024/09/effect-of-plant-growth-regulators-on-growth-parameters-and-fruit-yield-of-cherry-tomato-in-a-hydroponic-system/)

5) AIT Newsletter, coverage on the participation of the AIT delegation in the 6th Greater Mekong Subregion (GMS) Environment Ministers' Meeting (EMM-6) in Phnom Penh, Cambodia. (https://ait.ac.th/2024/09/ait-participates-in-6th-greater-mekong-subregion-environment-ministers-meeting/)

6) AIT Newsletter, coverage on the opening of the new 'Smart Greenhouse' in the Department of Food, Agriculture and Bioresources. (https://ait.ac.th/2023/11/ait-unveils-cutting-edge-smart-greenhouse-revolutionizing-sustainable-agriculture-with-iot-and-ai-technologies/)

7) Texas A&M University Research Bulletin, USA highlighted our research findings on irrigation management in cotton, with the title 'Cotton producers can gain maximum use of limited water using irrigation methods, says new modeling study' (https://research.tamu.edu/2023/06/02/cotton-producers-can-gain-maximum-use-of-limited-water-using-irrigation-methods-according-to-new-modeling-study/)

8) AIT Newsletter, coverage on the grant by The Rockefeller Foundation for implementing Regenerative Agriculture in ASEAN. (https://ait.ac.th/2023/11/revolutionizing-rice-production-in-asean-through-regenerative-agriculture/)

9) AgriLife Today magazine, USA highlighted our research findings on irrigation strategies in cotton, with the title 'Variable deficit irrigation in cotton can help improve yields, save water' (https://agrilifetoday.tamu.edu/2023/05/30/variable-deficit-irrigation-in-cotton-can-help-improve-yields-save-water/)

10) RESOURCE Magazine, by the American Society of Agricultural and Biological Engineers, published our research 'A mobile app for cotton irrigation management' (https://bt.e-ditionsbyfry.com/publication/?m=23718&i=752031&p=6&ver=html5)

11) Texas+Water Newsletter, USA highlighted our research findings on irrigation management in cotton, with the title 'The Synergy Between Water Conservation and Economic Profitability of Adopting Alternative Irrigation Systems for Cotton Production in the Texas High Plains' (https://texaspluswater.wp.txstate.edu/2022/01/23/thinkwater-cedar-promotes-recharge-irrigation-is-releasing-carbon-and-farmers-prefer-lepa/)

12) AgriLife Today magazine, USA highlighted our research findings on growth-stage-based irrigation strategies in cotton, with the title 'Study reveals optimum irrigation times for best cotton growth and water savings in the Southern High Plains' (https://today.agrilife.org/2019/11/18/growth-stage-irrigation-strategies-for-high-yielding-cotton/)

13) AIT Newsletter, coverage on delivered talk 'Precision Irrigation for Food Security and Agricultural Sustainability' in commemoration of World Food Day 2021 (https://ait.ac.th/2021/10/precision-irrigation-a-resolution-to-smart-farming-and-agricultural-sustainability-expands-in-commemoration-of-world-food-day-2021/)

14) AIT Newsletter, coverage on the opening of the new 'Digital Agriculture Lab' in the Department of Food, Agriculture and Bioresources. (https://ait.ac.th/2022/09/opening-of-the-new-digital-agriculture-lab-in-the-department-of-food-agriculture-and-bioresources/)

IX. Invited Talks/Presentations/Guest Lectures (11)

1) Keynote speaker to deliver a presentation on 'Modern Technologies for Smart and Sustainable Irrigation Management' at the 'International Conference on Civil, Materials, and Environment for

Sustainability' organized by the Jaypee University of Information Technology, Solan, Himachal Pradesh, India [4 October 2024]

2) Invited speaker to deliver a presentation on 'Agriculture 4.0: Innovative Smart Technologies for Agricultural Sustainability'. SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds), MOOC (Massive Open Online Course) platform by the Government of India [19 April 2024]
3) Invited speaker to deliver a presentation on 'The Future of Farming Technology - Agriculture 4.0'. Mahendra Engineering College, Tamilnadu, India [5 April 2024]
4) Plenary speaker to deliver a presentation on 'Geo-Intelligence for Smart Farming: Enhancing Agricultural Productivity and Sustainability' organized by Radhanath Sikdar Institute of Geospatial Science and Technology (RSIGST), India [5 August 2023]
5) Invited speaker to deliver a presentation on 'Smart Agricultural Technologies for Irrigation Water Management'. International Conference on Environmental Sustainability: New Paradigms and Developments, Birla Institute of Technology & Science, Pilani, Dubai Campus, UAE [29 October 2023]
6) Plenary speaker to deliver a presentation on "Climate-Smart Rice Production Management". Technology Clinic for Agro-Food Small and Medium-Sized Enterprises (SMEs), Asian Institute of Technology, Thailand [8 June 2022]
7) Keynote speaker to deliver a presentation on 'Career planning for Postgraduate Researchers' organized by the Department of Water Resources Development & Management, Indian Institute of Technology Roorkee, India [13 April 2022]
8) Keynote Speaker to deliver a presentation on "Modern Technologies for Sustainable Irrigation Management". organized by the Society of Young Agriculture and Hydrology Scholars of India (SYAHI) [9 January 2022]
9) Invited speaker to deliver a presentation on "Development of a Mobile App for Precision Irrigation". Global Indian Scientists and Technocrats (GIST) Fest, India International Science Festival (IISF) Goa-2021 [11 December 2021]
10) Invited lecture on "Precision Agriculture". Education Innovation Camp 2021, Asian Institute of Technology, Thailand [8 November 2021]
11) Invited talk on "Precision Irrigation for Food Security and Agricultural Sustainability". Given jointly with Dr. Farhad Zulfiqar in commemoration of World Food Day 2021, Asian Institute of Technology, Thailand [16 October 2021]

RESEARCH GRANTS AND SPONSORED PROJECTS

Ongoing

i. **Agro-meteorological Forecasts and Advisories through Mobile Application and Social Media for Climate-smart Agriculture in Thailand and Vietnam – AFAS**
Role: PI with Dr. Long Hoang and Dr. Spyros Paparrizos
Duration: January 2024-January 2027
Donor: Asian Development Bank (through Landell Mills Ltd.)
Budget: USD 91,540 (THB 3,014,901)
Status: Ongoing

ii. **Strengthening Digital Agriculture Ecosystem and Developing e-agriculture Solutions**
Role: PI with Dr. Muhammad Yaseen, Ms. Danielle Duan, Prof. Avishek Datta, and Dr. Hayat Ullah

Duration: November 2024-November 2026
Donor: Food and Agriculture Organization of the United Nations (FAO)
Budget: THB 1,516,356
Status: Ongoing

iii. **Agricultural and Rural Transformation for Nutrition, Entrepreneurship, and Resilience in Bangladesh**
Role: Co-PI with Prof. Avishek Datta, Dr. Muhammad Yaseen, and Dr. Hayat Ullah
Duration: May 2024-May 2032
Donor: Bangladesh Agricultural Research Council (BARC), Bangladesh
Budget: USD 769,794 (THB 26,172,996)
Status: Ongoing

iv. **Empowering Farming Communities on the Adoption of Regenerative Agriculture as Nature-Positive Solution for Rice Production**
Role: PI
Duration: November 2024-November 2025
Donor: Asian Institute of Technology, Thailand
Budget: THB 150,000
Status: Ongoing

v. **Adapting the Impact of Land Use and Climate Change through Smart Irrigation Water Management to Support Food Security (SIWAMA) (Seed Grant) [CRRP2023-FP16-Setyawan]**
Role: Co-PI with Dr. Chandra Setyawan, Dr. Tran Dang An, and Dr. Ha Thi Hoa
Duration: Sep 2024-Aug 2025
Donor: Asia-Pacific Network for Global Change Research, Japan
Budget: USD 12,500 (THB 441,775)
Status: Ongoing

vi. **Fisheries Stock Assessment GLLSP Phase-2**
Role: Co-PI with Dr. Hayat Ullah, Prof. Avishek Datta, and Dr. Muhammad Yaseen
Duration: Jan 2025-Jan 2027
Donor: Fishery and Coastal Development Dept., Government of Baluchistan, Pakistan
Budget: USD 16,100 (THB 550,620)
Status: Ongoing

vii. **Advancing Regional Climate Resilience: AI Monitoring of Lentic Water Bodies for Green House Gas Mitigation**
Role: Co-PI with Prof. Avishek Datta, Dr. Muhammad Yaseen, and Dr. Hayat Ullah
Duration: Jan 2025-Dec 2026
Donor: ASEAN-India Collaborative R&D Scheme, India
Budget: INR 30,31,992 (~THB 1,202,000)
Status: Ongoing

viii. **Regenerative Agriculture in ASEAN: Promoting Nature-positive Solutions for Rice Production (REGA-ASEAN)**
Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: August 2023-July 2025
Donor: The Rockefeller Foundation, USA
Budget: USD 300,000 (THB 10,500,000)
Status: Ongoing

ix. **Precision Agriculture with Smart Farming Technologies**
Role: PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: September 2023-August 2028
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 64,500 (THB 2,224,419)
Status: Ongoing

x. **Climate Change Adaptation in Crop Production Using Smart Farming Technology**
Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: September 2023-August 2028
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 80,180 (THB 2,782,364)
Status: Ongoing

xi. **Smart Agricultural Technologies for Nutrients and Irrigation Water Management**
Role: PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: May 2022-April 2024
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 25,180 (THB 849,500)
Status: Ongoing

xii. **Nutrient and irrigation water management in field and horticultural crops through smart agriculture technologies**
Role: Co-PI with Prof. Avishek Datta
Duration: November 2021-October 2023
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 33,335 (THB 1,103,557)
Status: Ongoing

xiii. **Crop Nutrient and Irrigation Water Management Using Smart Agricultural Technology**
Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: November 2022-November 2025
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 45,000 (~THB 1,575,000)
Status: Ongoing

xiv. **Agrotechnology Innovations Toward Sustainability in Agriculture and Food Systems**
Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: January 2023-December 2025
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 51,000 (THB 1,747,950)
Status: Ongoing

xv. **Smart Farming and Innovative Postharvest Technologies for Sustainable Agriculture Systems**
Role: PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: January 2023-December 2025
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 49,425 (THB 1,699,203)
Status: Ongoing

xvi. Technological Advancements Towards Sustainable Development of Horticulture and Forestry

Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: January 2023-January 2026
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 48,000 (THB 1,635,959)
Status: Ongoing

xvii. Technological Innovations to Meet the Future Challenges of Agriculture and Allied Sectors

Role: PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: January 2023-January 2026
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 45,600 (THB 1,500,650)
Status: Ongoing

xviii. Smart Farming Technologies for Sustainable Agricultural Development

Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: February 2023-February 2027
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 74,360 (THB 2,500,731)
Status: Ongoing

xix. Innovative Smart Technologies for Sustainable Farm Management

Role: PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: March 2023-March 2027
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 69,000 (THB 2,363,717)
Status: Ongoing

Completed

xx. Development of Machine Learning Algorithms for Spatial Downscaling of Satellite Precipitation Data Over Thailand to help Farmers Achieve Agricultural Sustainability

Role: PI
Duration: November 2021-December 2023
Donor: Asian Institute of Technology, Thailand
Budget: THB 150,000
Status: Completed

xxi. Evaluation of efficient crop-growth-stage-based deficit irrigation strategies for cotton and grain sorghum production in the Texas High Plains

Role: Co-PI with Prof. Srinivasulu Ale, Dr. Jourdan Bell, Prof. Yubing Fan, Dr. James Bordovsky and Dr. Dennis Gitz III
Duration: September 2020-August 2021
Donor: United States Department of Agriculture (USDA), USA
Budget: USD 38,000 (~THB 1,375,000)
Status: Completed

xxii. Evaluation of Soil Health Benefits of Cover Crops in Cotton Production Systems of the Texas Rolling Plains

Role: Co-PI with Prof. Srinivasulu Ale and Prof. Paul DeLaune
Duration: January 2019-December 2021
Donor: Cotton Incorporated, USA
Budget: USD 40,000 (~THB 1,448,000)
Status: Completed

xxiii. Planning and Development of Climate Resilient Water Sensitive Urban Designs: A Case Study of Hyderabad Metropolitan City

Role: International Scholar
Duration: January 2019-December 2022
Donor: Scheme for Promotion of Academic and Research Collaboration, Govt. of India
Budget: INR 74,40,000 (~THB 3,369,000)
Status: Completed

xxiv. The 8th International Conference on Climate Change

Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: May 2021-April 2024
Donor: Sebelas Maret University, Indonesia
Budget: USD 10,000 (THB 371,700)
Status: Completed

xxv. Nutrients and Irrigation Water Management through Smart Agri-Tech Approaches

Role: Co-PI with Prof. Avishek Datta and Dr. Farhad Zulfiqar
Duration: April 2023-April 2027
Donor: The World Bank through the Indian Council of Agricultural Research (ICAR), India
Budget: USD 45,000 (THB 1,534,977)
Status: Completed

STUDENT RESEARCH SUPERVISION

Summary of Student Research Supervision

STUDENTS	COMPLETED			IN-PROGRESS		
	Chair of the Committee	Co-Chair of the Committee	Member of the Committee	Chair of the Committee	Co-Chair of the Committee	Member of the Committee
Doctoral	-	2	1	12	3	26
Master's	5	9	32	5	3	20

1. Doctoral students (as Program Committee Chair)

No.	Student's name	Dissertation title	Status	Role
1	Mr. Md Akhter Ul Alam	Induction of drought tolerance in cucumber plants by application of mineral nutrients, growth regulators, and bioinoculant	Graduated, December 2023	Co-Chair with Prof. Avishek Datta

2	Mr. Khalequzzaman	Alleviation of drought stress in cotton by exogenous application of bioinoculant, growth regulator, and mineral-nutrient	Graduated, December 2023	Co-Chair with Prof. Avishek Datta
3	Mr. Pavit Tandwongkit	A deep learning-based classification of coffee tree varieties: improving value of coffee production	Ongoing	Chair
4	Mr. Mallappa Jadiyappa Madolli	Assessing the Impacts of Large-Scale Teleconnections on Climate Variability and Their Implications on Agricultural Productivity over Thailand	Ongoing	Chair
5	Mr. Shubham Anil Gade	Enhancing Productivity through Precision Agriculture: An Integrated Crop Management Approach Leveraging Machine Learning and Advanced Imaging Techniques	Ongoing	Chair
6	Mr. Thawatchai Koedsuk	UAV-based multispectral vegetation indices and machine learning approach to evaluate soil water and nitrogen status in pangola grass (*Digitaria eriantha*)	Ongoing	Co-Chair with Prof. Avishek Datta
7	Mr. Mitesh Vishwas Sawant	Localization and Optimization of an Agro-Meteorological Advisory Services to Support Farmers' Decision-Making in the Context of Climate Change for Selected Districts in Bihar, India	Ongoing	Co-Chair with Prof. Avishek Datta
8	Mr. Yash Shukla	Impact of Climate Change on Food Security in Himachal Pradesh, India	Ongoing	Co-Chair with Dr. Vivek Gupta; IIT Mandi, India
9	Mr. Prakash Subedi	Title pending	Ongoing	Chair
10	Mr. Partha Biswas	Title pending	Ongoing	Chair
11	Mrs. Jarinut Tamanna	Title pending	Ongoing	Chair
12	Mr. Mahir Shahriyar	Title pending	Ongoing	Chair
13	Mr. Hafijur Rahaman	Title pending	Ongoing	Chair
14	Mr. Roldan Torres Quitos	Title pending	Ongoing	Chair
15	Mr. Mohammad Tanharul Islam	Title pending	Ongoing	Chair
16	Mr. Tusher Chakrobarty	Title pending	Ongoing	Chair
17	Mr. Jilves Incillo Jimenez	Title pending	Ongoing	Chair

2. Master students (as Program Committee Chair)

No.	Student's name	Academic Program	Thesis title	Status	Role
1	Mr. Kiran Karki	WRDM, IIT Roorkee	Application of VIC Model for River Basin Planning and Management	Graduated June 2020	Co-Chair with Prof. Ashish Pandey; IIT Roorkee, India
2	Mr. Sakron Vilavan	ASE	Simulating the Climate Change Impacts and Potential Adaptation Strategies for Rice Production in the Lower Chao Phraya Basin [Received **Dr. R K Sivanappan Award** in recognition of outstanding research in the field of Irrigation management]	Graduated, May 2023	Chair
3	Ms. Pema Wangmo	ASE	Spatial Downscaling of Satellite Precipitation Data Using Machine Learning Approach	Graduated, May 2023	Chair
4	Ms. Chime Wangmo	ASE	Deep Learning and Drone Imagery-based Automated Recognition of Coffee Plant Varieties	Graduated, May 2024	Chair
5	Mr. Apirak Somnam	ASE	UAV-based Multispectral Vegetation Indices for Assessing Soil Water Status in Pangola Grass (*Digitaria eriantha*)	Graduated, May 2024	Chair
6	Ms. Suthima Homhual	ASE	Assessment of Leaf Nitrogen Content in Pangola Grass (*Digitaria eriantha*) Using UAV-Derived Vegetation Indices and Chlorophyll Meter	Graduated, May 2024	Chair
7	Mr. Sajjad Hasnain Md. Haikel	CCSD	Climate Variability of Thailand in Association With El Nino Southern Oscillation and Indian Ocean Dipole	Graduated, May 2024	Co-Chair with Prof. Avishek Datta
8	Ms. Vo Doan Anh Thu	ABM	The Impacts of Participatory Guarantee Systems on Farmers who produce local specialties: Evidence from the North of Vietnam	Graduated, May 2024	Co-Chair with Dr. Farhad Zulfiqar

9	Mr. Kittipong Woraratpoka	ABM	Organic Fertilizer Adoption by Durian Farmers in Srisa-Asoke Community and Kantaraluk District in Srisaket	Graduated, May 2024	Co-Chair with Dr. Farhad Zulfiqar
10	Ms. Soe Sandy Lin	CCSD	Farmers' Perceptions of Climate Change with Meteorological Data and Adaptation Strategies in Rice Production: Evidence from Northern Thailand	Graduated, July 2024	Co-Chair with Prof. Avishek Datta
11	Ms. Ouly Thorng	ABM	Sustainability Assessment on Vegetable Production under Cambodia's Good Agriculture Practice (CAMGAP) in Kandal Province	Graduated, July 2024	Co-Chair with Dr. Farhad Zulfiqar
12	Ms. Vachana Jagadeesh	ABM	Digital Connect with Farmers and Digital Influencers for East-West Seed India Products	Graduated, July 2024	Co-Chair with Dr. Farhad Zulfiqar
13	Mr. Deo Abinoja Sumer	CCSD	Vulnerability Assessment of Rice Production Systems to Future Flood Hazards under the Changing Climate	Graduated, December 2024	Co-Chair with Prof. Avishek Datta
14	Ms. Margret Ziba	CCSD	Assessing Climate Change Mitigation Potential: A Comparative Analysis of Aboveground Tree Carbon Stock in Selected Tree Species of Zomba Mountain Timber Plantation, Malawi	Graduated, December 2024	Co-Chair with Prof. Avishek Datta
15	Aadarsh Rijal	CCSD	Effects of Biochar and Establishment Method on Growth, Physiology, Yield, and Water Productivity of Rice Subjected to Alternate Wetting and Drying Irrigation	Ongoing	Co-Chair with Prof. Avishek Datta
16	Nitiwat Wongchanla	ASE	Predicting Soil Organic Carbon Using Machine Learning Algorithms in Sugarcane Fields in Udon Thani Province, Thailand	Ongoing	Chair
17	Jirapat Suksomboon	ASE	Assessing the Effect of Different Irrigation Levels and Biochar Applications Using Remote Sensing Technology on Bell Pepper (*Capsicum Annuum* L.)	Ongoing	Chair

18	Ms. Kathleen Mae Anino Auxtero	ABM	Determinants of Farmers' Continuance Intention to Use Smartphone-Based Agroclimatic Information and Advisories: Insights from Thailand and Vietnam	Ongoing	Chair
19	Kumari Nikitha	ASE	Title pending	Ongoing	Chair
20	Mr. Warut Maihom	ASE	Title pending	Ongoing	Chair
21	Mr. Hafiz Ali Raza	ABM	Title pending	Ongoing	Chair
22	Mr. Karma Chogyal	ASE	Title pending	Ongoing	Chair

PROFESSIONAL SERVICES/ OUTREACH ACTIVITIES

i. Serving as an Editorial Board Member for the journal 'Scientific Reports', Springer-Nature. [https://www.nature.com/srep/about/editors]

ii. Serving as an Associate Editor for the journal 'Weather, Climate, and Society' published by the American Meteorological Society. [https://www.ametsoc.org/index.cfm/ams/publications/journals/weather-climate-and-society/]

iii. Serving as an Associate Editor of the International Agricultural Engineering Journal, published by the Asian Association for Agricultural Engineering. [https://iaejournal.org/]

iv. Serving as a member of the AIT Sustainability Positioning Task Force (AIT-SUPOT) [Oct 24-Sep 26]

v. Jury Member for 'sustainability debate competition' during sustainability awareness workshop, "Connect & Conserve 2025" organized by the Office of Sustainable Campus, AIT [29 January 2025]

vi. Led and organized a workshop on 'Empowering Farming Communities on the Adoption of Regenerative Agriculture as Nature-Positive Solution for Rice Production' [4 December 2024]

vii. Invited by ADB, participated in the 6th Greater Mekong Subregion (GMS) Environment Ministers' Meeting (EMM-6), held in Phnom Penh, Cambodia, and served as a panelist in the session on "Deploying Digital Technologies for Climate Action and Environmental Sustainability." [10-13 September 2024]

viii. Serving on the Board of Advisors, Amrita Vishwa Vidyapeetham (India's top-ranked University), Amritapuri, Kerala, India

ix. Serving as a member of the Board of Studies, Amrita School for Sustainable Futures, Amrita Vishwa Vidyapeetham, Amritapuri, Kerala, India

x. Serving as an International Collaborative Partner for the Intercontinental Delta Alliance (IDA) of the South Asian Institute for Advanced Research and Development (SAIARD), Kolkata, India

xi. Advisory and Technical Committee, 'International Conference on Advances in Sustainable Materials, Modelling & Infrastructure' to be organized by BITS Pilani, Pilani, Rajasthan, India [17-19 February 2025]

xii. Convener, Session- Fate and Mobility of Hazardous Pollutants in the Subsurface, Goldschmidt 2024 conference, Chicago, IL, USA [18-23 August 2024]

xiii. International Advisory Committee, 'International Conference on Civil, Materials, and Environment for Sustainability' organized by the Jaypee University of Information Technology, Solan, Himachal Pradesh, India [4-5 October 2024]

xiv. Invited and attended 'knowledge sharing and opinion exchange meeting' by Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh [30 August 2023]

xv. Invited and discussed 'potential opportunities of collaborative research and capacity development of scientists' by Bangladesh Agricultural Research Institute (BARI), Dhaka, Bangladesh [28 August 2023]

xvi. Served as mentor for the 'AIT Sustainability Expo-2023' [23 -25 August 2023]

xvii. Served as a jury member for the "Hackathon: Hacking Zero - Inspiring Innovation for Net-Zero Emissions" organized under the AIT Sustainability Expo-2023 [23 -25 August 2023]

xviii. Organized a knowledge-sharing and collaboration meeting with the research team from Virginia Tech (VT) USA and Virginia Cooperative Extension (VCE) and presented AIT's work on 'Climate Smart Agriculture and Digital Agriculture' [08 June 2023]

xix. International Adviser, 'International Conference on Biodiversity, Food Security, Sustainability & Climate Change' organized by Assam Agricultural University, Jorhat, Assam [25-28 April 2023]

xx. Advisory Committee, '3rd International Conference on Environmental Sustainability" organized by BITS Pilani, Dubai Campus, UAE [27-29 November 2023]

xxi. Developed Curriculum for a course 'Sustainable Agriculture: Principles and Practices in Organic Farming' for Amrita School for Sustainable Futures, Amrita Vishwa Vidyapeetham, Amritapuri, Kerala, India

xxii. Obtained Remote Pilot License for operating small Unmanned Aerial Systems (UAS) with effect from February 11, 2023.

xxiii. 'Selection committee member 2022' for the selection of lab supervisor for agricultural Systems and Engineering disciplines.

xxiv. Jury Member at Research Pitching Competition on the theme "Food Innovations and the SDGs". Organized under FOODI Info Day Workshop by the Department of Food, Agriculture and Bioresources, Asian Institute of Technology, Thailand [March 25, 2022]

xxv. Developed curriculum and taught a master's course 'Integrated Watershed Management' in my role as a collaborator in a research project with Osmania University, Hyderabad that was funded by the Government of India under the Scheme for Promotion of Academic and Research Collaboration (SPARC).

xxvi. Guest Editor, special issue 'Climate change and Coastal Agriculture' of 'The Journal of the Indian Society of Coastal Agricultural Research'.

xxvii. National Eligibility Test (NET) qualified with specialization 'Land and Water Management Engineering'.

xxviii. All India Rank-82 in Graduate Aptitude Test for Engineers (GATE-2010).

xxix. Joint organizing secretary, Cognizance-2011, The Annual Technical Festival of Indian Institute of Technology Roorkee, India.

xxx. Councilor and member, Student Affairs Council, Indian Institute of Technology Roorkee, India (2011-12, 2014-15).

xxxi. Student Representative, Coordinating Committee of Bhawans, Indian Institute of Technology Roorkee, India (2011-12).

xxxii. Reviewed ~50 articles for ~15 journals including the Journal of Hydrology, Advances in Water Resources, Water Resources Management, Agricultural Water Management, Agricultural Systems, Transactions of the ASABE, Precision Agriculture, Science of the Total Environment, Global and Planetary Change, etc.

xxxiii. Co-chairman, Sustainable Technologies for Intelligent Water Management (STIWM-2018) conference, Indian Institute of Technology Roorkee, India.

xxxiv. Moderator, Session- Sustainable Irrigation Management, ASABE Annual International Meeting-2019, Boston, MA, United States.

xxxv. Moderator, Session- Advances in Agrohydrology: Challenges and Opportunities, ASABE Virtual Annual International Meeting-2020.

SOCIETIES/MEMBERSHIPS

- Member, "**American Society of Agricultural and Biological Engineers (ASABE)**".
- Life Member "**Asian Association for Agricultural Engineering (AAAE)**"
- Life Member, "**Indian Water Resources Society (IWRS)**".
- Fellow Member, "**International Science Congress Association (ISCA)**".
- Affiliate member, "**American Society of Civil Engineers (ASCE)**".
- Associate member (AMIE), "**The Institution of Engineers (India)**".
- Life Member, "**International Association of Hydrological Sciences (IAHS)".**

(CV Updated on March 9, 2025)