Naeem Saddique, Ph.D.

(Bronze Medalist)

Name	Dr. Ing. Naeem Saddique
Father's Name	Muhammad Saddique
Date of Birth	20-12-1986
Nationality	Pakistani
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Email Address	naeem.saddique@uaf.edu.pk
Postal Address	Department of Irrigation and Drainage, University of Agriculture, Faisalabad, Pakistan

Teaching/Research Experience

Assistant Professor, **Feb 2022-to date**
Department of Irrigation and Drainage, University of Agriculture Faisalabad, Pakistan
Guest Scientist, **Feb 2021-Jun 2021**
Institute of Hydrology and Meteorology, Technical University Dresden, Germany
Assistant Executive Engineer, **May 2015-Jan 2022**
Department of Irrigation and Drainage, University of Agriculture Faisalabad, Pakistan

Education

- Ph.D. (Climate Change, extreme weather events, hydrological modeling, watershed management) from Technical University Dresden, Germany in 2021; securing magna cum laude (very good)
- M.Sc. (Hons.) Agri. Engineering from University of Agriculture, Faisalabad in 2015; securing CGPA of 3.91/4.00 and 80% marks
- B.Sc. (Hons.) Agri. Engineering from University of Agriculture, Faisalabad in 2013; securing CGPA of 3.87/4.00 and 81% marks

Ph.D. Thesis

Hydrometeorological Responses to Climate and Land Use Changes in the Jhelum River Basin, Pakistan

Research Publications

1. AL-Falahi, A. H., Gebrechorkos, S. H., **Saddique**, N., Spank, U., & Bernhofer, C. (2025). Projection of precipitation variability over the Highlands of Yemen by statistical down-scaling for the period 2026-2100. *Physics and Chemistry of the Earth, Parts A/B/C*, 103909.
2. AL-Falahi, A. H., **Saddique**, N., Spank, U., & Bernhofer, C. (2024). Building high-resolution projections of temperature potential changes using statistical downscaling for the future period 2026–2100 in the highland region of Yemen–A supportive approach for empowering environmental planning and decision-making. *Environmental and Sustainability Indicators*, *24*, 100490.
3. AL-Falahi, A. H., **Saddique, N**., Spank, U., Pluntke, T., Gebrechorkos, S. H., Mauder, M., & Bernhofer, C. (2024). Hydrological investigation of climate change impact on water balance components in the agricultural terraced watersheds of Yemeni highland. *Theoretical and Applied Climatology*.
4. Muzammil, M.; Zahid, A.; Farooq, U.; **Saddique, N.**; Breuer, L. Climate change adaptation strategies for sustainable water management in the Indus basin of Pakistan, Science of The Total Environment, Volume 878,2023,163143, ISSN 0048 9697. https://doi.org/10.1016/j.scitotenv.**2023**.163143
5. Ahmed, E.; **Saddique, N**.; Al Janabi, F.; Barfus, K.; Asghar, M.R.; Sarwar, A.; Krebs, P. Flood Predictability of One-Way and Two-Way WRF Nesting Coupled Hydrometeorological Flow Simulations in a Transboundary Chenab River Basin, Pakistan. *Remote Sens.* **2023**, *15*, 457. https://doi.org/10.3390/rs15020457

6. Khan, M.I.; Saddique, Q.; Zhu, X.; Ali, S.; Ajaz, A.; Zaman, M.; **Saddique, N**.; Buttar, N.A.; Arshad, R.H.; Sarwar, A. Establishment of Crop Water Stress Index for Sustainable Wheat Production under Climate Change in a Semi-Arid Region of Pakistan. *Atmosphere* **2022**, *13*, 2008. https://doi.org/10.3390/atmos13122008
7. Aslam, R.A.; Shrestha, S.; Usman, M.N.; Khan, S.N.; Ali, S.; Sharif, M.S.; Sarwar, M.W.; **Saddique, N**.; Sarwar, A.; Ali, M.U.; Arshad, A. Integrated SWAT-MODFLOW Modeling-Based Groundwater Adaptation Policy Guidelines for Lahore, Pakistan under Projected Climate Change, and Human Development Scenarios. *Atmosphere* **2022**, *13*, 2001. https://doi.org/10.3390/atmos13122001
8. Buttar, N.A.; Hu, Y.; Tanny, J.; Raza, A.; Niaz, Y.; Khan, M.I.; **Saddique, N**.; Sarwar, A.; Azeem, A.; Ahmed, F.; Bilal Idrees, M. Estimation of Sensible and Latent Heat Fluxes Using Flux Variance Method under Unstable Conditions: A Case Study of Tea Plants. *Atmosphere* **2022**, *13*, 1545. https://doi.org/10.3390/atmos13101545
9. Afzal, M.A.; Ali, S.; Nazeer, A.; Khan, M.I.; Waqas, M.M.; Aslam, R.A.; Cheema, M.J.M.; Nadeem, M.; **Saddique, N**.; Muzammil, M.; Shah, A.N. Flood Inundation Modeling by Integrating HEC–RAS and Satellite Imagery: A Case Study of the Indus River Basin. *Water* **2022**, *14*, 2984. https://doi.org/10.3390/w14192984
10. Shafeeque, M.; Sarwar, A.; Basit, A.; Mohamed, A.Z.; Rasheed, M.W.; Khan, M.U.; Buttar, N.A.; **Saddique, N.**; Asim, M.I.; Sabir, R.M. Quantifying the Impact of the Billion Tree Afforestation Project (BTAP) on the Water Yield and Sediment Load in the Tarbela Reservoir of Pakistan Using the SWAT Model. *Land* **2022**, *11*, 1650. https://doi.org/10.3390/land11101650
11. Rasheed, M.W.; Tang, J.; Sarwar, A.; Shah, S.; **Saddique, N**.; Khan, M.U.; Imran Khan, M.; Nawaz, S.; Shamshiri, R.R.; Aziz, M. Soil Moisture Measuring Techniques and Factors Affecting the Moisture Dynamics: A Comprehensive Review. Sustainability 2022, 14, 11538. https://doi.org/10.3390/ su141811538
12. **Saddique, N**., Jehanzaib, M., Sarwar, A., Ahmed, E., Muzammil, M., Khan, M.I., Faheem, M., Buttar, N.A., Ali, S., Bernhofer, C. A Systematic Review on Farmers' Adaptation Strategies in Pakistan toward Climate Change. Atmosphere 2022, 13, 1280. https://doi.org/ 10.3390/atmos13081280
13. Ahmed, E., Janabi, F.A., Yang, W., Ali, A., **Saddique**, N., Krebs, P. 2022. Comparison of flow simulations with sub-daily and daily GPM IMERG products over a transboundary Chenab River catchment. Journal of Water and Climate Change jwc2022420; https://doi.org/10.2166/wcc.2022.420
14. **Saddique**, N., Muzammil, M., Jahangir, I., Sarwar, A., Ahmed, E., Rana Ammar Aslam, R.A., Bernhofer, C. 2022. Hydrological evaluation of 14 satellite-based, gauge-based and reanalysis precipitation products in a data-scarce mountainous catchment. Hydrological Sciences Journal https://doi.org/10.1080/02626667.2021.2022152
15. Sarwar, A., Peters, R.T., Shafeegue, M., Mohamed, A., Arshad, A., Ullah, I., **Saddique,** N., Muzammil, M., Aslam, R.A. 2021. Accurate measurement of wind drift and evaporation losses could improve water application efficiency of sprinkler irrigation systems − A comparison of measuring techniques. Agricultural Water Management, 107209
16. AL-Falahi, A.H.A., **Saddique**, N., Spank, U., Gebrechorkos, S.H., & Bernhofer, C., 2020. Evaluation the Performance of Several Gridded Precipitation Products over the Highland Region of Yemen for Water Resources Management. Remote Sens., 12(18), 2984; https://doi.org/10.3390/rs12182984
17. Ahmed, E., Janabi, F.A., Zhang, J.,Yang, W., **Saddique**, N., & Krebs, P. 2020. Hydrologic Assessment of TRMM and GPM-Based Precipitation Products in Transboundary River Catchment (Chenab River, Pakistan). Water, 12(7), 1902; https://doi.org/10.3390/w12071902
18. **Saddique**, N., Mahmood, T., and Bernhofer, C. 2020. Quantifying the impacts of Land use/Land cover change on the water balance in the afforested River Basin, Pakistan. Environmental Earth Sciences, 79:448

19. **Saddique**, N., Khaliq, A., and Bernhofer, C. 2020. Trends in Temperature and Precipitation Extremes in Historical (1961-1990) and Projected (2061-2090) Periods in Data Scarce Mountain Basin, Northern Pakistan. Stochastic Environmental Research and Risk Assessment, 34:1441-1455
20. **Saddique**, N., Usman, M., and Bernhofer, C. 2019. Simulating the Impact of Climate Change on the Hydrological Regimes of a Sparsely Gauged Mountainous Basin, Northern Pakistan. Water, 11(10), 2141
21. **Saddique**, N., Usman, M., Kronenberg, R., and Bernhofer, C. 2019. Downscaling of CMIP5 Models Output by Using Statistical Models in a Data Scarce Mountain Environment (Mangla Dam Watershed), Northern Pakistan. Asia-Pacific Journal of Atmospheric Sciences, 55, 719-735

Oral & Poster Presentations

- Saddique, N., Kronenberg, R., and Bernhofer, C. Extreme events in small and medium-sized catchments of Saxony, Germany. In 2019 Center for Advanced Water Research (CAWR), Dresden
- Saddique, N., and Bernhofer, C. Climate change impacts on low and high flows of Jhelum River Basin, Pakistan. In 2021 9th International Symposium on Atmospheric Sciences, Turkey

Editor

Theoretical and Applied Climatology (Springer Nature)

Reviewer

- Journal of Cleaner Production
- Theoretical and Applied Climatology
- Stochastic Environmental Research and Risk Assessment
- Remote Sensing
- Water

Distinctions/Memberships

1. Ph.D. Scholarship by Higher Education Commission (HEC), Pakistan
2. M.Sc. Merit Scholarship University of Agriculture, Faisalabad, Pakistan
3. Bronze medal in my Bachelor's degree
4. University Merit Scholarship throughout my Bachelor degree
5. Pakistan Society of Agricultural Engineers (PSAE)
6. Pakistan Engineering Council (PEC), AGRI/03835

Computer skills

1. Geospatial analysis software viz. ArcGIS, QGIS, ERDAS IMAGINE, etc.
2. Climatic, Crop, and Hydrologic models viz. SDSM, LARS-WG, SWAT, HEC-HMS, WEAP, DSSAT, CROPWAT, etc.
3. Data analysis tools viz. R, Python, CDO, etc.

Projects/Research Work

- Risk-based assessments of aquifer vulnerability for Sanger and Umer Kot. Sponsored by Food and Agriculture Organization (FAO). Rule: Co-PI, Funding: 6.78 million PKR
- Extreme events in small and medium-sized catchments in Germany funded by EFS. Rule: Research Scientist.
- River flows prediction using machine learning Models.
- Estimating the impact of climate change on the glacier melting of Indus River Basin using remote sensing dataset, Pakistan.

Workshops/Conferences/Activities

1. International Workshop organized as Technical committee member “Geo-Informatics for water and Agricultural Resource Management” held on April 24-26, 2024.
2. One day International workshop “Climate Change and Hydrological Modeling” held on April 25, 2024.
3. Participation in one day conference “Application of Artificial Intelligence in Agriculture” organized by HEC held on February 01, 2024.
4. One day CPD activity as Resource Person on “How to write an effective student research proposals and thesis/final years project report” held on January 10, 2024.
5. Participation in one day training on “Understanding and Implementation of outcome-based Education” ” held on September 25, 2023.
6. Two day Workshop organized as a committee member “Conceptual Hydrological Modeling” held on May 23-24, 2023.
7. One day CPD activity as Resource Person “Opportunities of Bioenergy based stove Technologies in developing countries” ” held on April 7, 2023.
8. Participation in two day training on “3-D Scanning and Printing for Design of Agriculture Machinery” held on May 18-19, 2023.
9. Participation in one day workshop “Hands-on experience on Developing Cubesats: From satellite to classroom based educational tool” held on February 09, 2023.
10. Two day Workshop organized as a committee member “Conceptual Hydrological Modeling” held on January 23-24, 2023.
11. One day Seminar organized as a committee member “International seminar on World Water Day-2022” held on March 30, 2022.
12. One day Seminar organized as a committee member “CPD activity on Establishing Science and Technology Parks in Pakistan” held on March 2, 2022.
13. One day Seminar organized as a committee member “CPD activity on Training of Artificial Intelligence in Water, Food and Energy” held on March 16, 2022.
14. Participation in training 3-days “Induction Training Workshop for Newly Appointed Faculty” held by Directorate of Academics and Teaching Resource Center held on March 15-17, 2022.
15. Participation in CPD Seminar on “Seeing the Unseen: The value of water” organized by faculty of Agri. Engg. And Tech. and Directorate of External Linkages held on August 23, 2022.
16. Participation in One-day seminar on “Monsoon Dynamics and cloud measurement” held on May 19, 2022.
17. Participation in One-day CPD Webinar on “Procurement and Contract Management” organized by Pakistan Engineering Council held on August 25, 2022.
18. Participation in Orientation Session on “Outcome Based Education and Hybrid/Blended Learning” organized by the Directorate of Academics held on June 28, 2022.