



CURRICULUM VITAE

Name	Dr. M. Shahzad Khattak
Job Title	Professor
CNIC	14202-1316744-3
Organization	University of Engineering and Technology, Peshawar, Pakistan
Major Field	Water Resources Engineering and Management
Education	2011-Doctor of Engineering (Water Resources Engineering & Management), School of Civil Engineering, Asian Institute of Technology (AIT), Bangkok, Thailand
	2000- Master of Science (Soil and Water Engineering), University of Engineering and Technology, Peshawar, Pakistan
	1997-Bachelor's of Science (Agricultural Engineering) with distinction by earning Habib Bank Gold Medal
Job History	<ul style="list-style-type: none"> • Worked as Lecturer since February 2000 in Agricultural Engineering Department, University of Engineering and Technology, Peshawar -Pakistan up to August, 2004 • Worked as Assistant Professor from August 2004 to till date in Agricultural Engineering Department, University of Engineering and Technology, Peshawar – Pakistan (On Study Leave during Jan 2007- May 2011 for PhD study at AIT) • Working as Associate Professor from February, 2018 to May, 2019. • Working as Professor from May 6, 2019 to till date • 20 years experience
HEC Approved	• HEC Approved Supervisor
Courses Taught	Soil and Water Conservation Engineering, Watershed Hydrology, GIS and Remote Sensing Applications. Modeling of Water Resources Systems
Contact Address	Department of Agricultural Engineering, University of Engineering and Technology, Peshawar, P.O. Box 814, Pakistan
Contact/Cell No.	+92-91-9222218: +92-333-9399985
Email	shahzadkk2004@gmail.com ; shahzad@uetpeshawar.edu.pk

Research Interest: Climate Change Impacts on Water Resources, Agricultural and Energy sectors. Adaptation to Climate Change, Water Resources System Modeling, Floods modeling and Drought assessments, Rainfall-Runoff Modeling, Snow and Glaciers assessment using GIS and Remote Sensing tools. GIS and Remote Sensing applications in Water Management Projects.

Topic of Research during PhD:

Impacts of Climate Change on the Hydrology, Water Resources and Irrigation Water Demand in the upper Indus River Basin.

Research Publications:

1. Farooq A, Shafique M, **Khattak MS (2019)** Flood Hazard Assessment and Mapping of River Swat using HEC-RAS 2D Model and High Resolution 12-m Tan DEM-X DEM (WorldDEM) . Natural Hazards (IF= 1.90)-
<https://link.springer.com/article/10.1007%2Fs11069-019-03638-9>
2. Shah S, Ajmal M, Alam A, Arif G, **Khattak MS**, Shaukat P (2019). Multi-Criteria Decision Analysis for Flood Risk on the Chenab River. Journal of Weather (IF=0.81).
<https://doi.org/10.1002/wea.3490>
3. **Khattak MS**, Khan A, Khan MA, Ahmad W, Rehman S, Sharif M, and Ahmad S (2019) **Investigation of Characteristics of Hydrological Droughts in Indus Basin. Sarhad Journal of Agriculture.** Volume 35 (1): 48-56 (HEC-X category)
4. Ali S , Ajmal M , Khattak MS , Shah SU, Khan M (2018). **Conflicting signals of dry/wet rainfall pattern over the Punjab (Pakistan) during 1961-2015: Complex seasonal changes.** Journal of Himalayan Earth Sciences, Volume 50, No. 2A, pp. 94-107(HEC-X category)
5. Malik A, Shakir AS, Kham MJ, Ajmal M, **Khattak MS**, Khan TA, and Co-authors (2018). **Modelling Sugar Beet Response to Different Combinations of On-Farm Water Management Practices Under Semi-Arid Sub-Tropical Environment.** Sugar Tech. <https://doi.org/10.1007/s12355-018-0631-1>(IF=0.829)
6. Farooq A, Shafique M, **Khattak MS (2018)**. **Flood frequency analysis of river swat using Log Pearson type 3, Generalized Extreme Value, Normal, and Gumbel Max distribution methods.** Arabian Journal of Geosciences 11:216 (IF= 0.955).
<https://doi.org/10.1007/s12517-018-3553-z>
7. Malik A, Shakir AS, Naveedullah, Khan MJ, Latif M, **Khattak MS**, Khan TA (2018). **Interactive effect of deficit irrigation and mulching on Sugar beet productivity in Pakistan.** Pakistan Journal of Botany 50(5): 1775-1783 (IF= 0.69)
8. Khan MJ , Malik A, **Khattak MS** , Naveedullah , Ijaz N, and Ahmad I (2018). **Status of Water Table Depths and Water Quality in District Karak, Khyber Pakhtunkhwa**

Province of Pakistan. Sarhad Journal of Agriculture. Volume 34 (2) 283-290: (HEC-X category)

9. Bhatti MT, Ahmad W, Shah MA, **Khattak MS** (2018). **Climate Change Evidence and Community Level Autonomous Adaptation Measures in a Canal Irrigated Agriculture System of Pakistan.** *Climate and Development (IF = 2.16).* <https://doi.org/10.1080/17565529.2018.1442803>
10. Khan MA, Munir A, **Khattak MS**, Khan D, Ajmal M (2017). **Groundwater Recharge Quantification from Rainfall in Peshawar District-Khyber Pakhtunkhwa.** *Journal of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar.* Vol 36 (2): 55-61: (HEC-X category)
11. **Khattak MS**, Ali W, Ajmal M, Khalil TM, Ahmad J, Malik A, Akbar G (2017). **Assessment of wetted irrigation patterns for inline and online emitters in different soil textures.** *Journal of Himalayan Earth Sciences, Volume 50 (2):* 149-163 (HEC- X category)
12. **Khattak MS**, Babel MS, Sharif M (2017). **Global climate model for projecting future climate changes over upper Indus river basin.** *Pakistan Journal of Agriculture, Agricultural Engineering and Veterinary Sciences. Sindh Agriculture University, Tandojam* Vol.33 (2): 227-242 : (HEC-Y category)
13. Jamil A, Afzal MA, **Khattak MS**, Feroz S (2017). **Comparison of four different neutralizers for the treatment of acidic waste water.** *Journal of Pakistan Institute of Chemical Engineers.* Vol 45(1): 129-136 (HEC-Y category)
14. Sharif M, **Khattak MS**, Joshi RK (2017). **Extreme precipitation events simulation under plausible scenarios of climate change in Satluj River basin, India.** *Int. J. Hydrology Science and Technology, Vol. 7 (4) :* 323-349
15. Jamil A, Afzal MA, **Khattak MS**, Ishaq A (2017). **Treatment of acidic and lead contaminated waste water from an automotive battery production plant.** *Journal of Pakistan Institute of Chemical Engineers.* Vol 45(1): 137-143 (HEC-Y category)
16. Ali S, Ajmal M, **Khattak MS**, and Shah SU (2017). **Assessment of precipitation trends in Gilgit Baltistan (Pakistan) for the period 1980–2015: an indicator of climate change.** *Journal of Himalayan Earth Sciences Volume 50 (1A):* pp. 66-75): (HEC-X category)
17. **Khattak MS**, Barkatullah, Ayesha A, Sharif M, Jamil A, Babel MS (2017). **Impacts of Climate Change on Crop Water Requirement under Multi - Representative Concentration Pathways during mid century: A Case Study of D. I. Khan.** *Journal of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar.* Vol 36 (1): 147-160: (HEC-X category)
18. Ali S , **Khattak MS** , Khan D , Sharif M , Hamad K , Asmat U , Malik A (2016). **Predicting Future Temperature and Precipitation over Pakistan in the 21st Century.** *Journal of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar.* Vol 35 (2): 13-20: (HEC-X category)

19. **Khattak MS**, Anwar F, Saeed TU, Sharif M, Sheraz K (2016). **Floodplain Mapping Using HEC-RAS and ArcGIS: A Case Study of Kabul River.** (IF= 0.367), Arabian Journal of Science and Engineering 41 (4) :pp 1375-1390. (HEC-W category)
20. Asif M, Akbar G, Ahmad MM, **Khattak MS** (2016). **Impact of Rod Kohis Improvement on water Conveyance and wheat Yield.** Journal of Himalayan Earth Sciences. Vol 49 (1): pp 110-116: (HEC-X category)
21. Khan MJ, Pacha G, **Khattak MS**, R. Oad (2015). **Water Distribution of Traditional Karez Irrigation Systems in Afghanistan.** Irrigation and Drainage (IF =0.717), Volume 64, Issue 2, pages 169–179: (HEC-W category)
22. **Khattak MS**, Ali S (2015). **Assessment of Temperature and Rainfall Trend in Punjab province of Pakistan for the period 1961-2014.** Journal of Himalayan Earth Sciences Volume 48, No.2, pp 42-61: (HEC-X category)
23. **Khattak MS**, Naseem R, Sharif M, Khan MA (2015). **Analysis of streamflow data for trend detection on major rivers of the Indus Basin.** Journal of Himalayan Earth Sciences (X-category) Volume 48, No. 1, pp.99-111: (HEC-X category)
24. **Khattak MS**, Saadia R, Kalsoom S, Khan MA (2015). **Analysis of Land use Changes using Remote Sensing and GIS Techniques: A Case Study of District Peshawar-Pakistan.** International Journal of Engineering Research & Technology (IJERT), Volume 4 No.10: pp.375-382
25. Khan MA, Khan TA, **Khattak MS**, Saeed TU, Khan D. (2013) **Evaluation of salinity and sodicity parameters: Bannu SCARP, Pakistan.** International Research Journal of Agricultural Science and Soil Science. Vol.3 (10): 343-352
26. Mullick, RA, **Khattak MS**, Haq, Z (2012). **Considering Environmental flow for Water Resources Management in South Asia.** Journal of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar, Pakistan Vol31(1), January-June 2012: 37-44: (HEC-X category)
27. **Khattak MS**, Babel MS, Sharif M (2011). **Hydro-metrological trends in the upper Indus river basin in Pakistan.** Climate Research (IF= 2.50), Vol 46 (2): 103-119: (HEC-W category)
28. Malik A, **Khattak MS** (2005). **Irrigation water quality of groundwater in Lachi Valley, District Kohat.** Journal of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar, Pakistan, Vol 24 (1): 13-20: (HEC-X category)
29. **Khattak MS**, Khan TA, Alamgir M (2002). **Ground water chemicals concentration and standards for crops with particular reference to dug wells in district Karak.** Sarhad Journal of Agriculture, NWFP Agricultural University Peshawar, Pakistan, Vol 18 (2): 215-224 : (HEC-X category)

30. **Khattak MS**, Khan TA, Alamgir A (2001). **To study the suitability of groundwater for irrigation in district Karak**. Journal. of Engineering and Applied Sciences, University of Engineering and Technology, Peshawar, Pakistan, Vol.20 (2): 20-24: (HEC-X category)

Paper Presented at International Workshop:

- Hassan SS, Ajmal M, Khan AA, Khattak MS, Gohir MA (2017). **Spatial Flood Risk Analysis of Chenab River from Marala to Qadirabad Based on Multi-Criteria Decision Analysis (MCDA) Approach**. Science-Policy Conference on Climate Change, 18-20th December 2017, Islamabad - Pakistan.
- Khattak MS, Khan MA, Ajmal M, Khan AA (2017). **Impact of climate change on crop water requirement under representative concentration pathways (RCP) in Dera Ismail Khan**". Science-Policy Conference on Climate Change, 18-20th December 2017, Islamabad - Pakistan.
- Khan D, Tariq A, **Khattak MS** (2014). **Motor vehicular air pollution – a health hazard in Peshawar city, Pakistan**. Second International Conference on global Environmental Changes, February 25-26, 2014 held at Faisalabad, Pakistan (Abstract Book pp-162)
- **Khattak MS**, Babel MS (2011). **Hydro-meteorological trends and climate change impacts on water resources in the Upper Indus River Basin** in the workshop on “Adaptation to Global Change in Agricultural Practices” held at Bangkok (Jan 10-11, 2011). Jointly organized by UNESCO-IHE, AIT and DOI/Nepal.

Training /Workshop/Seminar Attended

- One day CPD short Course on “Communication and Presentation Skills for Managerial Engineers”, Organized by Agricultural Engineering Department and Pakistan Engineering Council at UET Peshawar on 26th January 2017.
- One day CPD short course on “Groundwater Resources Development and Management”, Organized by Agricultural Engineering Department and Pakistan Engineering Council at UET Peshawar on 23rd May 2017.
- Three days workshop on “Precision Agriculture Technologies” organized by US-Pakistan Center for Advanced Studies in Agriculture and Food Security in Faisalabad (25-27 Sep 2016)
- Three days workshop on “Adaptation to Natural Hazards in Changing Global Climate Scenario” jointly organized by NCEG and COMSTECH at Islamabad (Sep 25-27, 2012)
- Two days workshop on “Distributed Rainfall-Runoff Modeling” conducted by Kyoto University, Japan at AIT, Bangkok (Feb 24-25, 2011)

- 07 Months distance learning program on “Distributed Hydrological Model YHyM/BTOPMC 2009” conducted by Global COE program of the University of Yamanashi, Japan (July 2009-January 2010)
- Changing Water Management Landscape in Asia held at AIT, Bangkok (July 10, 2009)
- Appropriate, Promising Technologies towards sustainable water cycle in Asia. International R& D themes for safety water, held at Bangkok (March 10-11,2008)
- Approaches towards Integrated Flood Risk Management in Europe held at AIT, Bangkok (Dec 4, 2007)
- Vulnerability Assessment of Freshwater Resources in South and Southeast Asia held at Bangkok (Sep 12-14, 2007)
- One Week Workshop on “United Nations/Pakistan Regional Workshop on Monitoring and Protection of the Natural Environment” held at Islamabad (Aug 30 - Sep4, 2004)
- One Day National Seminar on“ GIS application to Automated Hydraulic Modeling” held at NWFP UET Peshawar (May 08, 2004)
- 12 Days Regional training workshop Entitled “Geo – Information for Resource Management Using Arc GIS ” jointly collaborated with Center of Excellence in Geology, University of Peshawar and International Center for Integrated Mountain Development (ICIMOD), Nepal (September 1-12, 2003)
- 1-1/2 Months Geographic Information System (GIS) and Remote Sensing (RS) Course from Brains Post Graduate College of Information Technology. Peshawar (Jan 15-March 1, 2003)

Current Student Supervision at Graduate Level:

1. Engr. Mahmood Alam –PhD level
2. Engr. Sadia Rehamn-MSc
3. Engr. Amjad Khan-MSc
4. Engr. Sajjad-MSc
5. Engr. Waheed Ali -MSc
6. Engr. Muhammad Amjad-MSc
7. Engr. Abdullah-MSc

Co-Supervisor

1. Engr. Saiqa- PhD level of Agriculture University, Peshawar.
2. Mr, Farooq Ahmad-PhD level of NCEG- Peshawar
3. Engr. Salahudin-MSc of Civil Engineering UET, Peshawar.

Additional Responsibilities Performed:

1. Remained as Director Club for 2012-2013 (1.5 yr)
2. Focal Person for Naway Sahar Laptop Scheme from UET side to Government of Khyber Pakhtunkhwa.
3. PREC Member of Agricultural Engineering Department, UET, Peshawar.
4. Member of Course Monitoring Folder at under graduate level of UET, Peshawar.
5. Member of Qualifying Examination Committee for two Ph.D scholars in Agricultural Engineering Department.
6. External Thesis evaluator at MS level of the department of Water Management, Agricultural University, Peshawar.
7. External Examiners of Geometrics department of Peshawar University.
8. Assisted KP Public Service Commission as a Subjects Experts during recruitment of Assistant Engineer (16, 17 May 2016)