

# Dr. Ing. Kashif Mehmood

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## EDUCATION

### PhD in Hydrology and Water Resources Management

Nov 2018 — Apr 2024

University of Bonn, Germany

Hydrological Modelling, Remote Sensing, Water resources (management)

### M.Sc. (Hons) Agricultural Engineering

Sep 2010 — Oct 2013

Univ. of Agriculture, Faisalabad, Pakistan

Specialization: Irrigation & Drainage

### B.Sc. Agricultural Engineering

Sep 2006 — Aug 2010

Univ. of Agriculture, Faisalabad, Pakistan

## CURRENT POSITION

Lecturer

Department of Irrigation & Drainage

University of Agriculture, Faisalabad, Pakistan

Web: <https://web.uaf.edu.pk/FacultyProfile/Department?id=32#>

## WORK EXPERIENCE

### Centre for Development Research (ZEF), University of Bonn-Germany

Nov 2018 — Sep 2023

- Junior Researcher (Groundwater Modelling, Environmental Flows, Sustainable use of natural resources)

### University of Agriculture, Faisalabad

Sep 2014 — Present

Lecturer

- Teaching (Groundwater Hydrology; Water Quality Engineering; Pumps & Tubewells; Irrigation Engineering; Open Channel Hydraulics; Fluid Mechanics), GIS and Remote Sensing
- Research (Groundwater modelling; Sustainable use of water)
- Secretary/Member of departmental board of studies
- Tutor of student group # TGM-300

## University of Agriculture, Faisalabad

Assistant Executive Engineer (Lab. Engineer)

Jun 2012 — Sep 2014

- Assistance in practical performance at Department of Irrigation and Drainage department, UAF.
- In-charge of hydraulics and flow systems lab.

## University of Agriculture, Faisalabad

Mar 2012 — Jun 2012

Research Fellow in DAAD funded Project, "Improving Irrigation Water Use in the Punjab Province of Pakistan by Raising Flexibility and Integrating Surface and Ground Water Resources" at University of Agriculture (UAF), Pakistan

- Assistance in research activities of project,
- Field survey for data collection
- Digital images processing

### RESEARCH INTERESTS

Climate change and water resources, Surface and Groundwater Hydrology, Groundwater modelling, Remote sensing and GIS applications in water resources management

### PUBLISHED MANUSCRIPTS

- **Mehmood, K.**, Tischbein, B., Mahmood, R., Borgemeister, C., Flörke, M., & Akhtar, F. (2024). Analysing and evaluating environmental flows through hydrological methods in the regulated Indus River Basin. *Ecohydrology*, 17(4), e2624.
- Nadeem, A. A., Zha, Y., **Mehmood, K.**, Awais, M., Afzal, M. M., Hussain, H., ... & Aslam, B. (2023). Quantification of temporal variations in groundwater level using satellite imagery technique: A case study of Rachna Doab, Pakistan. *International Journal of Environmental Science and Technology*, 20(3), 2565-2580.
- **Mehmood, K.**, Tischbein, B., Flörke, M., & Usman, M. (2022). Spatiotemporal analysis of groundwater storage changes, controlling factors, and management options over the transboundary Indus basin. *Water*, 14(20), 3254.
- Saleem, F., Arshad, A., Mirchi, A., Khaliq, T., Zeng, X., Rahman, M. M., ... & **Mahmood, K.** (2022). Observed changes in crop yield associated with droughts propagation via natural and human-disturbed agro-ecological zones of Pakistan. *Remote Sensing*, 14(9), 2152.
- Shoukat, M. R., Shafeeqe, M., Sarwar, A., **Mehmood, K.**, & Masud Cheema, M. J. (2021). Investigating effects of deficit irrigation levels and fertilizer rates on water use efficiency and productivity based on field observations and modeling approaches. *Int. J. Hydrogen*, 5, 252-263.
- Saeed, M., Maqbool, A., Ashraf, M. A., Arshad, M., **Mehmood, K.**, Usman, M., & Farid, M. A. (2021). Competency of groundwater recharge of irrigated cotton field subjacent to sowing methods, plastic mulch, water productivity, and yield under climate change. *Environmental Science and Pollution Research*, 1-15.
- Mehmood, A., Yousaf, M. I., **Mehmood, K.**, & Shabbir, M. (2018) Estimating Irrigation System Capacity: A Multi-Dimensional Modeling Approach In Pakistan. *African-Asian Rural Development Organization, New Delhi*, 24.
- Zaman, M., Fang, G., Mehmood, K., & Saifullah, M. (2015). Trend change study of climate variables in Xin'anjiang-Fuchunjiang watershed, China. *Advances in Meteorology*, 2015

- Chauhdary, J. N., Bakhsh, A., Ahmad, N., & Mehmood, K. (2015). Optimizing chlorine use for improving performance of drip irrigation system under biologically contaminated water source. Pak. J. Agri. Sci, 52(3), 829-835.

## **CONFERENCE PAPERS**

- Mehmood, K.; Bernhard, T.; Flörke, M.; Akhtar, F. Improving and Evaluating GRACE Resolution Using Geographical Weighted Regression. In Proceedings of the Sustain Valencia 2022. Achieving Sustainable Groundwater Management: Promising Directions and Unresolved Challenges; Gomez-Hernandez, J.J., Butler Jr., J.J., Eds.; Valencia, 2022; p. 75.
- Mehmood, K.; Bernhard, T.; Flörke, M.; Mahmood, R. Vulnerability of downstream ecosystems: evaluating environmental flows in the Indus River Basin. In Proceedings of the Geo Bon Global Conference. Monitoring Biodiversity for Action; Montreal, 2023; p. 282.

## **BOOK CHAPTER**

- A Chapter on "Irrigation Pumping Systems" in the multi-authored Book of Department of Irrigation & Drainage, Faculty of Agricultural Engineering & Technology, University of Agriculture, Faisalabad-Pakistan 2017. The book entitled "Applied Irrigation Engineering" is available Online available at [onlinebooks@uaf.edu.pk](mailto:onlinebooks@uaf.edu.pk)

## **MODELING EXPERTISE**

Groundwater Vista, CropWat, WinSfr, AquaCrop, Erdas Imagine, Arc GIS, QGIS, SAGA-GIS, CropWat, ET Calculator, Ref ET,

## **PROGRAMING & COMPUTATIONAL EXPERTISE**

R programming, SPSS, SigmaPlot, MS Excel, MS Word, MS PowerPoint,

## **DISTINCTIONS / MEMBERSHIPS**

- PhD scholarship by Higher Education Commission (HEC), Pakistan & German Academic Exchange Services (DAAD), Germany
- PhD funding from ZEF, University of Bonn, Germany
- Silver medalist in B.Sc Engineering
- Merit scholarship in B.Sc and M.Sc(Hons) degree programs
- Overall 5th Position in the session 2006-2010
- Member, Pakistan Engineering Council (Reg. No. Agri-3070)

## **LANGUAGE SKILLS**

1. English:Fluent
2. German, Arabic:Basic
3. Urdu, Punjabi:Mother tongue

## REFERENCES

- Dr. Muhammad Adnan Shahid, Associate Professor/Chairman, Department of Irrigation and Drainage, University of Agriculture Faisalabad. Email: muhammad.shahid@uaf.edu.pk
- Dr. Muhammad Jehanzeb Masud Cheema, International Researcher, IWMI,. Email. mjm.cheema@gmail.com
- Dr. Berherd Tischbein. Senior Researcher, Centre for Development Research, University of Bonn, Germany. Email. tischbein@uni-bonn.de