

Department of Civil Engineering,
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Haris Akram Bhatti

Experience

Jan 2008 –To Date NED University of Engg and Tech. Karachi

Assistant Professor in the Department of Civil Engineering, NED University of Engineering and Technology, Karachi, Pakistan; teaching the courses of Fluid Mechanic-I, Fluid Mechanics-II and Hydraulic Engineering and Water Resources Management to Undergraduate students.

Feb 2005 –To Jan 2008 NED University of Engg and Tech. Karachi

Enrolled as full time M.Engg (by Research work) Student/ Research Assistant in the NED University of Engineering and Technology, having Research Title “Development of a Groundwater Simulation Model for Malir River Basin, Karachi for Sustainable Peri-Urban Water Management.”

- Development of Groundwater Model
- Hydro-geological Characterization of Aquifer
- Data Analysis of Groundwater Models
- Pumping Tests
- Calibration of Groundwater Models
- Water Balance

Developed a physical model of the Electric Tape for the measurement of Depth-to-Water (DTW) manually in the tube wells and open wells.

Proficiency in the state-of-the-art groundwater monitoring instruments and equipments.

- Global Positioning System (GPS)
- Electrical Conductivity (EC) Meter
- Level Trolls
- Electric Tape

2002 –To Feb 2005 Zaheeruddin Consultants Pvt. Ltd Karachi

Junior Civil Engineer on Sehwan Barrage Complex Project

- Estimation of Crop Water Requirement
- Water Losses in Irrigation channels
- Optimization of cropping intensity
- Design of Head/Cross Regulators
- Design of irrigation channels
- Mass Haul analysis
- Cost Estimation of irrigation channels

- Bund to Bund cross section of River Indus
- L-section of irrigation channels
- Geo-membrane lining
- Discharges of Barrage
- Base Map Preparation on the basis of Command area
- Monthly progress reports

Education

2009 –To Date ITC, University of Twente Enschede, Netherlands

- PhD (Water Resources) (in progress)

2005–2008 NED University of Engg & Tech Karachi

- M.Engg (By Research) (Civil)

1998–2002 NED University of Engg & Tech Karachi

- Bachelor of Engineering (Civil)

Computer Skills

- VISUAL MODFLOW PRO
- MODFLOW 2000
- PMWIN
- Win-Situ 5
- ARCVIEW
- SURFER 5.01
- WIDE
- CASE
- HEC-2 (Water Surface Profile Package)
- AUTOCAD 2000 (AUTODESK Certified)
- FORTRAN-90
- MS OFFICE

Publications

Bhatti, H., Rientjes, T., Verhoef, W., & Yaseen, M. (2013). Assessing Temporal Stability for Coarse Scale Satellite Moisture Validation in the Maqu Area, Tibet. *Sensors*, 13(8), 10725-10748.

Rientjes, T. H. M., Muthuwatta, L. P., Bos, M. G., Booij, M. J., & **Bhatti, H. A.** (2013). Multi-variable calibration of a semi-distributed hydrological model using streamflow data and satellite-based evapotranspiration. *Journal of Hydrology*, 505(0), 276-290. doi: <http://dx.doi.org/10.1016/j.jhydrol.2013.10.006>

Yaseen, M., **Bhatti, H.**, Rientjes, T., Nabi, N., Rehman, H., Latif, M. (2013). Temporal and spatial variation in summer flows of Upper Indus Basin, Pakistan. 72nd annual session of Pakistan Engineering Congress, December, 2013. Paper No. 747, 315-334.

Yaseen, M., Khan, K., **Bhatti, H.**, Afzal, M., Gabriel, H. F. A. Hydrological trends and variability in the Mangla watershed, Pakistan (**under review**). *Hydrological Sciences Journal*

Yaseen, M., Nabi, G., Khan, K., **Bhatti, H.**, Asim, Q. A. Effect of bed configuration on flow resistance under different flow regimes in an open channel (**under review**). *NED University Journal of Research*

Bhatti, H., Ejaz, M. S. paper titled "Assessment of Agriculture Development Potential in the Karachi Peri-Urban Area: A GIS Approach", presented in

the Third International Symposium on Infrastructure Engineering in Developing Countries (IEDC-2010) & 1st International Conference on Sustainable Transportation & Traffic Management Karachi, Pakistan. July 1-3, 2010

Ejaz, M. S., **Bhatti, H.** paper titled “Assessment of Groundwater Behaviour and Management Strategies in the Peri-Urban Area of Malir, Karachi, Pakistan”, presented in the 22nd European Regional Conference, organized by International Commission on Irrigation and Drainage (ICID) and European Regional Working Group (ERWG), held from 2-6 September, 2007 in Pavia, Italy.

Bhatti, H., Ejaz, M. S., Khan, A. M., Asim, Q. A. Hydrogeological Characterization of Malir River Basin Aquifer. Poster Presented at 1st International Conference on Global Environmental Changes, Department of Environmental Science, GC University Faisalabad, Pakistan, January 15-16, 2013.

Bhatti H., Rientjes, T., Verhoef, W., Haile, H. T. Rainfall-Runoff model uncertainty using satellite based rainfall data in a multi-objective optimization framework. Poster Presented at 1st International Conference on Global Environmental Changes, Department of Environmental Science, GC University Faisalabad, Pakistan, January 15-16, 2013.

Bhatti, H., Rientjes, T., Verhoef, W. (2013). Assessing representative soil moisture at watershed scale of Maqu catchment using spatio-temporal statistical analysis. Session HS6.1- The Third Pole Environment - Observation and modelling of hydrometeorological processes in high elevation areas. EGU General Assembly, 22-27 April, Vienna, Austria 2012

Scientific Trainings

Attended an advance course on “model building, inference and hypothesis testing in hydrology”, Gabriel Lippmann Institute, 21-25 May, 2012, Luxembourg.

Attended a summer course on “Inverse modeling for improving hydrological, environmental and ecological models”, University of Amsterdam, June 26-July 1, 2011, Amsterdam.

Training Course titled “Geographic Information System ‘An efficient decision making tool’” organized by SUPARCO from 13-24 February, 2006 was attended and successfully completed.

Training Course titled “Geographic Information System” organized by Centre for Continuing Engineering Education, NED University of Engineering and Technology from 4-9 July, 2005 was attended and successfully completed.

Training Course titled “Technical Writing for Scholars” organized by Department of Humanities and Management, NED University of Engineering and Technology from 6-11 June, 2005 was attended and successfully completed

Honours and Awards

Awarded Research Assistantship, from NED University to pursue Master of Engineering by Research in Water Resources Engineering for the research project titled “**Development of Groundwater Simulation Model for Malir River Basin, Karachi**”. The budget of **1.843 Million** was approved by AS&RB, NEDUET for this research project.

Awarded scholarship from EMMA (Erasmus Mundus Mobility for regional Asia) to pursue PhD in Water Resources Engineering From Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, Enschede, The Netherlands.

**Area of
Interest**

Rainfall-runoff modelling
Hydrologic model
Conceptual model
Canal designing
Water resources management
GIS applications for water resources
Remote sensing/ satellite data for water related activities
Soil moisture
Groundwater
Pipe flow analysis