Faisal-ur-Rehman

CONTACT INFORMATION	Assistant Professor Department of Civil Engineering University of Engineering and Technology Peshawar, Pakistan (UETP)	| *Mobile:* +92-314-519-3495 | *Fax:* +92-91-921-6663 | *E-mail:* faisal@nwfpuet.edu.pk | fslurrehman@hotmail.com | *WWW:* www.enggprog.com

SKILLS SUMMARY
Assistant Professor and Semester Coordinator in Department of Civil Engineering UETP since 2005. Currently teaching GIS/RS and MATLAB for Civil Engineers. M.S in Structural Engineering. Field of interest is Numerical Modeling and Analysis of Structures. M.S research thesis title is *Analysis of Brick Masonry using Discrete Element Method.*

RESEARCH INTERESTS
Numerical Modeling and Analysis of Engineering Structures: Finite Element Analysis, Applied Element Method, Bridge Analysis, Blast Resistant Designing, Collapse Mechanism, Earthquake Resistant Designing, Analysis of Brick Masonry Structures, Analysis of Retrofitted Structures,Building Information Modeling, Application of open-source platform and tools for Finite Element Analysis.

UNIVERSITY TEACHING AND ADMINISTRATION

Assistant Professor	May 2013 to present
Lecturer	September 2005 to May 2013
Semester Coordinator	September 2005 to present

Department of Civil Engineering, University of Engineering and Technology Peshawar Pakistan

EDUCATION

University of Engineering and Technology Peshawar Pakistan

M.S.(2 Years Program), Department of Civil Engineering, May 2012.

- Thesis Topic: *Analysis of Brick Masonry Structures using Discrete Element Method.*
- Adviser: Professor Akhtar Naeem Khan
- Area of Study: Structural Engineering

B.S.(4 years Program), Department of Civil Engineering, September 2005.

- Major Subjects:
  - Structural Engineering
  - Introduction to Dynamics and Earthquake Engineering
  - Reinforced Concrete Design
  - Steel Structures
  - Mechanic of Solid
  - Soil Mechanics
  - Concrete Technology
  - Environmental Engineering
  - Irrigation Engineering
  - Fluid Mechanics
  - Hydrology
  - Quantity Survey and Estimate
  - Surveying and leveling
  - Highway and Transportation Engineering
  - Engineering Drafting and Designing

JOURNAL PUBLICATIONS

[1] Noreema Masud, Muhammad Rizwan, Daulat Khan, Faisal ur Rehman, Bashir Alam and Afzal Khan In: *Computer Software for the Optimized Cost Design of Water Treatment Process*, Volume 05, No. 05 (02):1443–1447, October 2012. ISSN 0974-5904

[2] Muhammad Rizwan, Bashir Alam, Faisal ur Rehman, Noreema Masud, Khan Shahzada and Tabinda Masud In: *Cost Optimization of Combined Footing Using Modified Complex Method of Box*, Volume 01, No. 01:24–28, July 2012. ISSN 2319-5347

[3] J. Mirza, M. Riaz, A. Naseer, F. Rehman, A.N. Khan, Q. Ali. In: *Pakistani bentonite in mortars and concrete as low cost construction material*, 45(4):220–226, August 2009.
doi:10.1016/j.clay.2009.06.011

CONFERENCE
PUBLICATIONS

[4] Muhammad Rizwan, Noreema Masud, Daulat khan, Faisal ur Rehman, MAQ Jahangir Durrani, Afzal Khan, Tabinda Masud. Development of Computer Program for the Design of Water Treatment Plant. In: *Proceedings of the IEEE 2011 International Conference on Advance Modeling and Simulation (ICAMS 2011)*, College of Electrical and Mechanical Engineering. National University of Science and Technology (NUST) November 28–30, 2011.

BOOKS IN
PREPARATION
PAPERS IN
PREPARATION

[5] Faisal ur Rehman. *Scilab for Engineers.*

[6] F. Rehman, S. Rahman, S. M. Ali. Analysis of Brick Masonry Structures using Discrete Element Method.

[7] F. Rehman, S. Rahman, S. M. Ali. Analysis of RC Brick Pier using Applied Element Method.

STUDENT
ADVISING

Final Year Project Supervision of Undergraduate students in Department of Civil Engineering - UETP

Muhammad Ishaq. Development of Open-source Matlab Toolbox for RC Design . 2013.

Mustafa, **Ayman Nawafleh**. Development of Open-source BIM Template for Commercial Building using non BIM Software. 2012.

Adnan Sardar, **Muhammad Jawad**, **Muhammad Waqas Khan**.
Case Study for Plotting of Interaction Curve in various Sections of 2D RC Frames to Visualize RC Design Process. 2010–2011

Rashid Latif, **Muhammad Hafeez Khan**. GIS Based Quick Shake Map System. The Software won 3rd prize in SOFTCOM2010 Ghulam Ishaq Institute of Science and Technology Pakistan - GIKI, 2011–2012.2011–2012.

Muhammad Qasim Shinwari, **Haseeb Jamal**. Geometry Optimization of Space Frame Structures. 2011–2012.

Muhammad Rizwan, **Noreema Masud**. Undergraduate students in Department of Civil Engineering - UETP. Development of Computer Program for the Design of Water Treatment Plant. The Software won 4th prize in SOFTCOM2010 Ghulam Ishaq Institute of Science and Technology Pakistan - GIKI, 2011–2012.

Bilal Akbar, **Humaira Mansoor**, **Ahmad Abdi Hassan**. Undergraduate students in Department of Civil Engineering - UETP. Design of Academic Block, Case Study. 2007–2008

TEACHING
EXPERIENCE

University of Engineering and Technology Peshawar Pakistan - UETP,

Instructor **September 2005 to present**

- Currently teaching GIS/RS for Civil Engineers (Theory + Lab) in Spring Semester and Programming for Civil Engineers Lab in Fall Semester from 2010 and onward. All courses have been taught to students of undergraduate. Detailed list of taught courses is given below.

- Instructor for CE 318 (T+L): GIS/RS for Civil Engineers (Theory + Lab) in Spring Semester 2012.

⋄ Students learn key concept of GIS/RS and its application to of Civil Engineering
⋄ Lab course is based on QGIS software. Students have made soil profile map of Khyber Pakhtunkhwa Province of Pakistan.
⋄ They also mapped Drinking Water Properties for Khyber Pakhtunkhwa province.
⋄ This course is taught to students of 6th semester.

- Instructor for CE 105L: Computer Programming for Civil Engineers Lab in Fall 2012.
  ⋄ Students make programs in Matlab for analysis of Problem in different subjects of Civil Engineering
  ⋄ The course was based on VB.NET. Latter upgraded to MATLAB on my recommendations.
  ⋄ This course is taught to students of 1st semester.

- Instructor for CE 408 (T+L): Project Planning and Management (Theory and Lab) in Spring 2008 and Spring 2009.
  ⋄ Students learned basics of Project Planning and Management and applied those basics using MS PROJECT and PRIMAVERA 3.0.
  ⋄ This course was taught to students of 7th semester.

- Instructor for CE 401L: Structural Engineering Software and Application Lab in Fall 2008 and Fall 2009.
  ⋄ Students learned Analysis and Design using Finite Element Analysis software named SAP2000.
  ⋄ This course was taught to students of 6th semester.

- Instructor for AE 210 (T+L): Surveying - I Spring 2007.
  ⋄ In this course, students learned and applied basic survey techniques for land measurements.
  ⋄ This course was offered for 4th Semester students in Department of Agriculture Engineering.

- Instructor for CE 113L: Computer Fundamental and its Application in Fall 2007.
  ⋄ Students learned the use of Windows OS and Office Software.
  ⋄ This course was offered to 1st semester students.

- Instructor for CE 211: Mechanics of Solids I in Fall 2006.
  ⋄ Students learned basic concepts in Mechanics of Solids I.
  ⋄ This course was taught to the students of 3rd semester in Department of Mining.

- Instructor for CE 103L: Computer Application and Communication Skills in Fall 2006.
  ⋄ Students learned Presentation, Report Writing and Interview Skills. They also learned how to make C.V.
  ⋄ The course was taught to students of 1st semester.

PROFESSIONAL SERVICE

Conference Service
- Organizer: International Conference on Seismology, Structure, Code and Disaster Mitigation after Kashmir Earthquake of October 8, 2005 November 18–19, 2005.

Workshop Service
- Participant: Workshop on Contract Document organized by Pakistan Engineering Council in UETP, December 1, 2011.
- Speaker: Introduction to GIS/RS to Engineers, Workshop on World Space Week 2011 Organized by Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) in UETP, October 4, 2011.
- Organizer and Speaker: 03 Days Workshop on Linux for Engineers in UETP, December 16, 2009.

Symposium Service
- Organizer: Symposium on Resilient Pakistan October 8, 2011

PROFESSIONAL
EXPERIENCE

University of Engineering and Technology Peshawar Pakistan

Semester Coordinator   **September 2005 to present**

- Managing Semester System for Undergraduate Program in Department of Civil Engineering. Scheduling Time Table, Semester Bills, Exam. Facilitating teacher and students and preparing result.

Design Engineer

- Finite Element Analysis for following projects:
  - Electronic Cabinets and Control Panel and comparison with Pre and Post Experimental Test.
  - Fazle Haq Degree College Mardan: A masonry structure was analyzed to find its load carrying capacity for construction of new story.
  - Structural Assessment of Confined Brick Masonry Building in Peshawar Town after blast.
  - Peer Review of Road blocker.
  - Peer Review of RC Bridge in Azad Kashmir, Pakistan.
  - Peer Review of Bridge pier of Suspension Bridge in Azad Kashmir, Pakistan.
  - Design Concept of Bridge in Azad Kashmir, Pakistan.

Software Developer

- Software for Analysis of Glass Fibre Reinforced Concrete Wallet in Ansys APDL.
- Interaction Diagram of Biaxial RC column.
- Plot of Hysteresis Curve from Experimental data.
- Grade Calculation of Semester System for UETP.
- Software for Automation of Excel, AutoCAD and SAP2000.
- Software for Drafting of Road X-Section in AutoCAD.
- Software for Draft of Siphon for SAP2000 v7.
- Road X-Section Design on Road-note 29.
- Analysis of Beam.

Web Developer

- Developed website enggprog.com - Engineering Programs. Engineering Programs is website of software for Engineering Analysis and Design.
- PHP based Moment Calculator for RC Section.
- Social network on open-source ELGG Platform.
- Content Management System on open-source Moodle.

Hardware and Software troubleshooting

- Troubleshooting and repair of software ANCODAQ Labview for 2mx2m Shake Table of Earthquake Engineering Center UETP.

PROFESSIONAL
MEMBERSHIPS

Pakistan Engineering Council, Registered Engineer, 2005 to present

SERVICE

- Promoting use of Debian Linux and Open-Source Software for Engineering at enggprog.com - Engineering Programs.

- Blogging for development of open-source community for Engineering Projects on http://facebook.com/enggprog, open-source community for Finite Element Analysis on http://facebook.com/FiniteElementAnalysis, and open-source community for GIS/RS on http://facebook.com/gisnrs

APPLICATION AREAS	Structural Analysis and Design, Bridges, Earthquake and Blast Resistant Analysis and Design, GIS/RS, Engineering Modeling, Analysis and Computation.
PROFESSIONAL TRAINING AND CERTIFICATIONS	• 01 Week course on Teaching Methodology by Higher Education Commission - HEC at Technology Incubation Center UETP. • 03 Days Training Course on Mathematica by HEC at University of Engineering and Technology Taxila - UET Taxila. • Webinar on Use of Applied Element Method by Applied Science International. • Microsoft Certified System Engineer - MCSE.

SOFTWARE SKILLS

Finite Element Analysis:
- Ansys
- CaluliX
- SAP2000

GIS/RS:
- QCAD
- postGIS
- pgRouting
- ARCGIS 9.2

Project Management:
- Gnome Planner
- Task Juggler
- KPlato
- Primavera 3
- MS Project

Computer Aided Design:
- LibreCAD
- AutoCAD
- DIA
- Visio

Computer Programming:
- C, C++, Java, VB.NET, JavaScript, Python, PHP, UNIX shell scripting (including POSIX.2), GNU make, PostgreSQL, MySQL, Scilab, MATLAB, Mathematica.

MATLAB skill set:
- Linear algebra, Fourier transforms, polynomials, statistics, visualization.
- Toolboxes: Mapping, Partial Differential Equation, Symbolic, Statistics.

Productivity Applications:
- TeX (LaTeX, BibTeX).
- LibreOffice and MS Office.

Operating Systems:
- Linux and Microsoft Windows family.

EXPERTISE

Mathematics:
- Applied Mathematics, Calculus, Calculus of Variations.

REFERENCES AVAILABLE TO CONTACT

Dr. Akhtar Naeem Khan (e-mail: drakhtarnaeem@nwfpuet.edu.pk; phone: +92-91-921-6796 (Ext:3091))
- Professor and Chairman, Department of Civil Engineering, University of Engineering and Technology.
- ⋄ Peshawar, Pakistan
- ⋆ *Dr. Akhtar Naeem Khan is my graduate supervisor, teacher and mentor.*

Dr. Shahzad Rahman (e-mail: rahman.shahzad@gmail.com; phone: +92-91-570-2126)
- General Manager at National Engineering Services Pakistan (Pvt.) Limited, NESPAK.
- ◇ 1-C, Block-N, Model Town Extension, Lahore 54700, Pakistan.
- ⋆ *Dr. Shahzad Rahman is my graduate co-supervisor, teacher and mentor.*

Dr. Qaisar Ali (e-mail: drqaisarali@nwfpuet.edu.pk; phone: +92-91-921-8569)
- Professor, Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Qaisar Ali is my teacher.*

Dr. Ali Syed (e-mail: ali@civionics.pk; phone: +92-333-939-5265)
- Assistant Professor, Director of Earthquake Engineering Center. Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Ali Syed is my teacher and mentor.*

Dr. Amjad Naseer (e-mail: amjad_naseer@yahoo.com; phone: +92-333-912-3304)
- Associate Professor, Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Amjad Naseer is my teacher.*

Dr. Mohammad Ashraf (e-mail: engineerashraf@yahoo.com; phone: +92-334-918-7041)
- Assistant Professor, Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Mohammad Ashraf is my teacher.*

Dr. Irshad Ahmad (e-mail: irspk@yahoo.com; phone: +92-91-584-2867)
- Associate Professor, Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Irshad Ahmad is my teacher.*

Dr. Mohammad Adil (e-mail: adil@nwfpuet.edu.com.pk; phone: +92-313-954-3411)
- Assistant Professor, Department of Civil Engineering, University of Engineering and Technology.
- ⋆ *Dr. Mohammad Adil is my colleague in UETP. We are working on making of software for Analysis and Optimization of Glass Fibre Reinforced Concrete (GRFC) Wallets. This Software will be interfaced to Ansys.*

MORE INFORMATION

More information and auxiliary documents can be found at
http://enggprog.com/?page_id=409.