

# Muhammad Rizwan

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National Institute of Transportation

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## About

Dr. Muhammad Rizwan is working as Associate Professor in the National Institute of Transportation. Dr. Muhammad Rizwan has a PhD in (Structural Engg). Dr. Muhammad Rizwan has published 27 research articles & conference papers having a citation count of 109, carried out 6 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in (Structural Engg)</b> UET Lahore , Pakistan	2005 - 2009
<b>MSc in (Structural Engg)</b> UET Lahore , Pakistan	2003 - 2005
<b>BE in (Civil Engg)</b> Military College Of Engineering Risalpur , Pakistan	1988 - 1992
<b>F.Sc in Pre Engineering</b> BISE, Sargodha , Pakistan	1987 - 1989
<b>Matric (SSC) in Science</b> Board of Intermediate and Secondary Education, Lahore , Pakistan	1986 - 1987

## Experience

<b>Associate Professor</b> National Institute of Transportation	2024- Present
<b>Assistant Professor</b> National Institute of Transportation	2022 - 2024
<b>Defence Faculty</b> Military College of Engineering	2009 - 2022
<b>Instructor Class-B and Instructor Class-A</b> Military College of Engineering Risalpur , Military College of Engineering Risalpur	2016 - 2022
<b>GSO-II E-10</b> HQ DGW&CE Army , HQ DGW&CE Army	2016 - 2016
<b>Instructor Class-B</b> Military College of Engineering Risalpur , Military College of Engineering Risalpur	2015 - 2016
<b>Post Doc Fellow</b> Department of Mining , University of Witwatersrand, Johannesburg	2013 - 2015
<b>Instr Cl B,</b> Military College of Engineering , Engrs Dte	2009 - 2013
<b>PG Student</b> Sta HQ Lahore , Sta HQ Lahore	2002 - 2009

Industry Projects

National Projects

“JMF Design of AWC and ABC at Islamabad International Airport”

Client: PCA  
Amount: PKR 868,000.00  
Status: Approved\_inprocess

Payment of Remuneration for the Material Testing Project at DHA Peshawar Consultancy Project – “Material Testing and Concrete Mix Design”

Client: DHA Peshawar  
Amount: PKR 310,500.00  
Status: Completed

Vertical Sounding (VES) in Commercial Sector A at DHA Peshawar

Client: DHA Peshawar  
Amount: PKR 255,000.00  
Status: Completed

Hydrology Study Terrain Analysis at DHA Quetta

Client: DHA Quetta  
Amount: PKR 22,000,000.00  
Status: Approved\_inprocess

2022

Supervision of and Construction works of DHA - Quetta

Client: DHA Quetta  
Amount: PKR 27,600,000.00  
Status: Approved\_inprocess

2022

Supervision of Implementation of Remedial Works at Custom Building IIAP Islamabad

Client: CAA  
Amount: PKR 28,800,000.00  
Status: Approved\_inprocess

2022

International Projects

Research Articles

Towards sustainable construction: Harnessing potential of pumice powder for eco-friendly concrete, augmented by hybrid fiber integration to elevate concrete performance

Umar Farooq Muhammad Rizwan Wasim khaliq .. Ali Ejaz Panumas Saingam Qudeer Hussain Panuwat Joyklad  
Case studies in construction materials , Elsevier BV  
Impact Factor: 6.500 | Quartile: 1 | Citations: 4  
DOI: <https://doi.org/10.1016/j.cscm.2024.e03815>

2024

Optimizing hybrid fiber content for enhanced thermo-mechanical performance of high-strength concrete

Mushtaq Ahmad Muhammad Rizwan Muhammad Faisal Javed Loai Alkhatabi Fahid Aslam Muhammad Nouman Qamar Farman Ullah  
Materials Today Communications , Volume 39, Article Number 109293  
Impact Factor: 3.8 | Quartile: 2 | Citations: 3  
DOI: [10.1016/j.mtcomm.2024.109293](https://doi.org/10.1016/j.mtcomm.2024.109293)

2024

Shielding Encapsulation to Enhance Fire Endurance of Phase Change Materials in Energy-Efficient Concrete

Wasim Khaliq Rao Arsalan Khushnood Muhammad Rizwan Muhammad Farhan Saleem Hassan Sardar  
Fire Technology , Volume 59, Issue 4, Pages 1697-1723  
Impact Factor: 3.4 | Quartile: 2 | Citations: 5  
DOI: <https://doi.org/10.1007/s10694-023-01404-9>

2023

Self-centering passive base isolation system incorporating shape memory alloy wires for reduction in base drift

Sania Dawood Muhammad Usman Mati Ullah Shah Muhammad Rizwan  
Smart Structures and Systems , Volume 31, No.5, Pages 531-543 (13 pages)  
Impact Factor: 3.5 | Quartile: 2 | Citations: 2  
DOI: <https://doi.org/10.12989/sss.2023.31.5.531>

2023

Seismic behaviour of concrete bridge piers with various types of transverse reinforcement

2023

<p><i>Inzimam ul Haq Muhammad Fiaz Tahir Qaiser uz Zaman Khan Ali Raza Muhammad Rizwan</i>  <i>Proceedings of the Institution of Civil Engineers - Structures and Buildings</i> , Volume 176, Issue 5, Pages 349-360</p> <p><b>Impact Factor:</b> 1.6   <b>Quartile:</b> 3   <b>Citations:</b> 1  <b>DOI:</b> <a href="https://doi.org/10.1680/jstbu.20.00282">https://doi.org/10.1680/jstbu.20.00282</a></p>		
<p><b>Effect of multiwalled carbon nanotubes on compressive behavior of concrete at elevated temperature for mass concreting</b></p> <p><i>Kashan Nisar Muhammad Shahid Siddique Muhammad Rizwan Syed Hassan Farooq Muhammad Usman Asad Hanif</i>  <i>European Journal of Environmental and Civil Engineering</i>, Pages 1-24</p> <p><b>Impact Factor:</b> 2.187   <b>Quartile:</b> 3   <b>Citations:</b> 3  <b>DOI:</b> 10.1080/19648189.2023.2194957</p>		2023
<p><b>A scientometric analysis approach on the plastic sand</b></p> <p><i>Bawar Iftikhar Sophia C. Alih Mohammadreza Vafaei Raid Alrowais Muhammad Tariq Bashir Alamgir Khalil Muhammad Rizwan Muhammad Faisal Javed Muhammad Faisal Rehman Abdullah Mohamed</i>  <i>Heliyon</i> , Volume 9, Issue 3, Article Number e14457</p> <p><b>Impact Factor:</b> 4.0   <b>Quartile:</b> 2   <b>Citations:</b> 13  <b>DOI:</b> <a href="https://doi.org/10.1016/j.heliyon.2023.e14457">https://doi.org/10.1016/j.heliyon.2023.e14457</a></p>		2023
<p><b>Spring-controlled modified tuned liquid column ball damper for vibration mitigation of structures</b></p> <p><i>Mati Ullah Shah Muhammad Usman Syed Hassan Farooq Muhammad Rizwan</i>  <i>Journal of Sound and Vibration</i>, Volume 545, Article Number 117443</p> <p><b>Impact Factor:</b> 4.761   <b>Quartile:</b> 1   <b>Citations:</b> 25  <b>DOI:</b> <a href="https://doi.org/10.1016/j.jsv.2022.117443">doi.org/10.1016/j.jsv.2022.117443</a></p>		2023
<p><b>Tensile Strength Improvement of Concrete Slabs Using Polyurea Spray</b></p> <p><i>Muhammad Rizwan Shaheer Khaleequzzaman Uzair Khaleeq-uz-Zaman Syed Aqib Fida Amjed Shahzad Muneeb Rehman Muhammad Oneeb Sulaiman</i>  <i>Practice Periodical on Structural Design and Construction</i>, Volume 26(1), Article Number 04020048</p> <p><b>Impact Factor:</b> N/A   <b>Citations:</b> 9  <b>DOI:</b> 10.1061/(ASCE)SC.1943-5576.0000530</p>		2021
<p><b>Damage assessment of deficient reinforced concrete setback structures</b></p> <p><i>Abdul Waheed Muhammad Ammar Ayub Muhammad Rizwan</i>  <i>Proceedings of the Institution of Civil Engineers - Structures and Buildings</i>, Volume 171, Issue 9, Pages 696-704, Published: Sep 2018</p> <p><b>Impact Factor:</b> 0.877   <b>Quartile:</b> 4   <b>Citations:</b> 7  <b>DOI:</b> 10.1680/jstbu.17.00095</p>		2018
<p><b>Modelling steel-strip-confined reinforced-concrete columns</b></p> <p><i>Muhammad Rizwan Shaukat Ali Khan Muhammad Ilyas Raja Rizwan Hussain</i>  <i>Proceedings of the Institution of Civil Engineers - Structures and Buildings</i> , Volume 169, Issue 4, Pages 245-256</p> <p><b>Impact Factor:</b> 0.424   <b>Quartile:</b> 4   <b>Citations:</b> 2  <b>DOI:</b> <a href="http://dx.doi.org/10.1680/jstbu.14.00084">http://dx.doi.org/10.1680/jstbu.14.00084</a></p>		2016
<p><b>Enhancement of the tensile strengths of rock and shotcrete by thin spray-on liners</b></p> <p><i>P. Mpunzi R. Masethe M. Rizwan T.R. Stacey</i>  <i>Tunnelling and Underground Space Technology</i>, Volume 49, Pages 369-375</p> <p><b>Impact Factor:</b> 1.741   <b>Quartile:</b> 1   <b>Citations:</b> 31  <b>DOI:</b> <a href="https://doi.org/10.1016/j.tust.2015.05.013">https://doi.org/10.1016/j.tust.2015.05.013</a></p>		2015
<p><b>Computer based estimation of backbone curves for hysteretic Response of reinforced concrete columns under static cyclic lateral loads</b></p> <p><i>Muhammad Rizwan M. T.A. Chaudhary M. Ilyas Raja Rizwan Hussain T.R. Stacey</i>  <i>Computers and Concrete</i> , Volume 14, Issue 2, Pages 193-209</p> <p><b>Impact Factor:</b> 0.869   <b>Quartile:</b> 2   <b>Citations:</b> 1  <b>DOI:</b> <a href="http://dx.doi.org/10.12989/cac.2014.14.2.193">http://dx.doi.org/10.12989/cac.2014.14.2.193</a></p>		2014
<p><b>Analytical Load Displacement Curves of RC Columns under Constant Axial and Cyclic Lateral Loads</b></p> <p><i>M. Rizwan M. T. A. Chaudhary M. Ilyas</i>  <i>Pakistan Journal of Engineering and Applied Sciences</i>, Volume 15, Pages 37-49</p> <p><b>Impact Factor:</b> N/A  <b>DOI:</b> <a href="https://journal.uet.edu.pk/ojs_old/index.php/pjeas/article/view/94/55">https://journal.uet.edu.pk/ojs_old/index.php/pjeas/article/view/94/55</a></p>		2014
<p><b>Experimental Behavior of RC Columns, Confined with Stirrup and Strips, Under Cyclic Axial Load</b></p> <p><i>M. Fiaz Tahir Qaiser-Uz-Zaman Khan Muhammad Rizwan M. Ashraf M. Yaqub</i>  <i>Arabian Journal for Science and Engineering</i>, Volume 39, Issue 5, Pages 3449-3460</p>		2014

**Impact Factor:** N/A | **Citations:** 2  
**DOI:** DOI 10.1007/s13369-014-0968-z

**Push over Analysis of steel strengthened Masonry**

2012

*Syed Hassan Farooq Muhammad Ilyas Muhammad Rizwan*  
*Pakistan Journal of Engineering & Applied Sciences*, Volume 10, Pages 36-44

**Impact Factor:** N/A  
**DOI:** [https://journal.uet.edu.pk/ojs\\_old/index.php/pjeas/article/view/160](https://journal.uet.edu.pk/ojs_old/index.php/pjeas/article/view/160)

**Design Spectrums Based on Earthquakes Recorded at Tarbela**

2008

*Muhammad Rizwan M Ilyas Asif Masood*  
*Quarterly Mehran University Research Journal of Engineering & Technology*, HEC Approved Journal

**Impact Factor:** 0  
**DOI:** -----

**An Approach to Digitize Analog Form of Accelerograms Recorded at Tarbela-Pakistan**

2008

*Muhammad Rizwan M. Ilyas Asif Masood I. Towhata*  
*Soil Dynamics and Earthquake Engineering*, Volume 28, Issue 4, Pages 328-332

**Impact Factor:** 1.182 | **Quartile:** 1 | **Citations:** 1  
**DOI:** <https://doi.org/10.1016/j.soildyn.2007.06.015>

**Reconstruction Challenges After Kashmir-Hazara Earthquake**

2006

*Muhammad Rizwan M Ilyas*  
*Engineering News - A Quarterly Journal of the Pakistan Engineering Congress*, Engineering News - A Quarterly Journal of the Pakistan Engineering Congress

**Impact Factor:** 0  
**DOI:** [https://pecongress.org.pk/images/upload/books/Vol.42\(No.8&9\).pdf](https://pecongress.org.pk/images/upload/books/Vol.42(No.8&9).pdf)

- Conceptual Support Systems to Limit Damage to Tunnel Floors in Rockbursting Environments** 2015  
*Muhammad Rizwan T. R. STACEY*  
*13th ISRM International Congress of Rock Mechanics, 10-13 May, Montreal, Canada, res.country(38,)*  
**Citations:** N/A  
**DOI:** ISBN: 978-1-926872-25-4
- Review of Sawat-Indus Flood 2010 – Documentation, Lesson Learnt and a Way Forward** 2013  
*MUHAMMAD RIZWAN M T A Chaudhary MUHAMMAD NASEEM BAIG*  
*The First Saudi International Conference on Crisis and Disaster Management, res.country(192,)*  
**Citations:** N/A  
**DOI:** Nil
- Design of RC Frames According to Seismic Provisions Suggested for Islamabad-A Comparative Studt** 2006  
*MUHAMMAD ILYAS MUHAMAMD RIZWAN M T A Chaudhary*  
*International Conference on Earthquake Engineering, res.country(177,)*  
**Citations:** N/A  
**DOI:** ISBN-969-546-013-5
- A Study of Damage to Reinforced Concrete Structures due to Kashmir-Hazara Earthquake, 8th October 2005** 2006  
*MUHAMMAD ILYAS MUHAMMAD RIZWAN*  
*7th International Congress on Civil Engineering, res.country(107,)*  
**Citations:** N/A  
**DOI:** Nil
- Devastating Effects of Kashmir - Hazara Earthquake** 2006  
*MUHAMMAD ILYAS MUHAMMAD RIZWAN*  
*SBCN Asia 2006-International Conference on Safe & Quality Buildings in Asia - Review of Practices res.country(177,)*  
**Citations:** N/A  
**DOI:** Nil
- Design of R.C Buildings Under Moderate Earthquakes** 2005  
*MUHAMMAD ILYAS MUHAMMAD RIZWAN*  
*2nd International Conference on Concrete & Development, res.country(107,)*  
**Citations:** N/A  
**DOI:** Nil
- Ground Failure And Structural Damages During Recent Earthquakes In Northern Areas Of Pakistan** 2005  
*MUHAMMAD ILYAS MUHAMMAD RIZWAN Syed Hassan Farooq*  
*First National Seminar on Geotechnical Aspects of Hydropower Projects, res.country(282,)*  
**Citations:** N/A  
**DOI:** Nil
- Damage Observed in Earthquakes on February 14th, 2004 in Northern Pakistan** 2004  
*MUHAMMAD ILYAS MUHAMMAD RIZWAN*  
*International Conference for Building & Construction, res.country(65,)*  
**Citations:** N/A  
**DOI:** Nil