#### **Muhammad Usman**

#### Professor

NUST Institute of Civil Engineering

PhD in Structural Health Monitoring, Energy Harvesting

Email: m.usman@nice.nust.edu.pk

Contact: LinkedIn:



2012 - 2016

2020

#### **About**

Dr. Muhammad Usman is working as Professor in the NUST Institute of Civil Engineering. Dr. Muhammad Usman has a PhD in Structural Health Monitoring, Energy Harvesting. Dr. Muhammad Usman has published 85 research articles & conference papers having a citation count of 2049, carried out 23 projects and filed 4 intellectual property.

#### **Qualifications**

**ICE Publising Award** 

ICE Publishing Award (Fredrick Palmer's Prize)

Korea Advanced Institute of Science & Technology , Pakistan	
MS in Structural Dynamics	2008 - 2010
Korea Advanced Institute of Science & Technology , Korea	
BE in Structures	2003 - 2007
NUST, Islamabad , Pakistan	
Experience	
Professor	2025- Present
NUST Institute of Civil Engineering	
Associate Professor	2021 - 2019
NUST Institute of Civil Engineering	
Assistant Professor	2019 - 2021
NUST Institute of Civil Engineering	
Assistant Professor	2016 - 2021
(Do Not Use-Duplicate)NUST Institute of Civil Engineering	
Assistant Professor	2016 - 2016
(Do Not Use-Duplicate)NUST Institute of Civil Engineering	
Lecturer	2010 - 2016
(Do Not Use-Duplicate)NUST Institute of Civil Engineering	
Research associate	2011 - 2016
Structural Control and Intelligent Systems Lab (KAIST) , Daejeon, South Korea	
Research Assistant	2008 - 2010
Structural Control and Intelligent Systems Lab (KAIST) , KAIST, Daejeon, South Korea	
Junior Engineer	2007 - 2008
NESPAK , F6 Islamabad, Pakistan	
Structural Engineer	2007 - 2007
Pakistan Engineering Services (PES), Lahore, Pakistan	
Research Associate	2007 - 2007
NIT (NUST) , Risalpur Pakistan	
Awards	

Professional Memberships	
PEC	Since 2007
Research Projects	
National Projects	
Formulation of Printable Mix Design for Prefabricated Modular Construction	2025
Funding Agency: IGNITE	
Amount: PKR 57,334.00	
Status: Completed	
Development of NextGen Concrete	2023
Funding Agency: NUST	
Amount: PKR 17,000,000.00	
Status: Approved_inprocess	
Large Scale 3D Concrete Printing	2023
Funding Agency: NUST	
Amount: PKR 72,800,000.00	
Status: Approved_inprocess	
Sustainable Construction 3D-Printer	2021
Funding Agency: NUST	
Amount: PKR 1,000,000.00	
Status: Completed	
Development of Magneto-Rheological Elastomer Based Seismic Isolation Systems for Seismic	2017
Protection of Civil Structures	
Funding Agency: HEC	
Amount: PKR 495,000.00	
Status: Completed	
Feasibility study of Smart MRE based base isolation system for Large scale application in civil	2019
engineering structures	
Funding Agency: HEC	
Amount: PKR 11,990,000.00  Status: Completed	
Status. Completed	
International Projects	
Industry Projects	
National Projects	
Non-destructive Testing of R.C.C Structures at Bhara Kaho Fly-Over Islamabad - ECSP	2024
Client: M/S Engineering Consultancy Services Punjab	
Amount: PKR 156,000.00 Status: Completed	
Status: Completed	
Provision of Consultancy Services for Non-Destructive testing (NDT) of Business District Building,	2024
DHA-5, Express Highway, Islamabad	
Client: M/S Comrades Planning & Design	
Amount: PKR 1,460,000.00  Status: Completed	
Status. Completed	
Provision of Consultancy services for the Ultrasonic Pulse Velocity Testing of a Transom at Bara Kahu	2023
Bypass  Client M/C Innovetive Nepopoline Consulting Engineers	
Client: M/S Innovative Nanoengineering Consulting Engineers  Amount: PKR 90,000.00	
Status: Completed	
Provision of Consultancy Services for Core Testing of the Project "ESTABLISHMENT OF CANCER	2024
HOSPITAL, PIMS, ISLAMABAD"  Client: Pak PWD	
Amount: PKR 205 000 00	

Amount: PKR 205,000.0 Status: Completed

SEMI-DESTRUCTIVE TESTING ON FIRE-EXPOSED PORTION OF CENTAURUS BUILDING ISLAMABAD  Client: Capital Development Authority  Amount: PKR 1,520,000.00  Status: Completed	2023
Provision of Consultancy Services for Feasibility Study and Rehabilitation Design of Bhakkar-DI Khan Bridge Client: Khyber Pakhtunkhwa Highway division Amount: PKR 2,535,000.00 Status: Completed	2023
Comparison of Best way and Fauji Cement Quality as per ASTM C-109 and BS EN-196 Client: China Gezhouba Group Co. Ltd. Dasu Hydropower Project Management Amount: PKR 248,000.00 Status: Completed	2022
comparison of Cement Quality and Strength as per ASTM C-109 and BS EN-196 Client: China Gezhouba Group Co. Ltd. Dasu Hydropower Project Management Amount: PKR 94,000.00 Status: Completed	2022
Screed Mix Recipe for Qavi Engineering Client: Qavi Engineers Amount: PKR 140,000.00 Status: Completed	2022
Ferro Scanning and Ultrasonic Pulse Velocity Testing at House # 677, G-9, Islamabad Client: Mr. Asghar Golo Amount: PKR 55,000.00 Status: Completed	2022
Concrete Mix Recipe for Agha Khan Medical Center, Gilgit using locally available materials  Client: Al-Shafi Enterprises  Amount: PKR 200,000.00  Status: Completed	2021
Concrete Quality Assessment of RCC Foundation of Dormitory at CTTI Islamabad Client: Pak PWD Islamabad Amount: PKR 411,000.00 Status: Completed	2021
Assessment of Concrete Quality of Base Slab Foundation at German Embassy Islamabad Client: Qavi Engineers Amount: PKR 96,000.00 Status: Completed	2021
Expanded Polystyrene Smart (EPS) Panel Testing Client: EPS Solutions Amount: PKR 462,000.00 Status: Completed	2021
Design for Construction of Mini Dam at Tehsil Naushera, District Khushab Client: N/A Amount: PKR 1,804,910.00 Status: Approved_inprocess	2020
Expert Opinion on the Seismic Hazard Level and its Design Implications at Pakistan Gulpur Hydropower Project, District Kotli, AJK Client: Daelim Lotte Amount: PKR 1,275,000.00 Status: Approved_inprocess	2020
International Projects  Concrete Core Sampling and Testing of Rehmanabad Mall, Rehmanabad Chowk, Murree Road,  Rawalpindi  Client: Al-Furqan International  Amount: PKR 117,000.00  Status: Completed	2021

#### **Research Articles**

Probabilistic seismic loss estimation for residential buildings in Pakistan  Sajid Mehmood Fawad Ahmed Najam Muhammad Usman Zain Ul Abidin Ali Khan Ghouri  Natural Hazards, Volume:121, Issue:12, Page:14443-14486  Impact Factor: 3.700   Quartile: 1  DOI: https://doi.org/10.1007/s11069-025-07362-5	2025
Numerical investigations on RC beam-column structures under collapse phenomenon-a simplified finite element approach  Aleem Ullah Abdul Qadir Bhatti Attiq Ur Rahman Dogar Girum Urgessa Muhammad Usman Innovative Infrastructure Solutions, Volume:10, Issue:6, Article Number 229  Impact Factor: 2.400   Quartile: 2	2025
DOI: https://doi.org/10.1007/s41062-025-02000-2  Advancing mix design prediction in 3D printed concrete: Predicting anisotropic compressive strength and slump flow  Umair Jalil Malik Raja Dilawar Riaz Muhammad Usman Raja Ehsan Riaz Raja Hamza Saif Ur Rehman  Case studies in construction materials, Volume 21, Article Number e03510  Impact Factor: 6.500   Quartile: 1   Citations: 8	2024
DOI: https://doi.org/10.1016/j.cscm.2024.e03510  Effect of web holes on web crippling capacity of rectangular hollow steel sections under two flange loadings  Muhammad Amir Taimur Junaid Ahmad Sarmad Shakeel Muhammad Usman  Journal of Constructional Steel Research, Volume 222, Article Number 108985  Impact Factor: 4.000   Quartile: 1  DOI: https://doi.org/10.1016/j.jcsr.2024.108985	2024
Augmented Data-Driven Approach towards 3D Printed Concrete Mix Prediction  Saif Ur Rehman Raja Dilawar Riaz Muhammad Usman In-Ho Kim  Applied Sciences, Volume 14(16), Article Number 7231  Impact Factor: 2.500   Quartile: 1   Citations: 1  DOI: https://doi.org/10.3390/app14167231	2024
Thermal Performance Assessment of Concrete Walls Using Different Phase Change Materials  Muhammad Usman Mahmood Hussain Arslan Mushtaq Syed Hassan Farooq Atif Mehmood Asad Hanif  Advances in Civil Engineering, Volume 2024, Article ID 2994221, 10 pages  Impact Factor: 1.500   Quartile: 3   Citations: 1  DOI: https://doi.org/10.1155/2024/2994221	2024
Modal-based fragility analysis of high-rise tubular structures: A methodology for vulnerability assessment  Muhammad Zain Chayut Ngamkhanong Thomas HK. Kang Dr Muhammad Usman Lapyote Prasittisopin Structures, Volume:63, Article Number: 106289  Impact Factor: 3.9   Quartile: 1   Citations: 7  DOI: 10.1016/j.istruc.2024.106289	2024
Optimizing Reinforcement Strategies for Robust Beam-Column Joints in Seismic-Resistant Structures  Hafiz Ahmed Waqas Mehran Sahil Muhammad Mansoor Khan Abdul Wahid Anwar Mati Ullah Shah Muhammad Usman  Arabian Journal for Science and Engineering, Volume 49, Issue 4, Pages 6107-6124  Impact Factor: 2.600   Quartile: 2   Citations: 8  DOI: https://doi.org/10.1007/s13369-023-08591-1	2024
Establishing Efficacy of Machine Learning Techniques for Vulnerability Information of Tubular  Buildings  Muhammad Zain Suraparb Keawsawasvong Chanachai Thongchom Issara Sereewatthanawut Muhammad Usman Lapyote Prasittisopin  Engineered Science, Volume 27, Article Number 1008  Impact Factor: N/A   Citations: 21  DOI: 10.30919/es1008	2024
Advancing structural health monitoring: A vibration-based IoT approach for remote real-time systems  Saif Ur Rehman Muhammad Usman Muhammad Huzaifa Younus Toor Qalandar Ali Hussaini  Sensors and Actuators A: Physical, Volume 365, Article Number 114863  Impact Factor: 4.6   Quartile: 1   Citations: 22	2024

Journal of Sound and Vibration, Volume 545, Article Number 117443

Effect of Different Confinements on High-Strength Steel Fiber-Reinforced Concrete (SFRC) Beams  Hammad Hafeez Waqas Ahmad Muhammad Usman Asad Hanif  Arabian Journal for Science and Engineering, Pages 1-14  Impact Factor: 2.9   Quartile: 2   Citations: 1  DOI: 10.1007/s13369-023-08171-3	2023
Enhanced mechanical properties of surface modified and silica reinforced nomex sandwich	2023
composites  Malik Adeel Umer Muhammad Irfan Muhammad Siyar Muhammad Usman Sana Abbasi Muhammad Talha Masood  Materials Today Communications, Volume 36, Article Number 106346  Impact Factor: 3.8   Quartile: 2   Citations: 2  DOI: 10.1016/j.mtcomm.2023.106346	
Diagnosis of durability-related problems in concrete structures through comprehensive analysis and	2023
Mati Ullah Shah Muhammad Usman Rao Arsalan Khushnood Asad Hanif  Journal of Structural Integrity and Maintenance, Pages 1-11  Impact Factor: 3.00   Quartile: 2   Citations: 12  DOI: https://doi.org/10.1080/24705314.2023.2233812	
Machine Learning-Based Predictive Model for Tensile and Flexural Strength of 3D-Printed Concrete	2023
Ammar Ali Raja Dilawar Riaz Umair Jalil Malik Syed Baqar Abbas Muhammad Usman Mati Ullah Shah In-Ho Kim Asad Hanif Muhammad Faizan Materials, Volume 16, Issue 11, Article Number 4149	
Impact Factor: 3.4   Quartile: 2   Citations: 41  DOI: https://doi.org/10.3390/ma16114149	
Development of mortar filled honeycomb sandwich panels for resistance against repeated ballistic impacts	2023
Mehvesh Iqbal Muhammad Usman Ghulam Hussain Malik Adeel Umer Asad Hanif Wasim Khaliq	
Journal of Materials Research and Technology, Volume 24, Pages 8121-8134  Impact Factor: 6.267   Quartile: 1   Citations: 6  DOI: https://doi.org/10.1016/j.jmrt.2023.05.026	
Self-centering passive base isolation system incorporating shape memory alloy wires for reduction in	2023
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	
Enhancing Seismic Resilience of Existing Reinforced Concrete Building Using Non-Linear Viscous  Dampers: A Comparative Study	2023
Raja Dilawar Riaz Umair Jalil Malik Mati Ullah Shah Muhammad Usman Fawad Ahmed Najam Actuators , Volume 12, Issue 4, Article Number 175	
Impact Factor: 2.6   Quartile: 2   Citations: 16  DOI: https://doi.org/10.3390/act12040175	
Effect of multiwalled carbon nanotubes on compressive behavior of concrete at elevated temperature for mass concreting	2023
Kashan Nisar Muhammad Shahid Siddique Muhammad Rizwan Syed Hassan Farooq Muhammad Usman Asad Hanif European Journal of Environmental and Civil Engineering, Pages 1-24	
Impact Factor: 2.187   Quartile: 3   Citations: 3  DOI: 10.1080/19648189.2023.2194957	
Experimental investigation of tuned liquid column ball damper's position on vibration control of	2023
structure using different fluids Mati Ullah Shah Syed Waiz Shah Syed Hassan Farooq Muhammad Usman Farhan Ullah	
Innovative Infrastructure Solutions , Volume 8, Issue 3, Article Number 111	
Impact Factor: 2.300   Quartile: 2   Citations: 8  DOI: https://doi.org/10.1007/s41062-023-01080-2	
Spring-controlled modified tuned liquid column ball damper for vibration mitigation of structures  Mati Ullah Shah Muhammad Usman Sved Hassan Faroog Muhammad Bizwan	2023

Impact Factor: 4.761 | Quartile: 1 | Citations: 25

DOI: doi.org/10.1016/j.jsv.2022.117443

#### Axial compressive behavior of concrete incorporating crumb rubber pretreated with waste quarry dust

2022

Muhammad Ashar ul Aleem Muhammad Shahid Siddique Syed Hassan Farooq Muhammad Usman Muhammad Hamza Ahsan Manzoor Hussain Asad Hanif Journal of Building Engineering, Volume 59, Article Number 105086

Impact Factor: 7.144 | Quartile: 1 | Citations: 17 DOI: https://doi.org/10.1016/j.jobe.2022.105086

## Analytical and experimental investigations on the performance of tuned liquid column ball damper

2022

considering a hollow ball

Mati Ullah Shah Muhammad Usman In-Ho, Kim Sania Dawood

Structural Engineering and Mechanics, Volume 83, Issue 5, Pages 655-669

Impact Factor: 2.998 | Quartile: 2 | Citations: 5

DOI: 10.12989/sem.2022.83.5.655

#### Machine Learning-Based Fragility Assessment of Reinforced Concrete Buildings

2022

Abdur Rasheed Muhammad Usman Muhammad Zain Nadeem Igbal

Computational Intelligence and Neuroscience, Volume 2022, Article ID 5504283, 12 pages

Impact Factor: 3.120 | Quartile: 2 | Citations: 11 DOI: https://doi.org/10.1155/2022/5504283

## Effect of Volume Fraction on Shear Mode Properties of Fe-Co and Fe-Ni Filled Magneto-Rheological

2022

**Elastomers** 

Shayan Tahir Muhammad Usman Malik Adeel Umer

Polymers, Volume:14, Issue:14,

Impact Factor: 4.967 | Quartile: 1 | Citations: 14 DOI: https://doi.org/10.3390/polym14142968

### Experimental Investigation of Concrete Properties using Locally available Coarse Aggregates in

2022

Punjab, Pakistan

Muhammad Ilyas Khan Matiullah Shah Muhammad Usman

NUST Journal of Engineering Sciences, Volume 15, No. 1, Pages 26-29

Impact Factor: N/A

**DOI:** https://doi.org/10.24949/njes.v15i1.655

#### An experimental study of tuned liquid column damper controlled multi-degree of freedom structure subject to harmonic and seismic excitations

2022

Mati Ullah Shah Muhammad Usman

PLOS ONE. Volume 17. Issue 6. Article Number e0269910

Impact Factor: 3.752 | Quartile: 2 | Citations: 18 **DOI:** https://doi.org/10.1371/journal.pone.0269910

#### In-Plane Seismic Strengthening of Brick Masonry Using Steel and Plastic Meshes

2022

Safi Ullah Syed Hassan Farooq Muhammad Usman Burhan Ullah Manzoor Hussain Asad Hanif

Materials, Volume 15, Issue 11, Article Number 4013 Impact Factor: 3.748 | Quartile: 1 | Citations: 5 **DOI:** https://doi.org/10.3390/ma15114013

#### Mechanical behavior of high-strength concrete incorporating seashell powder at elevated temperatures

2022

Muhammad Hamza Ahsan Muhamad Shahid Siddique Syed Hassan Faroog Muhammad Usman Muhammad Ashar ul Aleem Manzoor Hussain Asad Hanif Journal of Building Engineering, Volume 50, Article Number 104226

Impact Factor: 5.318 | Quartile: 1 | Citations: 38 DOI: https://doi.org/10.1016/j.jobe.2022.104226

#### Microstructure and Corrosion Behavior of Atmospheric Plasma Sprayed NiCoCrAlFe High Entropy **Alloy Coating**

2022

DOI: https://doi.org/10.3390/ma15041486

Kashif Mehmood Malik Adeel Umer Ahmed Umar Munawar M. Imran Muhammad Shahid Rabeeka Firdous Humair Kousar Muhammad Usman

Materials, Volume 15, Issue 4, Article Number 1486 Impact Factor: 3.748 | Quartile: 1 | Citations: 18

## Performance Evaluation of MWCNTs Reinforced Cement Mortar Composites using Natural and

2022

**Commercial Surfactants** 

Qareeb Ullah Rao Arsalan Khushnood Sajjad Ahmad Muhammad Usman Shad Muhammad Jean-Marc Tulliani

DOI: https://doi.org/10.1007/s11595-022-2498-y	
Vibration control of an irregular structure using single and multiple tuned mass dampers  Imdad Ullah Khan Muhammad Usman Muhammad Tanveer  Proceedings of the Institution of Civil Engineers - Structures and Buildings , Pages 1-13  Impact Factor: 1.171   Quartile: 4   Citations: 4  DOI: https://doi.org/10.1680/jstbu.21.00011	2022
Effect of Tuned Spring on Vibration Control Performance of Modified Liquid Column Ball Damper  Mati Ullah Shah Muhammad Usman Syed Hassan Farooq In-Ho Kim  Applied Sciences, Volume 12(1), Article Number 318  Impact Factor: 2.679   Quartile: 1   Citations: 16  DOI: 10.3390/app12010318	2021
Suitability of liquid crystal display (LCD) glass waste as supplementary cementing material (SCM):  Assessment based on strength, porosity, and durability  Hee JunYang Muhammad Usman Asad Hanif  Journal of Building Engineering, Volume 42, Article Number 102793  Impact Factor: 5.318   Quartile: 1   Citations: 34  DOI: https://doi.org/10.1016/j.jobe.2021.102793	2021
A Framework with reduced computational burden for Seismic Fragility Assessment of Reinforced  Concrete Buildings in High-Intensity Seismic Zones  Muhammad Zain Muhammad Usman Syed Hassan Farooq  Structures, Volume 33, Pages 3055-3065  Impact Factor: 2.983   Quartile: 2   Citations: 13  DOI: https://doi.org/10.1016/j.istruc.2021.06.050	2021
Effect of steel and concrete thickness on shear strength of square concrete filled double skin tubular beams  Muhammad Usman Wahab Ashraf Asad Hanif Syed Hassan Farooq Najeeb Ullah  Case Studies in Construction Materials, Volume 14, Article Number e00478  Impact Factor: 4.934   Quartile: 1   Citations: 6  DOI: https://doi.org/10.1016/j.cscm.2020.e00478	2021
Effect of masonry infill on analytical fragility response of RC frame school buildings in high seismic zone  Muhammad Waleed Khan Muhammad Usman Syed Hassan Farooq Muhammad Zain Sajid Saleem  Journal of Structural Integrity and Maintenance, Volume 6, Issue 2, Pages 110-122  Impact Factor: N/A   Citations: 14  DOI: https://doi.org/10.1080/24705314.2020.1865624	2021
Investigation of the Structural Response of the MRE-Based MDOF Isolated Structure under Historic  Near- and Far-Fault Earthquake Loadings  Muhammad Ahsan Tariq Syed Hassan Farooq Imran Ullah Asad Hanif Muhammad Usman  Applied Sciences, Volume 11(6), Article Number 2876  Impact Factor: 2.838   Quartile: 2   Citations: 11  DOI: https://doi.org/10.3390/app11062876	2021
Utilization of Solid Waste from Brick Industry and Hydrated Lime in Self-Compacting Cement Pastes  Mati Ullah Shah Muhammad Usman Iqra Naseem Muhammad Usman Hanif Sara Farooq  Materials , Volume 14(5), Article Number 1109  Impact Factor: 3.748   Quartile: 1   Citations: 26  DOI: https://doi.org/10.3390/ma14051109	2021
Durability of slag waste incorporated steel fiber-reinforced concrete in marine environment  Seungwon Kim Yongjae Kim Muhammad Usman Cheolwoo Park Asad Hanif  Journal of Building Engineering, Volume 33, Article Number 101641  Impact Factor: 7.144   Quartile: 1   Citations: 58  DOI: https://doi.org/10.1016/j.jobe.2020.101641	2021
Recent Progress in Isotropic Magnetorheological Elastomers and Their Properties: A Review  Muhammad Arslan Hafeez Muhammad Usman Asad Hanif Malik Adeel Umar	2020

Journal of Wuhan University of Technology-Mater. Sci. Ed., Volume 37, Pages47-57

Polymers, Volume 12(12), Article Number 3023 Impact Factor: 4.329 | Quartile: 1 | Citations: 47 DOI: 10.3390/polym12123023 Material Optimization of Tuned Liquid Column Ball Damper (TLCBD) for the Vibration Control of Multi-2020 Storey Structure Using Various Liquid and Ball Densities Muhammad Tanveer Muhammad Usman Imdad Ullah Khan Syed Hassan Faroog Asad Hanif Journal of Building Engineering, Volume 32, Article Number 101742 Impact Factor: 5.318 | Quartile: 1 | Citations: 33 DOI: https://doi.org/10.1016/j.jobe.2020.101742 2020 Interfacial characteristics of cement mortars containing aggregate derived from industrial slag waste Hyongi Lee Asad Hanif Muhammad Usman Yonghwan Kim Hongseob Oh Seong Kyum Kim Journal of Structural Integrity and Maintenance, Volume 5, Issue 4, Page 236-243 Impact Factor: - | Citations: 10 DOI: https://doi.org/10.1080/24705314.2020.1783124 Emerging trends in the growth of structural systems for tall buildings 2020 Shazim Ali Memon Muhammad Zain Dichuan Zhang Sardar Kashif Ur Rehman Muhammad Usman Deuckhang Lee Journal of Structural Integrity and Maintenance, Volume 5, Issue 3, Page 155-170 Impact Factor: - | Citations: 33 DOI: https://doi.org/10.1080/24705314.2020.1765270 Flexural properties of concrete filled double skin (SHS outer and SHS inner) tubular Beams 2020 Wahab Ashraf Muhammad Usman Syed Hassan Farooq Najeeb Ullad Sajid Saleem Proceedings of the Institution of Civil Engineers - Structures and Buildings, Pages 1-13 Impact Factor: 1.171 | Quartile: 4 | Citations: 5 DOI: https://doi.org/10.1680/jstbu.19.00190 Development and characterization of a novel hybrid magnetorheological elastomer incorporating micro 2020 and nano size iron fillers Sadia Umer Khayam Muhammad Usman Malik Adeel Umer Ahmed Rafique Materials & Design, Volume 192, Article Number 108748 Impact Factor: 7.991 | Quartile: 1 | Citations: 51 DOI: https://doi.org/10.1016/j.matdes.2020.108748 Optimized Corrosion Performance of AISI 1345 Steel in Hydrochloric Acid Through Thermo-Mechanical 2020 **Cyclic Annealing Processes** Muhammad Usman Muhammad Arslan Hafeez Aqil Inam Misbah Ul Hassan Malik Adeel Umer Asad Hanif Crystals, Volume 10, Article Number 256 Impact Factor: 2.589 | Quartile: 2 | Citations: 5 DOI: 10.3390/cryst10040265 Effect of Coconut Fiber Length and Content on Properties of High Strength Concrete 2020 Muhammad Usman Wagas Ahmad Syed Hassan Faroog Mehran Khan Ayaz Ahmed Fahid Aslam Rayed Al Yousef Hisham Al Abduljabbar Muhammad Sufian Materials, Volume 13, Issue 5, Article Number 1075 Impact Factor: 3.623 | Quartile: 1 | Citations: 162 DOI: https://doi.org/10.3390/ma13051075 Axial compressive behavior of confined steel fiber reinforced high strength concrete 2020 Muhammad Usman Syed Hassan Faroog Mohammad Umair Asad Hanif Construction and Building Materials, Volume 230, Article Number 117043

Impact Factor: 6.141 | Quartile: 1 | Citations: 83 DOI: https://doi.org/10.1016/j.conbuildmat.2019.117043

#### Improving structural performance of timber wall panels by inexpensive FRP retrofitting techniques

2020

Muhammad Ammad Hassan Muhammad Usman Asad Hanif Syed Hassan Farooq Jamil Ahmed

Journal of Building Engineering, Volume 27, Article Number 101004

Impact Factor: 5.318 | Quartile: 1 | Citations: 23 DOI: https://doi.org/10.1016/j.jobe.2019.101004

#### Application of tuned liquid column ball damper (TLCBD) for improved vibration control performance of multi-storey structure

2019

Muhammad Tanveer Muhammad Usman Imdad Ullah Khan Shakil Ahmad Asad Hanif Syed Hassan Farooq

impact Factor: 2.740   Quartile: 2   Citations: 26	
<b>DOI:</b> 10.1371/journal.pone.0224436	
Seismic Vulnerability Assessment of School Buildings in Seismic Zone 4 of Pakistan	2019
Muhammad Zain Muhammad Usman Syed Hassan Farooq Tahir mehmood	
Advances in Civil Engineering, Volume: 2019 Article Number: 5808256	
Impact Factor: 1.176   Quartile: 3   Citations: 28	
<b>DOI:</b> 10.1155/2019/5808256	
Self-Consolidating Lightweight Concrete Incorporating Limestone Powder and Fly Ash as	2019
Supplementary Cementing Material	
Muhammad Ilyas khan Muhammad Usman Syed Ali Rizwan Asad Hanif	
Materials , Volume: 12 Issue: 18 Article Number: 3050	
Impact Factor: 3.057   Quartile: 2   Citations: 25	
<b>DOI:</b> 10.3390/ma12183050	
Blast Loading Response of Reinforced Concrete Panels Externally Reinforced with Steel Strips	2019
Rizwan Khan Syed Hassan Farooq Muhammad Usman	
Infrastructures , Volume 4, Issue 3	
Impact Factor: 0   Citations: 15	
<b>DOI:</b> 10.3390/infrastructures4030054	
Influence of bonded mortar of recycled concrete aggregates on interfacial characteristics – Porosity	2019
assessment based on pore segmentation from backscattered electron image analysis	
Asad Hanif Muhammad Usman Wonjun Park YongJae kim	
Construction and Building Materials, Volume 212, Pages 149-163	
Impact Factor: 4.419   Quartile: 1   Citations: 88	
<b>DOI:</b> 10.1016/j.conbuildmat.2019.03.265	
Properties enhancement of super absorbent polymer (SAP) incorporated self-compacting cement	2019
pastes modified by nano silica (NS) addition	
Hassan Baloch Muhammad Usman Syed Ali Rizwan Asad Hanif	
Construction and Building Materials, Volume 203, Pages 18-26	
Impact Factor: 4.419   Quartile: 1   Citations: 80	
<b>DOI:</b> 10.1016/j.conbuildmat.2019.01.096	
Ambient Vibration Testing of a Pedestrian Bridge Using Low-Cost Accelerometers for SHM	2019
Applications	
Azam Ali Talha Yousaf Sandhu Muhammad Usman	
Smart Cities , Volume 2, Issue 1, Pages 20-30	
Impact Factor: 0   Citations: 34	
<b>DOI:</b> 10.3390/smartcities2010002	
Optimization of Steam-Curing Regime for Recycled Aggregate Concrete Incorporating High Early	2018
Strength Cement-A Parametric Study	
Asad Hanif Yongjae Kim Cheolwoo Park Muhammad Usman	
Materials , Volume: 11, Issue: 12, Article Number: 2487	
Impact Factor: 2.972   Quartile: 2   Citations: 22  DOI: 10.3390/ma11122487	
	0010
Progressive structural capacity loss assessment-A framework for modern reinforced concrete buildings	2018
Muhammad Zain Muhammad Usman Syed Hassan Farooq Asad Hanif	
PLoS ONE, Volume 13, Issue 12, Article Number e0208149	
Impact Factor: 2.776   Quartile: 2   Citations: 10	
<b>DOI:</b> 10.1371/journal.pone.0208149	
Effect of Soil-Structure Interaction on a Masonry Structure under Train Induced Vibrations	2018
Bilal Lal Khan Syed Hassan Farooq Muhammad Usman Faheem Butt Abdul Qudoos Khan Asad Hanif	
Proceedings of the Institution of Civil Engineers - Structures and Buildings, -	
Impact Factor: 0.877   Quartile: 4   Citations: 16	

 $PLoS\ ONE$  , Volume 14(10), Article Number e0224436

**DOI:** 10.1680/jstbu.18.00131

Structural reliability analysis of superstructure of highway bridges on China-Pakistan Economic	2018
Corridor (CPEC): a case study	
Abdur Rasheed muhammad Usman Rao Arsalan Khushnood Syed Hassan Farooq Asad Hanif Noman A. Khan Journal of Structural Integrity and Maintenance, Volume:3, Issue: 3, Pages 197-207	
Impact Factor: 0   Citations: 9	
<b>DOI:</b> 10.1080/24705314.2018.1492665	
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Source code of Optimus3D	2024
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User Interface of Optimus3D	2024
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