



Khan Shahzada, PhD

Professor

Department of Civil Engineering,
University of Engineering & Technology,
Peshawar, Pakistan.

Telephone: Off: 091-9222075 Cell# 0333-9217623

Email: khanshahzada@uetpeshawar.edu.pk and shah_civil2003@yahoo.com

EDUCATION

PhD in Structural/Earthquake Engineering, September 2011 (GPA: 3.74/4.0)

PhD research completed under the supervision of Prof. Akhtar Naeem Khan, University of Engineering and Technology Peshawar Pakistan and Prof. Amr Elnashai University of Illinois at Urbana Champaign USA.

- Title of PhD Research: “**Seismic Risk Assessment of Buildings in Pakistan (Case Study Abbottabad City)**”

MSc in Earthquake Disaster Mitigation, September 2007 (Japan) (GPA: 3.86/4.0)

- Title of MSc Research: “Improvement of Masonry Structures Against Seismic Force”

BSc in Civil Engineering 2003 UET, Peshawar with distinction

- Title of BSc Research: “Design of Self Supporting Steel Tower”

SPECIALTY

Seismic Risk Assessment of Buildings, Vulnerability Assessment of unreinforced and confined masonry buildings, Hazard assessment, Development of fragility curves for different types of buildings and risk assessment of existing buildings. Experimental investigation (Shake table and Quasi static tests) of different types of buildings. Seismic capacity assessment and retrofitting of existing damaged buildings. Slopes Stability, Role of Bentonite in Controlling Autogenous Shrinkage of High Strength Concrete, Evaluation of Self-Sensing Behaviour of Concrete, Effect of mineral substitution on the properties of mass concrete, Confined Masonry buildings against Blast Loading, and waste utilization in cement and concrete.

PROFESSIONAL EXPERIENCE

1. Worked as Lecturer at the Department of Civil Engineering, University of Engineering & Technology, Peshawar, 2004-2005.
2. Worked as Junior Engineer at Water and Power Development Authority (WAPDA) on Hydropower Projects 2005 to 2006. During this tenure I worked as Site Incharge of 37.0 Kilometer Road from Thahkot to Banna to Weir site and 9.0 Km road from Thahkot to Switchbiyar, Power House site of Allai Khawar Hydropower Project.
3. Worked as Lecturer at the Department of Civil Engineering, University of Engineering & Technology, Peshawar, 2006-2012.
4. Working as Associate Professor in the Department of Civil Engineering, University of Engineering & Technology, Peshawar, since January, 2013 to October 04, 2020.
5. Working as Professor in the Department of Civil Engineering, University of Engineering & Technology, Peshawar, since October 05, 2020 to till date.
6. Worked for a year as visiting scholar at Mid America Earthquake Center UIUC, USA 2010.

ADVANCED COURSES STUDIED IN UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN USA, 2010

- Earthquake Engineering, Decision and Risk Analysis, Finite Element Method, Masonry Structures, Disasters and Urban Planning, Structural Analysis, Basics of Seismology and Seismic Hazard Analysis,

EXPERIMENTAL WORK CARRIED OUT

- Shake table of three stories confined brick masonry building before and after retrofitting
- Quasi static test of full scale unreinforced brick masonry building
- Quasi static test of full scale unreinforced and confined concrete block masonry walls
- Quasi static test of full scale unreinforced concrete block masonry building before and after retrofitting with ferrocement overlay
- Evaluation of different properties of concrete
- Blast loading test of confined dry stacked block masonry structures

CONSULTANCY SERVICES AS GEOTECHNICAL CONSULTANT

1. Construction of multipurpose sports Gymnasium Works Directorate Agriculture University Peshawar,

2. Construction of Auqaf Plaza at Adda Nasar Bagh Main GT road Peshawar, Auqaf Peshawar.
3. Construction of Buildings complex in Muzaffarabad, Physical planning housing sector Planning and Development Department Azad Kashmir.
4. Construction of Research Farm at NIFA Peshawar, Pakistan Atomic Energy Commission.
5. Construction of 12 JCOs Quarters at Kohat Air Base, Pakistan Air force.
6. Construction of Fish Hatchery at Dera Ismail Khan, Pak PWD DI Khan.
7. Construction of two story Buildings Swat Scout Peshawar, Pak Associates Consultants.
8. Construction of Shaheen Foundation Multi story Plaza Mall Road Peshawar, Gaheez Consultants.
9. Construction and Renovation of 35 houses at Kohat, Pak PWD Bannu.
10. Construction of 6 story Building in Hayatabad for FATA Headquarter, Building Division Khyber Agency.
11. Construction of Girls Hostel Alpuri District Shangla, Pak PWD Swat.
12. Construction of Bacha Khan Medical Complex Sheikh Maltoon Mardan.
13. Construction of Academic Block, Khyber Medical College Peshawar.
14. Construction of Food Storage Building at Azad Kashmir.
15. Construction of Regional Passport Office Abbottabad, Pak PWD, Abbottabad.
16. Construction of Cluster Hostel Building District Battagram Works and Services Department Battagram.
17. Construction of four story plaza near Gul Haji Plaza Peshawar. Gaheez Consultants.
18. Construction of Quaid-e-Azam Public School District Swabi. Lala Zar Consultants.
19. Construction of Girls Hostel and School Mardan. Contech International Health Consultants.
20. Construction of Roads, Causeways and box culverts of Different Roads at Khyber Pakhtunkhwa.

CONSULTANCY SERVICES AS STRUCTURAL/EARTHQUAKE ENGINEER

1. Seismic Risk Assessment of Jehanzeb College Building Swat
2. Retrofitting and Rehabilitation of Judicial Complex Bannu
3. Seismic Risk Assessment of Cantonment Board Plaza Mardan
4. Retrofitting and Rehabilitation of Government Degree College Nawagai, Bajaur Agency

5. Retrofitting and Rehabilitation of Government Degree College Barkhalozo Bajaur Agency
6. Retrofitting and Rehabilitation of Governor’s House Peshawar
7. Retrofitting and Rehabilitation of Girls Degree College Mansehra
8. Seismic Risk Assessment of Qayum Stadium Structures Peshawar
9. Earthquake Risk Assessment of Secretariat Buildings in Peshawar
10. Seismic Risk Assessment of Secretariat Buildings Azad Kashmir Muzafarabad
11. Seismic Risk Assessment of Bar Room at Judicial Complex Bannu
12. Seismic Capacity assessment of Shahi Mehman Khana Building Peshawar

INTERNATIONAL/NATIONAL MEMBERSHIP

- Life time Member Pakistan Engineering Council
- Member American Society of Civil Engineers, USA.
- Member International Institute of Seismology and Earthquake Engineering Japan
- Member Mid America Earthquake Centre University of Illinois Urbana Champaign USA.
- Member Board of Studies Department of Civil Engineering, University of Engineering. & Technology, Peshawar, Pakistan.
- Member Board of Studies Department of Civil Engineering, Iqra National University, Peshawar, Pakistan.
- Member Board of Studies Department of Civil Engineering, CECOS University, Peshawar, Pakistan.
- Member Board of Studies Department of Civil Engineering, Abasyn University, Peshawar, Pakistan.
- Member Proposal Research Evaluation Committee (PREC) in MSc and PhD for Structural Engineering, Department of Civil Engineering, UET Peshawar, Pakistan.

RESEARCH PUBLICATIONS

1. Asfandyar Ahmed, **Khan Shahzada**, 2020“Seismic vulnerability assessment of confined masonry structures by macro-modeling approach”, Structures, Volume 27, 2020, Pages 639-649, ISSN 2352-0124, <https://doi.org/10.1016/j.istruc.2020.06.007>.
(<http://www.sciencedirect.com/science/article/pii/S2352012420302824>)

2. Akhtar Gul, Bashir Alam, Wisal Ahmed, Nauman Wahab, **Khan Shahzada**, Yasar Irfan Badrashi, Sajjad Wali Khan, Muhammad Nasir Ayaz Khan, 2020 “Strengthening and Characterization of Existing Reinforced Concrete Beams for Flexure by Effective Utilization of External Steel Elements. Advances in Structural Engineering. August 2020. doi:10.1177/1369433220950614
3. Kaffayatullah Khan, Muhammad Fahad Ullah, **Khan Shahzada**, Muhammad Nasir Amin, Tayyaba Bibi, Nauman Wahab, Abdullah Aljaafari, 2020 “Effective use of micro-silica extracted from rice husk ash for the production of high-performance and sustainable cement mortar”, Construction and Building Materials, Volume 258, 2020, 119589, ISSN 0950-0618,
<https://doi.org/10.1016/j.conbuildmat.2020.119589>.
(<http://www.sciencedirect.com/science/article/pii/S0950061820315944>)
4. Hafiz Asfandyar Ahmed , **Khan Shahzada**, 2020 “Numerical modeling of confined brick masonry structures with parametric analysis and energy absorption calculation.” International Journal of Protective Structures. August 2020. doi:10.1177/2041419620947730.
5. Fasih Ahmed Khan, **Khan Shahzada**, Qazi Sami Ullah, Muhammad Fahim, Sajjad Wali Khan, Yasir Irfan Badrashi, 2020 “Development of Environment-Friendly Concrete through Partial Addition of Waste Glass Powder (WGP) as Cement Replacement” Civil Engineering Journal, Volume 6 No. 12 Doi: [10.28991/cej-2020-03091620](https://doi.org/10.28991/cej-2020-03091620)
<https://civilejournal.org/index.php/cej/article/view/2475>
6. Wajid Ali, Syed Azmat Ali Shah, **Khan Shahzada**, Syed Mohammad Ali and Sajjad Wali Khan, 2020 “Retrofitting of Infilled Frame in Reinforced Concrete Structure” Mehran University Research Journal of Engineering and Technology 39(3):475-488. ISSN 2413-7219. DOI: [10.22581/muet1982.2003.03](https://doi.org/10.22581/muet1982.2003.03)
<https://publications.muet.edu.pk/index.php/muetrj/article/view/1689>

7. Syed Azmat Ali Shah, **Khan Shahzada**, Qazi Samiullah , 2020 “Influence of Brick Masonry Infilled Wall on Seismic Performance of Reinforced Concrete Frame” NED University Journal of Research XVII(3):15-29. DOI: [10.35453/NEDJR-STMECH-2018-0013](https://doi.org/10.35453/NEDJR-STMECH-2018-0013)
<https://www.neduet.edu.pk/NED-Journal/2020/20vol3paper2.html>
8. Akhtar Gul, **Khan Shahzada**, Bashir Alam, Yasir Irfan Badrashi, Sajjad Wali Khan, Fayaz A. Khan, Abid Ali, and Zahid Ur Rehman, 2020 "Experimental Study on the Structural Behavior of Cast in-situ Hollow Core Concrete Slabs." Civil Engineering Journal 6.10 (2020): 1983-1991.
9. Asmat Ullah, **Khan Shahzada**, Sajjad Wali Khan, Victor Starov, 2020 “Purification of produced water using oscillatory membrane filtration” , Desalination, Volume 491, 2020, 114428, ISSN 0011-9164, <https://doi.org/10.1016/j.desal.2020.114428>.
10. Asfandyar Ahmed, **Khan Shahzada**, Syed Muhammad Ali, Akhter Naeem Khan, Syed Azmat Ali Shah, 2019 “Confined and unreinforced masonry structures in seismic areas: Validation of macro models and cost analysis”. Engineering Structures. Volume 199, Pages: 1-15, DOI: 10.1016/j.engstruct.2019, 109612.
11. Muhammad Adeel Khan, Bazid Khan, **Khan Shahzada**, Sajjad Wali Khan, Nauman wahab, Muhammad Imran Ahmad, 2020”Conversion of Waste Marble powder into a binding material”. Civil Engineering Journal, Volume 6 No. 3 DOI: 10.28991/cej-2020-03091481.
12. Izaz Ahmad, **Khan Shahzada**, Muhammad Imran Ahmad, Fayaz Khan, Yasir Irfan Badrashi, Sajjad Wali Khan, Noor Muhammad, Habib Ahmad, “Densification of Concrete using Barite as Fine Aggregate and its Effect on Concrete Mechanical and Radiation Shielding Properties”. Journal of Engineering research. Vol. 7, Issue No. (4) December 2019 pages: 81-95.
13. Farshid Hosseinia, Bora Gencturk , Amit Jaina, and **Khan Shahzada** 2019 “Optimal design of bridge columns constructed with engineered cementitious composites and Cu-Al-Mn superelastic alloys” Engineering Structures Volume 198, 1 November 2019, 109531 <https://doi.org/10.1016/j.engstruct.2019.109531>.

14. Syed Azmat Ali Shah, Junaid Shah Khan, Syed Muhammad Ali, **Khan Shahzada**, Waqar Ahmad, and Junaid Shah 2019 “Shake Table Response of Unreinforced Masonry and Reinforced Concrete Elements of Special Moment Resisting Frame,” *Advances in Civil Engineering*, vol. 2019, Article ID 7670813, 17 pages, 2019. <https://doi.org/10.1155/2019/7670813>.
15. Muhammad Nasir Amin, Syed Hissan, **Khan Shahzada**, Kaffayatullah Khan, and Tayyaba Bibi 2019 “Pozzolanic Reactivity and the Influence of Rice Husk Ash on Early-Age Autogenous Shrinkage of Concrete” *Frontier in Materials*, <https://doi.org/10.3389/fmats.2019.00150>.
16. Muhammad Nasir Amin, Tariq Murtaza, **Khan Shahzada**, Kaffayatullah Khan, and Muhammad Adil 2019 “Pozzolanic Potential and Mechanical Performance of Wheat Straw Ash Incorporated Sustainable Concrete” *Sustainability-Sustainable Engineering and Science* DOI: <http://dx.doi.org/10.3390/su11020519> Volume: 11, Issue: 2, Pages 1-20.
17. Zawar.H.Khan, **Khan Shahzada**, T.Aaron Gulliver, Hassan Nasir, A. Rehman, “A macroscopic traffic model based on driver physiological response”. *Journal of Engineering Math*. January 2019. Vol. 115, Page 21-41.
18. Waheed Khan, **Khan Shahzada**, Tayyaba Bibi, Shams Ul Islam and Sajjad Wali Khan 2018 “Performance Evaluation of Khyber Pakhtunkhwa Rice Husk Ash (RHA) in Improving Mechanical Behavior of Cement” ” *Construction & Building Materials* Volume 176, Pages 89-102.
19. Sajjad Wali Khan, Bora Gencturk, **Khan Shahzad**, Asmat Ullah, 2018 “Bending behaviour of axially preloaded multilayered spiral strands”. *Journal of Engineering Mechanics* (Impact Factor 2.264), ASCE, Vol. No. 144, Issue 12, December 2018, Pages: 1-19.
20. Sajjad Hussain, Zahid Ur Rehman, Noor Muhammad, Muhammad Tahir, **Khan Shahzada**, Sajjad Wali Khan, Muhammad Salman, Mujahid Khan, Akhtar Gul, “Numerical Modeling for Engineering Analysis and Designing of Optimum Support Systems for Headrace Tunnel”. *Advances in Civil Engineering* (Impact Factor 1.104). March 2018. Volume 2018, Article ID 7159873, 10 pages.
21. Syed Mustafa Ali Shah, **Khan Shahzada**, Gencturk Bora, Shazim Ali Memon (2017) “Retrofitting of Full-Scale Confined Masonry Building Using Ferro-Cement Overlay” *Journal of Performance of Constructed Facilities* (DOI.org/10.1061/(ASCE)CF.1943-5509.0001060) Vol. 31, Issue 5.

22. Asfandyar Ahmad, Imad Ahmad, **Khan Shahzada**, Bashir Alam, Muhammad Tayyab Naqash, Muhammad Fahad, Sajjad Wali Khan 2018 “Seismic Capacity Assessment of Confined Brick Masonry Building: An Experimental Approach” Shock and Vibration DOI 10.1155/2018/4756352
23. Muhammad Tufail, **Khan Shahzada**, Gencturk Bora, Jianqiang Wei (2016)“Effect of Elevated Temperature on Mechanical Properties of Limestone, Quartzite and Granite Concrete” International Journal of Concrete Structures and Materials · (DOI: 10.1007/s40069-016-0175-2).
24. Muhammad Ejaz Shabab, **Khan Shahzada**, Bora Gencturk, Muhammad Ashraf Tanoli, and Muhammad Fahad (2015), “Synergistic Effect of Fly Ash and Bentonite as Partial Replacement of Cement in Mass Concrete” Korean Society of Civil Engineers DOI 10.1007/s12205-015-0166-x.
25. Asmat Ullah, Muddasar Habib, Sajjad Wali Khan, M. I. Ahmad, **Khan Shahzada**, Victor M Starov “Membrane oscillation and oil drop rejection during produced water purification”, Separation and Purification Technology. 03/2015; DOI: 10.1016/j.seppur.2015.03.009.
26. Salman Afzal, **Khan Shahzada**, Muhammad Fahad, Salman Saeed, Muhammad Ashraf, “Assessment of early-age autogenous shrinkage strains in concrete using bentonite clay as internal curing technique” Construction & Building Materials Vol. 66, 2014, pp. 403-409.
27. Zeeshan Ahmad, **Khan Shahzada**, Gencturk Bora, Akhtar Naeem Khan, Rashid Rehan, Muhammad Fahad, Muhammad Ashraf, and Zaigham Ali “Seismic Capacity Assessment of Unreinforced Concrete Block Masonry Buildings in Pakistan Before and After Retrofitting” Journal of Earthquake Engineering Vol. 19 Issue 3, 2015, pp. 357-382, DOI: 10.1080/13632469.2014.963744.
28. Arshad Ali, Shahid Iqbal, Anwar Ulhaq Chaudary, Muhammad Naseem Baig, **Khan Shahzada**, Shakir Khan “The Wastes Utility In Concrete” Int. J. Environ. Res., Article 48, Volume 8 issue 4 pages 1323-1328, Autumn 2014 (Impact Factor 1.18).
29. **Khan Shahzada**, Akhtar Naeem Khan, Amr Elnashai, Mohmmad Ashraf, Muhammad Javed, Amjad Naseer, and Bashir Alam [2012]"Experimental Seismic Performance Evaluation of Unreinforced Brick Masonry Buildings" Earthquake Spectra,

Earthquake Engineering Research Institute Volume 28, No.3, Pages 1269-1290, August 2012, (DOI:10.1193/1.4000073).

30. Fazl-e-Jalal, **Khan Shahzada**, Salman Saeed, Irshad Ahmad and Kaffayat Ullah (2017) "Stabalization of Medium Expansive Soils in Pakistan using Marble Industrial Waste and Bagasse Ash" International Journal of Earth Sciences and Engineering 10(4) August 2017.
31. **Khan Shahzada** and Tetsuro Goto, "Improvement of Masonry Structures Against Seismic Force" Published in Bulletin of the International Institute of Seismology and Earthquake Engineering Tsukuba, Japan September, 2008. (ISSN: 0074-655X).
32. **Khan Shahzada**, Akhtar Naeem Khan, Amr S. Elnashai, Amjad Naseer, Muhammad Javed, and Mohammad Ashraf, "*Shake Table Test of Confined Brick Masonry Building*" Advanced Materials Research Vol. 255-260 pp 689-693 (2011).
33. Mohammad Ashraf, Akhtar Naeem Khan, Qaisar Ali, **Khan Shahzada**, and Amjad Naseer "Experimental Behavior of Full Scale URM Building Retrofitted with Ferrocement Overlay", Advanced Materials Research Vol. 255-260 pp 319-323 (2011).
34. Mohammad Shoaib, Amjad Naseer, **Khan Shahzada**, Akhtar Naeem Khan, and Mohammad Ashraf "Earthquake Disaster Mitigation Through Retrofitting of Unreinforced Concrete Block Masonry Buildings", Advanced Materials Research Vol. 255-260 pp 2627-2631 (2011).
35. **Khan Shahzada**, Tetsuro Goto, Akhtar Naeem Khan, Amjad Naseer, Muhammad Fahad, "Improvement of Mechanical Properties and Lateral Resistance of Brick Masonry Walls by Using Indigenous Materials", Advanced Materials Research Vol. 255-260 pp 684-688 (2011).
36. Azmat Ullah, **Khan Shahzada**, Akhtar Naeem Khan, Amjad Naseer, Mohammad Ashraf and Muhammad Shoaib " Seismic Resistance of Unreinforced Brick Masonry Buildings: An Experimental Study", Advanced Materials Research Vol. 255-260 pp 2622-2626 (2011).
37. **Khan Shahzada**, Akhtar Naeem Khan, Muhammad Javed, Sheng-Lin-Lin, and Amjad Naseer, " Seismic Hazard Assessment of Abbottabad City " published in International

Journal of Earth Sciences and Engineering ISSN 0974-5904, Volume 04, No 06SPL, October 2011, pp. 212-215

38. **Khan Shahzada**, Gencturk Bora, Akhtar Naeem Khan, Muhammad Javed, and Amjad Naseer, “ Vulnerability Assessment of Typical Buildings in Pakistan” published in International Journal of Earth Sciences and Engineering ISSN 0974-5904, Volume 04, No 06 SPL, October 2011, pp. 208-211.
39. Suleman Daud, **Khan Shahzada**, Muhammad Tufail and Muhammad fahad, “Stream flow modeling of river swat using regression and artificial neural networks (ANNs) techniques” Advanced Materials Research Vol. 255-260 pp 679-683 (2011).
40. Bashir Alam, Muhammad Ashraf, **Khan Shahzada**, Salman Afzal and Kaffayatullah Khan, “Sulphate attack in high performance concrete- A review” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 01, July 2012.
41. Anwar Shah, Qaiser Ali, Bashir Alam, **Khan Shahzada**, Rawid Khan and Naveed Ahmad, “Study on performance evaluation of adhesive anchors in concrete” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 02, Oct 2012
42. **Khan Shahzada**, M. Javed, Bashir Alam and Mansoor Khan, “Strengthening of Brick Masonry Walls against earthquake loading” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 01, July 2012
43. Hassan Khan, Zaigham Ali, Amjad Naseer, **Khan Shahzada**, Shahid Ali and Syed Shahan Ali Shah, “Investigation of mechanical and thermal properties of light weight brick” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 01, July 2012
44. **Khan Shahzada**, Bashir Alam, M. Javed and Zaigham Ali, “Retrofitting of brick masonry columns by Ferrocementing” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 02, Oct 2012
45. Bashir Alam, Zahid Ullah, Faheem Ullah and **Khan Shahzada**, “Performance of pre-wetted

- sawdust as a source of internal curing of concrete” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 02, Oct 2012
46. Muhammad Ayub, Qaiser Ali, **Khan Shahzada** and Amjad Naseer, “Engineering assessment of coarse aggregates used in Peshawar” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 02, Oct 2012
47. Muhammad Rizwan, Bashir Alam, Faisal ur Rehman, Noreema Masud and **Khan Shahzada**, “Cost optimization of combined footings using modified complex method of box” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 01, July 2012
48. Salman Afzal, **Khan Shahzada**, M. Ashraf and Bashir Alam, “Autogenous shrinkage in high performance concrete- A review” International journal of Advanced Structures and Geotechnical Engineering, ISSN 2319-5347, Vol. 01, No. 01, July 2012
49. Hafiz Asfandyar Ahmed, **Khan Shahzada**, Bashir Alam, Mohammad Javed, Syed Mohammad Ali, Syed Mustafa Ali Shah “Disaster Mitigation Through Conservation of Heritage Buildings in Peshawar City” International Journal of Pure and Applied Research in Engineering and Technology 2012; Volume 1(3): 36-47.
50. Hafiz Asfandyar Ahmed, **Khan Shahzada**, Mohammad Javed, Bashir Alam, “Effect of Short Carbon Fibres on Flexural Tensile Strength of Concrete” International Journal of Pure and Applied Research in Engineering and Technology 2012; Volume 1(3): 29-35.
51. Mohammed Javed, Guido Magenes, Bashir Alam, Amjad Naseer, **Khan Shahzada** 2012, “Seismic Performance Evaluation of Unreinforced Brick Masonry Shear Walls Constructed in Stone Dust Mortar” Journal of Applied Sciences and Engineering. 06/2012; 31(1):1-12.
52. Muhammad Abid Khan, **Khan Shahzada**, Bashir Alam, Akhtar Naeem Khan, Muhammad Javed “Slope Stability Hazard Evaluation and Mitigation Scheme for Sohbat Charra Slide Zone District Battagram”, Journal of Himalayan Earth Sciences 03/2014; 47(1):131-140.
53. Tabinda Masud, Amjad Ali, Hazrat Hussain, **Khan Shahzada**, Noreema Masud, Muhammad Rizwan “Estimation of groundwater balance for Pabbi region, Khyber

Pakhtunkhwa” Journal of Himalayan Earth Sciences. 12/2013; 46(2):113-119.

54. **Khan Shahzada**, Tetsuro Goto, Bahsir Alam, Muhammad Javed, Amjad Naseer, Muhammad Fahad, 2012 “Capacity assessment of masonry walls strengthened with indigenous materials” Journal of Applied Sciences and Engineering. 06/2012; 31(1):1-12.
55. **Khan Shahzada**, Akhtar Naeem Khan, Amr Elnashai, Amjad Naseer, M. Ashraf, M. Javed and Giulio Martire, 2010. “*Dynamic Response of Confined Brick Masonry Building*”, The 13th Japan Earthquake Engineering Conference, 2010. Tsukuba Japan, Page 3958-3965.
56. **Khan Shahzada**, Akhtar Naeem Khan, Amjad Naseer, Mohammad Ashraf, Azmat Ullah, 2009, “*Sustainable Buildings in Dera Ismail Khan and Adjoining Areas: An Experimental Study*” International Disaster Mitigation Conference-2009, Baragali, Pakistan, Page 141-152.
57. Mohammad Ashraf, Amjad Naseer, Akhtar Naeem Khan, **Khan Shahzada**, 2009. “*Seismic Up-gradation of Unreinforced Masonry Buildings as a Part of Disaster Management Policy*” International Disaster Mitigation Conference-2009, Baragali, Pakistan, Page 101-120
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60. Muhammad Ayub, Qaisar Ali, **Khan Shahzada**, Amjad Naseer, and Muhammad Shoaib, “*Conservation of Islamia College Building in Pakistan*” 2nd International Conference on Rehabilitation and Maintenance in Civil Engineering Solo, March 8th-10th , 2012 1877-7058 © 2013 The Authors. Published by Elsevier Ltd.
61. Suleman Daud, **Khan Shahzada**, Muhammad Tufail and Mujahid Khan, “*Stream flow*

forecasting significance in the mitigations of hazards occurring due to floods and droughts”
International Disaster Mitigation Conference-2009, Baragali, Pakistan.

62. Translation of “Field Practicing Manual” for Engineers and Contractors from Urdu to English language has been made and uploaded on IISEE Japan Website and also on EEC, UET, Peshawar Website.
63. Adil Rafiq, , Akhtar Naeem Khan, **Khan Shahzada**, Syed Shahan Ali Shah, Syed Azmat Ali Shah and Zaigham Ali "Implementation of the AASHTO LRFD Bridge Design Specifications for Bridge Superstructure Design " International Journal of Applied Sciences, Engineering and Management ISSN 2320 – 3439, Vol. 02, No. 02, March 2013, pp. 37 - 40.
64. Syed Shahan Ali Shah , Mohammad Ayaz, Rawid Khan, **Khan Shahzada**, Hassan Khan, and Zaigham Ali " TRAFFIC ANALYSIS OF WARSAK ROAD PESHAWAR PAKISTAN" International Journal of Applied Sciences, Engineering and Management ISSN 2320 – 3439, Vol. 02, No. 03, May 2013, pp. 58 - 64.
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66. Junaid Akbar, Bashir Alam, Muhammad Ashraf, Salman Afzal, Asfandyar Ahmad, **Khan Shahzada** “Evaluating the Effect of Bentonite on Strength and Durability of High Performance Concrete.” International Journal of Advanced Structures and Geotechnical Engineering ISSN 2319-5347, Vol. 02, No. 01, January 2013.
67. Syed Azmat Ali Shah, **Khan Shahzada**, Salman Afzal, Muhammad Ejaz Shabab, Nouman Khattak “Behavior of Infill Walls under Lateral Loads in Reinforced Concrete Frames - A Review” International Journal of Advanced Structures and Geotechnical Engineering ISSN 2319-5347, Vol. 02, No. 03, July 2013.

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69. Tariq Ali, Nouman Iqbal, Muhammad Ali Khan, Dr Mehboob Ali, **Dr Khan Shahzada** “Evaluation Of Flexure Strength Behavior Of Over Burnt Brick Ballast Aggregate Concrete” Tariq Ali et al Int. Journal of Engineering Research and Applications ISSN : 2248-9622, Vol. 4, Issue 1(Version 1), January 2014, pp.15-21.
70. Bashir Alam, Zahid Ullah, Faheem Ullah Jan, **Khan Shahzada**, Salman Afzal “Investigation of Styrofoam as Lightweight Aggregate” International Journal of Advanced Structures and Geotechnical Engineering ISSN 2319-5347, Vol. 02, No. 02, April 2013.
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72. Bashir alam, M. I. Haque, Qaisar Ali, **Khan Shahzada**, Syed Mohammad Ali, Afzal Khan, Muhammad Ibrahim “Optimal Geometry of Pin-Jointed Plane frames using a Hybrid Complex Method ” International Journal of Advanced Structures and Geotechnical Engineering ISSN 2319-5347, Vol. 02, No. 01, January 2013.
73. Muhammad Shoaib, Amjad Naseer, **Khan Shahzada**, Akhtar Naeem Khan and M. Ashraf “Earthquake Disaster Mitigation through Retrofitting of Unreinforced Concrete Block Masonry Buildings” Advanced Materials Research Vols. 255-260 (2011) pp 2627-2631 Online available since 2011/May/31.
74. Muhammad Waseem, Irshad Ahmad, Rawid Khan, Bashir Alam, **Khan Shahzada**, Muhammad Javed “Stability Analysis of Soil Slope in Swabi, Pakistan.” Journal of Engineering and Applied Science Vol. 32 No. 1 (2013) ISSN 1023-862X.
75. Anwar Shah, Qaisar Ali, Bashir Alam, **Khan Shahzada**, Rawid Khan, Naveed Ahmad “Study on Performance Evaluation of Adhesive Anchors in Concrete” International Journal

of Advanced Structures and Geotechnical Engineering ISSN 2319-5347, Vol. 01, No. 02, October 2012.

76. Tariq Ali, Nouman Iqbal, Dr.Mehboob Ali, **Dr. Khan Shahzada** “Sustainability Assessment of Bitumen with Polyethylene as Polymer” IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) e-ISSN: 2278-1684,p-ISSN: 2320-334X, Volume X, Issue X (Nov. - Dec. 2013), PP 01-00.
77. **Khan Shahzada**, Akhtar Naeem Khan, Amr S. Elnashai, Amjad Naseer, M. Ashraf, M. Javed, Giulio Martire “Dynamic Response of Confined Brick Masonry Buildings” The 13th Japan Earthquake Engineering, Symposium (2010).

PhD and MSc STUDENTS

Currently Three (03) PhD students and Seven (07) MSc students are working on different research topics. Two PhD and Fifty (55) MSc students have completed their research work under my supervision.

BOOKS PUBLISHED

1. “**SEISMIC RISK ASSESSMENT OF BUILDINGS**” by Khan Shahzada, Akhtar Naeem Khan and Muhammad Javed, Pages: 408, Publisher: LAP LAMBERT Academic Publishing (April 27, 2012), Language: English, ISBN-10: 3848443120, ISBN-13: 978-3848443123

FUNDED RESEARCH PROJECTS

1. Performance of Confined Dry Block Masonry Against Blast Loading Investigator: Khan Shahzada, Co- Principal Investigator: Brig. Sarfaraz Ali, Higher Education Commission (HEC) Islamabad (**Rs. 13.947 Million**).
2. Role of Infilled Walls on Lateral Stability of Reinforced Concrete Frame Structures

Principal Investigator: Khan Shahzada, Co- Principal Investigator: Muhammad Javed. Higher Education Commission (HEC) Islamabad **(Rs. 6.01 Million)**.

3. Effectiveness of locally available SCMs in Reducing Greenhouse Gas emission and their optimization to produce high performance structural concrete: PI: Muhammad Nasir Amin Ghulam Qadir Co-PI: Khan Shahzada (King Faisal University KSA Research Grant)

4. Low Cost Seismic Monitoring Network Principal Investigator: Omar Usman Khan (FAST University), Co-Principal Investigator: Khan Shahzada. Higher Education Commission (HEC) Islamabad **(Rs. 2.9 Million)**.

5. Seismic Evaluation and Retrofitting of Confined Brick Masonry Buildings with FRP Principal Investigator: Qazi Samiullah, Co- Principal Investigator: Khan Shahzada. Higher Education Commission (HEC) Islamabad **(Rs. 6.31 Million)**.

5. Performance of external beam-column joint of engineered cementitious composite under seismic type loading Principal Investigator: Sajjad Wali Khan, Co- Principal Investigator: Khan Shahzada. Higher Education Commission (HEC) Islamabad **(Rs. 5.62 Million)**.

7. Seismic Capacity Assessment Before & After Retrofitting of Infrastructure unreinforced concrete block masonry building) Principal Investigator: Khan Shahzada, Consultant: Bora Gencturk, USA.

8. Improvement of Seismic Capacity of Infrastructure (Buildings) Principal Investigator: Khan Shahzada, Consultant: Bora Gencturk, USA

9. Hazard Assessment of Sohbat Charra Slide Zone District Battagram (Stability of Infrastructure)) Principal Investigator: Khan Shahzada, CO-Principal Investigator : Bashir Alam

10. Reuse of Plastic Waste as Pelletized Aggregate for Concrete Infrastructure Principal Investigator: Khan Shahzada, Consultant: Bora Gencturk, USA

11. Development of Seismic Hazard Map for Shami Road Area Peshawar Principal Investigator: Khan Shahzada, Consultant: Muhammad Shafique

12. Seismic Capacity Assessment of Confined Brick Masonry Buildings Principal Investigator: Khan Shahzada, CO-Principal Investigator : Bashir Alam

RESEARCH COLLABORATION

1. Collaborative research projects and Exchange of MSc and PhD students with Dr. Gencturk Bora Assistant Professor Department of Civil and Environmental Engineering University of Houston USA.
2. Collaborative research projects and Exchange of MSc and PhD students with Prof. Han, Sang Whan Department of Frontier Architectural and Urban Engineering College of Engineering, Hanyang University (SUSB), Korea
3. Collaborative research projects and supervision of MSc and PhD students with Dr. Nasir Amin Ghulam Qadir, Engr. Kaffayatullah Khan King Faisal University of Saudi Arabia.